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December 17, 2018

The Honorable Ronald D. Kouchi,  
President, and  
Members of The Senate  
Twenty-Ninth State Legislature  
Hawaii State Capitol, Room 409  
Honolulu, Hawaii 96813

The Honorable Scott K. Saiki,  
Speaker, and  
Members of The House of Representatives  
Twenty-Ninth State Legislature  
Hawaii State Capitol, Room 431  
Honolulu, Hawaii 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services (ETS) received for the State of Hawaii Department of Accounting and General Services (DAGS) and ETS' HawaiiPay Project Independent Verification and Validation (IV&V) report.

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

Sincerely,

TODD NACAPUY  
Chief Information Officer  
State of Hawai'i

Attachment (2)



# HawaiiPay Project

## Department of Accounting and General Services (DAGS)

IV&V Monthly Status Report - **Final**  
For Reporting Period: November 1 – 30, 2018

Draft submitted: December 5, 2018  
Final submitted: December 13, 2018

# Overview

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

# Executive Summary










*The project continues to make good progress towards a successful Group 3 go-live as results of their final comprehensive parallel test have proven positive and the project continues to improve UH/DOE communications. Despite project efforts to demonstrate sufficient data quality, UH continues to express their concerns. IV&V remains concerned that the increased complexity of combining legacy and HIP data for year-end processing, potential challenges related to new end of year processes, user provisioning concerns, resource availability during the holiday season, and possible DOE/UH internal challenges could jeopardize a smooth Group 3 go-live transition.*

Sept	Oct	Nov	Category	IV&V Observations
M	M	M	Communications Management	The project continues to make progress toward ensuring accurate UH/DOE employee communications prior to Group 3 go-live. As go-live draws near, UH/DOE seem to have improved HawaiiPay communications with their employees. DOE seems to have overcome initial challenges and appears poised for successful go-live. UH has instituted enrollment drives and their project-led train-the-trainer events have been well attended. However, the UH decision to run their Multi-Factor Authentication (MFA) enrollment drive in parallel with their payroll enrollment drive could prove challenging for UH employees and could increase HawaiiPay help desk call volume. Therefore, this category rating remains Medium. Failure to accurately and fully communicate with their employees could result in employees not taking necessary steps to prepare for the change, negatively impacting the Group 3 rollout.
L	L	M	Contract Management	While December Group 3 go-live activities seem to be progressing well, IV&V is still recommending contingency planning to manage any disruption to go-live that could necessitate a schedule and contract extension. The State has not been able to provide requirements tracking artifacts as communication challenges between the project and the DAGS Contracts division continue. As contract closure draws near, the project may have challenges validating fulfillment of requirements before contract closure and the SI may have little time to respond to gaps in meeting requirements to the projects satisfaction. IV&V recommends the project team assume responsibility for requirements validation going forward and request DAGS contracts office play an advisory role in confirming contract requirements have been met.







# Executive Summary (cont'd)

Sept	Oct	Nov	Category	IV&V Observations
			Cost and Schedule Management	Project readiness efforts have thus far proven effective as Group 3 seems poised for a successful go-live. Initial outbound interface concerns have been addressed, UH/DOE appear to have improved employee communications, and the project is making good progress towards quickly fixing bugs and documenting expected variation in payroll numbers. However, this risk remains a "Medium" as UH leadership concerns over final parallel test results could disrupt UH scheduled go-live activities. It is unclear if the concerns expressed by UH leadership is related to misunderstandings around known variances (which are not a reflection of system problems) or if there is a lack of confidence in the project ability to resolve known bugs before payroll go-live. IV&V also remains concerned that increased activities at year-end could overwhelm the project team given the increased complexity of combining legacy and HIP data for year-end processing, potential challenges related to new end of year processing requirements, and limited resource availability during the holiday season. Further, though the Payroll Operational team continues to gain confidence in supporting the new system and related operational processes, they have recently reported some staffing challenges which could exacerbate this risk.
			Human Resources Management	The addition of project help desk staff has, thus far, met the needs of the increased Group 3 call volume. IV&V remains concerned that other project resources could be overwhelmed with the strain of year-end and Group 3 go-live activities. The Payroll Operational team could already be showing signs of this strain as they have recently reported some staffing challenges, including the recent loss of key staff, which could exacerbate this risk (see risk #4). Therefore, IV&V has raised this risk to a Medium.
			Knowledge Transfer	Knowledge transfer activities continue to progress. The project has created production checklists that should assist turnover to new resources. The project has developed an informal turnover plan but has yet to assign staff to the defined roles; the Project has stated their intention to create a more comprehensive turnover plan. The project functional team and interface support still need additional knowledge transfer from the SI.
			Operational Preparedness	IV&V noted that the results from both the additional, and previously unplanned, parallel testing cycle and the additional testing scripts, designed to focus on data quality, improved the project's ability predict both the level of effort and the timeline for the Group 3 cutover, and therefore reduce overall operational preparedness risk.

# Executive Summary (cont'd)

Sept	Oct	Nov	Category	IV&V Observations
			Organizational Change Management	The project continues to be proactive with their OCM communications and has provided training to UH/DOE trainers to assist with their OCM efforts. UH has increased employee communications and instituted Enrollment Drives in support of their OCM efforts. IV&V remains concerned that the project has little control over Group 3 OCM activities and that ineffective execution of OCM by departments could lead to customer/employee frustration, excessive help desk calls, and ultimately reflect negatively on the project.
			Project Management and Organization	The project seems to be making good progress toward detailed planning of year-end activities but IV&V is concerned that the project could struggle to support/manage these tasks with limited resources. Efforts to institute a cross-departmental Enterprise Change Management and governance board seem to have slowed, which could lead to a lack of coordinated enterprise-level project guidance going forward.
			Quality Management	IV&V noted a continuing focus on data quality prior to the Group 3 go live. The project added additional testing scripts which helped to identify unknown data quality issues that were then resolved prior to the cutover conversion. This effort, in conjunction with the additional parallel testing cycle, is expected to further reduce post go live data cleansing efforts.

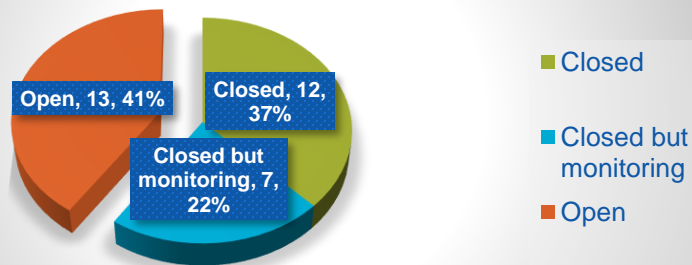
# Executive Summary (cont'd)

Sept	Oct	Nov	Category	IV&V Observations
			Requirements Management	The State has not been able to provide requirements tracking artifacts as communication challenges between the project and the DAGS Contracts division continue. As contract closure draws near, the project may have challenges validating fulfillment of requirements before contract closure and the SI may have little time to resolve requirement gaps, to the projects satisfaction, prior to contract closure.
			Risk Management	Though the project can assure that individual departments will not be able to access other departments data, IV&V remains concerned that DOE user permission requests seem excessive and not in keeping with segregation of duties and the principle of least privilege. The project has plans to work the DOE, post-go-live, to reduce permissions that seem excessive. IV&V also remains concerned that adequate and appropriate controls, related to the segregation of duties, the protection of assets as well as the prevention of fraud, are not in place for the HawaiiPay solution. The lack of formal security controls continues to leave the project powerless to deny requests for excessive permissions that could expose private data (PII) and increase the risk of fraud and identity theft. IV&V recommends that controls be implemented that are designed to prevent end users from completing systems transactions that are not in the best interest of the State.

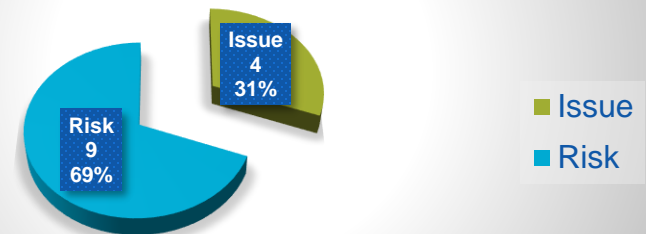
# IV&V Findings and Recommendations

*For this reporting period, PCG has identified a total of 13 open findings (4 issues, 9 risks). Of the open findings, 4 are related to Quality Management. The following graphs breakdown the risks by status, type, and category/priority.*

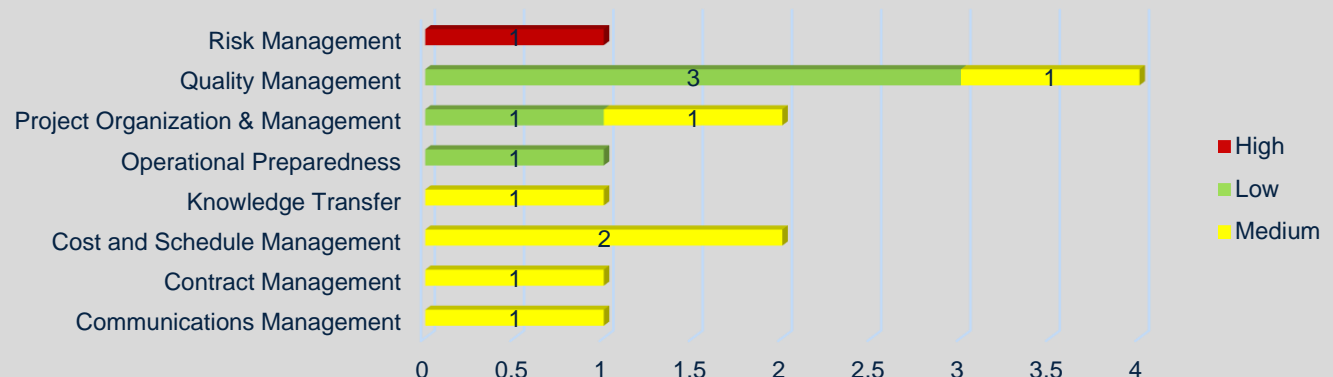
## Risk Status Summary



## Open Risks/Issues by Finding Type



## Open Risks/Issues by Category/Priority





# IV&V Findings and Recommendations (cont'd)

## Summary of IV&V Open Risks/Issues Criticality

Category		Finding Title	Criticality
Communications	Risk	<b>27 – Communications to external entities may be ineffectual</b>	Med
Contract	Risk	<b>2 - Non-functional contract requirements not tracked</b>	Med
Cost & Schedule	Issue	<b>22 – Lack of departmental readiness could impact project budget/schedule</b>	Med
	Risk	<b>4 - Group 2 and 3 planning and execution activities overlap</b>	Med
Knowledge Transfer	Issue	<b>23 - Lack of detailed turnover plan</b>	Med
Operational Readiness	Issue	<b>7 – High number of manual processes at cutover</b>	Low
Risk Management	Risk	<b>31 - Lack of adequate formal controls related to user access and segregation of duties</b>	Hi
Project Organization & Management	Risk	<b>30 - Strategy for data management not finalized</b>	Low
	Risk	<b>32 - End of year processing complexity</b>	Med
Quality Management	Risk	<b>18 - Increasing parallel testing defect resolution scope</b>	Low
	Risk	<b>19 - Inadequate interface development and testing coordination</b>	Med
	Issue	<b>25 - Insufficient data validation, checks and balances</b>	Low
	Risk	<b>26 - DHRD users' access to shared tables could result in corrupt payroll data</b>	Low

# IV&V Findings and Recommendations (cont'd)

## Communications Management



#	Key Findings	Criticality Rating
27	<b>Risk - Communications to external entities may be ineffectual:</b> While IV&V has observed good efforts by the project to provide reasonable levels of communications to external entities (departments, TPA, banks, etc.), some communication have been misinterpreted or mishandled and have not produced their intended result.	Medium

Recommendations	Progress
• Enact overt and persistent efforts to address communications that have proven to be ineffective and with organizations that have known communication challenges.	In progress
• Over-communicate important messages as well as messages that are likely to be missed. For example, multiple emails can be sent to reiterate important messages or restate them in increasingly simple or overt terms.	In progress
• Reassess existing communications and provide further clarification to external entities to ensure clear understanding and provide guidance on future communications.	In progress
• Request external entities forward all of their HawaiiPay related state employee communications to HawaiiPay for review prior to sending.	Complete

# IV&V Findings and Recommendations (cont'd)

## Contracts Management

M

#	Key Findings	Criticality Rating
2	<b>Risk - Non-functional contract requirements not tracked:</b> When non-functional requirements are not proactively monitored as the project progresses, there is increased potential that contract performance gaps may be identified too late in the project's timeline resulting in schedule delays or unmet contract requirements. The Requirements Traceability Matrix (RTM) does not include non-functional requirements and the project does not regularly report on contract performance metrics.	Medium

Recommendations	Progress
<ul style="list-style-type: none"><li>• Create a checklist of non-functional contract requirements to be satisfied in order to actively monitor and measure progress, and close-out the contract</li></ul>	Not started
<ul style="list-style-type: none"><li>• Escalate communications issues between DAGS Contracts office and HawaiiPay</li></ul>	Not started
<ul style="list-style-type: none"><li>• Project team assume responsibility for requirements validation and request DAGS contracts office play an advisory role in confirming contract requirements have been met</li></ul>	Not started

# IV&V Findings and Recommendations (cont'd)

## Cost and Schedule Management

M

#	Key Findings	Criticality Rating
4	<b>Risk - Concurrent execution and production support activities for Group Implementations:</b> Executing implementation and support tasks for multiple deployment Groups running in parallel may result in less efficient use of project resources and cause an overall delay if new tasks are introduced later in the project.	Low
22	<b>Risk - Lack of departmental readiness could impact project budget/schedule:</b> Departments transitioning to the Hawaii Information Portal (HIP) as part of the HawaiiPay project are expected to perform readiness activities and meet specified milestone deadlines. If any department does not transition to HIP by their designated rollout date, the HawaiiPay project schedule and budget could be negatively impacted.	Medium

Recommendations	Progress
• Ensure readiness deadlines/milestones are clearly communicated to appropriate stakeholders on a regular basis.	In progress
• Document missed readiness deadlines, communicate the possible consequences of missed deadlines clearly to department leaders in a timely manner to help ensure leadership is not surprised and has ample opportunity to respond and manage the risks.	In progress
• Consider implementing a strategy of over-communication for departments that may have communication challenges.	In progress
• Coordinate regular readiness discussions between HawaiiPay and departments that may have readiness challenges.	In progress

# IV&V Findings and Recommendations (cont'd)

## Knowledge Transfer



#	Key Findings	Criticality Rating
23	<b>Issue - Lack of detailed turnover plan:</b> The lack of a transition plan can lead to poor transition planning, important turnover activities can get missed, and can lead to stakeholder confusion since they are left ill-equipped to effectively maintain the system once the vendor has left the project.	Medium

Recommendations	Progress
• Request the SI utilize detailed checklists for turnover to ensure an effective turnover to the state and that nothing is overlooked.	In progress
• The state immediately draft and take ownership of a turnover plan and request the SI review and offer guidance.	Not started
• Assign turnover tasks to individuals and require task signoff by task owners once they validate tasks have been effectively completed.	In progress
• Utilize readiness checkpoints and key performance indicators (KPI's) to monitor readiness effectiveness and report to project leadership. KPI's can be utilized to assure a timely and effective system turnover as well as provide project leadership an opportunity to shore up efforts when turnover efforts are not achieving expected results.	In progress
• Request the SI update relevant documents to ensure an effective turnover to the state for M&O.	In progress

# IV&V Findings and Recommendations (cont'd)

## Operational Preparedness



#	Key Findings	Criticality Rating
7	<b>Risk - High volume of manual processes at cutover:</b> The number of manual processes that need to be executed during the cutover window and post implementation for future Group deployments may grow to a level of effort that cannot be accomplished during the designated timeframes thereby causing a delay in the implementation schedule. The project is reaching out to Agencies 60 days before go live and providing them instructions for required data cleanup prior to go live (e.g., social security number mismatches in Central Payroll). It is unknown if the time provided will be enough for all Agencies to complete within the implementation schedule.	Low

Recommendations	Progress
<ul style="list-style-type: none"><li>Append the cutover checklist with detailed descriptions of how to execute the task (as if for a back-up resource) and ensure that all dependencies between cutover tasks are identified and have designated contacts</li></ul>	In progress
<ul style="list-style-type: none"><li>Automate manual processes where possible</li></ul>	In progress

# IV&V Findings and Recommendations (cont'd)

## Risk Management



#	Key Findings	Criticality Rating
31	<b>Risk - Lack of adequate formal controls related to end user provisioning and segregation of duties:</b> The project currently lacks sufficient project security policies to guide, among other things, departmental user permissions. Controls currently exist to ensure departments only have access to their employee's data and the project has made efforts to warn departments about the risks of granting excessive permissions to their users. However, since there is no enforced PoLP policy, the project is currently granting all departmental access requests.	High

Recommendations	Progress
<ul style="list-style-type: none"><li>• Create/implement a HIP administrative user agreement for administrative users who are responsible for determining permissions for departmental users. The agreement should assure that administrative users clearly understand their additional responsibilities, security best practices, guidelines, PoLP, segregation of duties, and risks involved with giving users excessive permissions.</li><li>• Formally notify department leadership of requests that appear to be excessive and assure clear understanding of the risks involved; request departments rollback permissions that seem excessive</li><li>• Recommend implementation of controls designed to prevent end users from completing systems transactions that are not in the best interest of the State (see detailed recommendations for risk #31 in the Findings Log)</li></ul>	In progress

# IV&V Findings and Recommendations (cont'd)

## Project Management & Organization

M

#	Key Findings	Criticality Rating
30	<b>Risk - Strategy for data management not finalized:</b> Without a finalized data management strategy, data policies and inter-agency agreements may not adequately address the needs of all entities with responsibilities for governing data which may result in ineffective data management and remediation processes.	Low
32	<b>Risk - End of year processing complexity:</b> Payroll related end of year processing typically involves a significant number of activities to close out the year. Now that group 3 rollout has been moved to December, the project will be faced with performing unforeseen end of year processes that include combining legacy and HIP data to produce W2 and other reports. Project resources will be further constrained by the additional burden of a major Group 3 release that has already proven to be time consuming and problematic. Project will implement a combined CRT/state project plan going forward.	Medium

Recommendations	Progress
• Define and execute a Pilot run of end of year activities	Not started
• Early extensive detailed planning utilizing a consolidated schedule that includes CRT and state activities	In Progress
• Work with appropriate DAGS governance processes to develop an over-arching strategy for data management across the departments	Not started
• Work with impacted departments to codevelop and implement data management policies in support of the HawaiiPay solution	Not started



# IV&V Findings and Recommendations (cont'd)

## Quality Management

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#	Key Findings	Criticality Rating
18	<b>Risk - Increasing parallel testing defect resolution scope:</b> An increasing number of manual workarounds to resolve defects discovered during parallel testing may cause delays during the production cutover or confusion for end users who require supplemental training regarding work around functionality. It is unclear if all the workarounds are documented in the cutover plan and schedule.	Low
19	<b>Risk - Inadequate interface development and testing coordination:</b> The lack of a functioning process and signoff to coordinate both parties regarding the development and comprehensive end to end testing of interfaces may cause unnecessary risk. IV&V has observed many process improvements for coordinating and tracking interfaces in Group 2.	Medium
25	<b>Issue - Insufficient data validation, checks and balances:</b> Data validation processes and procedures to ensure data accuracy are insufficient and have resulted in data errors during payroll processing.	Low
26	<b>Risk - DHRD users' access to shared tables could result in corrupt payroll data:</b> Inadequate controls to manage access to update payroll data by both DHRD and Payroll Division users could result in payroll data corruption.	Low
Recommendations		Progress
<ul style="list-style-type: none"> <li>Establish a communications plan and signoff procedure that ensure all parties clearly understand interface testing expectations and signoff that they have the capacity to complete the testing, document defects, re-test and signoff that the interface is fully functional.</li> </ul>		In progress
<ul style="list-style-type: none"> <li>Establish enhanced validation processes to ensure interface updates are thoroughly validated prior to applying updates to production system data. Validations could include queries to validate all the business rules have been met, i.e. all key data is present, all required dependent data elements are present and contain valid values, etc.</li> </ul>		In progress
<ul style="list-style-type: none"> <li>Explore methods to secure critical payroll data that DHRD does not need permissions to edit.</li> </ul>		In progress
<ul style="list-style-type: none"> <li>Where possible, add automated resolutions to defects/issues discovered during Parallel Testing. Ensure any additional manual resolutions steps are documented in the cutover plan and assessed for expected level of effort, dependencies and overall effect on the cutover timeline.</li> </ul>		In progress

# IV&V Status

*The activities that PCG performed to inform the IV&V report for the current period are listed below. Upcoming activities are also included. For specifics, see Appendix B – IV&V Standard Inputs.*

- IV&V Project Milestones

Milestone / Deliverable Description	Baseline Due Date	Draft Submitted	Final Submitted	Approvals / Notes
IV&V Management Plan (IVVP)	4/6/18	3/18/18	3/29/18	Approved
IV&V Work Plan (Schedule)	4/6/18	3/18/18	3/29/18	Approved
Initial IV&V Assessment	5/9/18	5/18/18	6/8/18	Approved
June IV&V Monthly Status Report (MSR)	5/30/18	7/10/18	7/31/18	Approved
Deployment Audit Report – Grp 2	7/20/18	8/5/18	8/23/18	Approved
IV&V Management Plan (IVVP) Update (v. 3.0)	n/a	8/15/18	8/22/18	Approved
July IV&V Monthly Status Report (MSR)	8/10/18	8/17/18	9/4/18	Approved
End of Go Live Implementation Milestone Report – Grp 2	8/24/18	9/28/18	10/31/18	Approved
August IV&V Monthly Status Report (MSR)	10/5/18	9/7/18	9/10/18	Approved
September IV&V Monthly Status Report (MSR)	10/5/18	10/5/18	10/9/18	Approved
October IV&V Monthly Status Report (MSR)	11/7/18	11/7/18	11/19/18	Approved
November IV&V Monthly Status Report (MSR)	12/7/18	12/5/18	12/13/18	Approved
Deployment Audit Report – Grp 3	12/21/18			
IV&V Management Plan (IVVP) Update (v. 4.0)	TBD			
End of Go Live Implementation Milestone Report – Grp 3	1/18/19			
Final IV&V Monthly Status Report	2/19/19			
Lessons Learned & Final Recommendations Report	2/19/19			

# IV&V Status (cont'd)




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- **IV&V activities performed during the reporting period:**
  - Attended Monthly Payroll & TLM Modernization Project Executive meeting
  - Attended PCAB meeting
  - Attended Daily Scrums
  - Attended RIO-D meeting
  - Attended HawaiiPay State/CRT Project meeting
  - Project Team Risk Review sessions
  - October IV&V Monthly Status report deliverable and review
  - Attended UH/HawaiiPay meetings
  - Attended DOE/HawaiiPay meetings
- **IV&V next steps in the coming reporting period:**
  - IV&V Monthly Status Report
  - Group 3 Go-Live Implementation Audit report

# Appendix A – IV&V Criticality Ratings

*This appendix provides the details of each finding and recommendation identified by IV&V. Project stakeholders are encouraged to review the findings and recommendations log details as needed.*

See definitions of Criticality Ratings below:

Criticality Rating	Definition
	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely and a different approach may be required. Mitigation strategies should be implemented as soon as feasible.
	A low rating is assigned if there is a possibility of slight impact to product quality, scope, cost, or schedule. Minimal disruption is likely and some oversight is most likely needed to ensure that the risk remains low. Mitigation strategies should be considered for implementation when possible.

# Appendix B – IV&V Standard Inputs

*This appendix identifies the artifacts and activities that serve as the basis for the IV&V observations.*

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

- **Attends the following meetings**
  - Daily Scrum
  - Weekly State/CRT (Joint) Project Meeting
  - Weekly Risks-Issues-Opportunities-Decisions (RIOD) Meeting
  - Bi-Weekly Project Change Advisory Board (PCAB)
  - Monthly Payroll & TLM Modernization Project Executive Meeting
- **Reviews the following documentation**
  - HawaiiPay - Executive Committee Agendas
  - State/CRT (Joint) Meeting Notes
  - State Project Schedule (in Smartsheet)
  - Risks-Issues-Opportunities-Decisions (RIOD) Workbook
  - CherryRoad BAFO and Contract
- **Utilizes Eclipse IV&V® Base Standards and Checklists**



PCG Eclipse IVV  
Checklists

# Appendix C – IV&V Details

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- What is Independent Verification and Validation (IV&V)?
  - Oversight by an independent third party that assesses the project against industry standards to provide an unbiased view to stakeholders
  - The goal of IV&V is to help the State get the solution they want based on requirements and have it built according to best practices
  - IV&V helps improve design visibility and traceability and identifies (potential) problems early
  - IV&V objectively identifies risks and communicates to project leadership for risk management
- PCG IV&V Methodology
  - Consists of a 4-part process made up of the following areas:
    1. **Discovery** – Discovery consists of reviewing documentation, work products and deliverables, interviewing project team members, and determining applicable standards, best practices and tools
    2. **Research and Analysis** – Research and analysis is conducted in order to form an objective opinion.
    3. **Clarification** – Clarification from project team members is sought to ensure agreement and concurrence of facts between the State, the Vendor, and PCG.
    4. **Delivery of Findings** – Findings, observations, and risk assessments are documented in this monthly report and the accompanying Findings and Recommendations log. These documents are then shared with project leadership on both the State and Vendor side for them to consider and take appropriate action on.

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



Id	Title / Summary	Finding Description	Analysis and Significance	Recommendation	Updates	Category	Type	Priority	Status	Closure Reason	Closed Date	Risk Owner
2	<b>Non-functional contract requirements not tracked</b>	If CherryRoad's contract is not actively monitored and tracked, specifically for non-functional requirements, as the project progresses, contract performance gaps may be identified too late in the project's timeline which could result in a schedule delay or unmet contract requirements.	The Requirements Traceability Matrix (RTM) does not include non-functional requirements and the project does not have a separate mechanism for tracking contract performance. The project processes \$0 change orders and, therefore, relies on the Change Advisory Board (CAB) to monitor changes to functional requirements. It is unclear how and when non-functional requirements are being met.	<ul style="list-style-type: none"> <li>• Create a checklist of non-functional contract requirements that CherryRoad must satisfy in order to close-out the contract and actively monitor progress - perhaps begin with the SI's Attachment 8 - Technical Requirements to identify those non-functional requirements to be validated by the state outside of the project's Implementation Tracker.</li> <li>• Escalate communications issues between DAGS Contracts office and HawaiiPay</li> </ul>	<p>11/28/18 - While a December Group 3 go-live seems to be progressing well, IV&amp;V is still recommending contingency planning to manage any disruption to go-live that could necessitate a schedule and contract extension. IV&amp;V is still unable to determine requirements tracking status as communication challenges between the project and the DAGS Contracts division continue. As contract closure draws near, the project may have challenges validating fulfillment of requirements before contract closure and the SI may have little time to respond to gaps in meeting requirements to the projects satisfaction.</p> <p>10/31/18 - DAGS Contracts Division is responsible for tracking project requirements. However, IV&amp;V has been unable to get status on requirements tracking as there seems to be communication challenges between the project and the Contracts division. Contracts Division has been unresponsive to some project requests for information, some requests were made over 2 months ago. Recommend project escalate these requests to DAGS leadership.</p> <p>9/26/18 - No progress.</p> <p>8/31/18 - IV&amp;V met with the DAGS Contract Lead in August and the project provided IV&amp;V with a spreadsheet created by DAGS contract unit in May 2018 entitled "PR T18 compare to P03 final - Incl R5R6R7" which demonstrates the state's efforts in tracking and validating contract requirements separate from the project's design, development, and implementation teams. However, this spreadsheet has not been updated since May 2018 and appears to only include reporting requirements. It is unclear if any of these reporting requirements are considered non-functional. IV&amp;V is awaiting a response from DAGS contracts office.</p> <p>8/9/18 - While initially the SI reported that non-functional requirement were being carefully tracked by the DAGS contracts office, IV&amp;V has not been provided evidence that this is happening. IV&amp;V is awaiting response from DAGS contracts office.</p> <p>7/26/18 - CRT provided Attachment 8 - Responses to Technical Requirements - Oracle Confidential file to demonstrate their tracking for non-functional requirements which are not included in the Implementation Tracker.</p> <p>6/8/18 - IV&amp;V has not observed progress towards mitigating this risk.</p>	Contract Management	Risk	Medium	Open			Michael
4	<b>Concurrent execution and production support activities for Group Implementations</b>	Executing implementation and support tasks for multiple deployment Groups running in parallel may result in less efficient use of project resources and cause an overall delay if new tasks are introduced later in the project.	Concurrently planning and executing tasks for both Groups 2 and 3, which are running in parallel, may result in less efficient use of project resources and cause an overall delay if new tasks are introduced later in the project. For example, IV&V observed confusion regarding whose responsibility it was/is to monitor production logs. An error occurred and was eventually resolved but project resources had to react and divert time to research and remediate the production issue.	<ul style="list-style-type: none"> <li>• Update the schedules Group 3 with tasks and lessons identified from the Groups 1 and 2 implementations</li> <li>• Finalize new baseline schedule for Group 3 which confirms that all the tasks and deliverables are achievable in prescribed timeframes</li> <li>• Identify which tasks are production vs. project and determine the resources and processes needed to address each</li> <li>• Begin developing the procedures that are needed to support production operations and finalize the M&amp;O Plan</li> </ul>	<p>11/28/18 - Payroll Operational team continues to gain confidence in supporting the new system and related operational processes. The operational team has lost key staff recently, could see additional turnover and have also reported other staffing challenges, which could exacerbate this risk. Mainframe payroll staff will need to be transitioned to the new system once Group 3 rollout is complete and training sessions will continue.</p> <p>10/24/18 - Activities to mitigate this risk include: project continues to turn over project team activities to payroll operations group who continue to grow more confident in new activities and have proven capable to perform them.</p> <p>9/26/18 - The recent project extension has allowed additional time for Group 2 stabilization activities. The project will also leverage the additional time to identify opportunities for process improvement to simplify and reduce the level of effort for both M&amp;O and Group 3 rollout tasks. However, IV&amp;V has opened a related risk #32, <i>End of Year Processing Complexity</i>, that brings attention to the fact that Group 3 rollout and end-of-year processing will occur concurrently, which will add more complexity and additional overlap of activities. Therefore, IV&amp;V has raised this to a Medium risk.</p> <p>8/31/18 - In response to instances of insufficient coordination and validation with production payroll processing (for Groups 1 and 2) which caused errors in paychecks that needed to be corrected in future payroll runs, IV&amp;V has observed the project narrowing its focus on defining the resources and processes needed to support production operations. The project has initiated discussions with the DAGS and ETS leadership to develop the strategy which will guide the succession planning of roles and responsibilities from project to operations resources. This risk is related to IV&amp;V risk #23 regarding a Turnover Plan.</p> <p>8/14/18 - DAGS continues strategize to mitigate this risk.</p> <p>7/31/18 - DAGS met with DOE on July 31 and Parallel Testing for Group 3 has been pushed out (yet to be rescheduled) until after Group 2 Payroll is complete (Friday, August 3) due to concerns and constraints that a key resource would become overwhelmed.</p> <p>6/8/18 - Development tasks are ongoing and the team continues to identify requirements and/or processes through UAT and OCM activities which need to be re-reviewed or re-addressed. Further Group 2 training begins next week concurrent to Round 2 Parallel testing.</p>	Cost and Schedule Management	Risk	Medium	Open			Ken



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7	<b>High volume of manual processes at cutover</b>	The number of manual processes that need to be executed during the cutover window and post implementation for future Group deployments may grow to a level of effort that cannot be accomplished during the designated timeframes thereby causing a delay in the implementation schedule.	During the cutover and post implementation a number of manual processes are executed to produce the appropriate conversion and configuration of data needed to operate the system. While avoiding manual processes is unavoidable, since some are needed to ensure the proper sequencing of activities and to avoid post implementation pre-notes and paper checks, the timeframes for manual processing are constrained to data conversion dependencies. During Group 1 deployment, the pilot and smallest of the three deployments, these processes were able to be executed in a timely manner. However, new data and functional anomalies were identified during Group 1 deployment and additional manual processes have been added to the rollout schedules for future Groups 2 and 3. It is unknown at this time since these groups involve much larger end user communities, whether, in the aggregate, all manual processes will be able to be executed during the cutover and post implementation windows. Further, the project is strategically reaching out to Agencies less than 60 days in advance of go live and providing them instructions for required data cleanup prior to go live (e.g., social security number mismatches in Central Payroll). These pre-go-live activities are not directly under the control of the project since they need to be performed by external project stakeholders and it is unknown if the time provided will be enough for all Agencies to complete within the implementation schedule.	<ul style="list-style-type: none"> <li>Append the cutover checklist with detailed descriptions of how to execute the task (as if for a back-up resource) and ensure that all dependencies between cutover tasks are identified and have designated contacts</li> <li>Automate manual processes where possible</li> </ul>	<p>11/28/18 - In addition to implementing an additional 30 data validation test scripts, the project was able to complete an unplanned parallel test cycle. The results of both of these efforts allowed the project to identify additional defects in the conversion processes that were resolved prior to the group 3 go live. This effort is expected to reduce the cutover level of effort and timeframe.</p> <p>10/31/18 - Based on the results or the second Parallel testing cycle for Group 3, the project has been able to identify key issues and is working to resolve them. The delay in the group 3 go live has aided the project in being able to automate more of the data cleanup issues that were previously manual processes. The project has noted that an additionally previously unplanned Parallel test will be completed for group 3. This testing cycle could include a significant percentage of the employee populate of all group 3 departments.</p> <p>9/26/18 - CRT has made good progress towards automating some manual processes and have added 21 additional validation reports. For example, a process was created to better validate UH/DOE inbound HR data that allows them to send targeted HR files that CRT processes and sends back error details for UH/DOE to troubleshoot/cleanup. This will likely improve conversion as well as parallel testing results.</p> <p>9/19/18 - CRT reported additional efforts are underway to reduce then number of manual processes at cutover.</p> <p>8/31/18 - Until parallel testing has been completed for Group 3 departments, the project is unable to evaluate the known scope of manual processing that may be required to complete cutover activities. IV&amp;V will continue to monitor progress of cutover planning for Group 3.</p> <p>7/31/18 - IV&amp;V observed the number of manual processes increase during the cutover period for Group 2. Recent UPA deduction interface errors have triggered new manual processes for validation.</p> <p>6/8/18 - Though the project focuses on identifying and sequencing the cutover tasks appropriately, IV&amp;V has not observed progress towards mitigating the risk of cutover tasks not being able to complete during the timeframe.</p>	Operational Preparedness	Issue	Low	Open			Ken
18	<b>Increasing parallel testing defect resolution scope (high number of parallel defects)</b>	An increasing number of manual workarounds to resolve defects discovered during parallel testing may cause delays during the production cutover or confusion for end users who require supplemental training regarding work around functionality.	A continuing number of defects discovered during Parallel testing are being rectified with manual workaround. It is unclear if all the workarounds are documented in the cutover plan and schedule. The project should plan to ensure that all defect resolutions are prioritized and tracked in the cutover plan and that manual workarounds are resourced with appropriate staff. Further, as function work arounds are identified for end users, they may or may not be receiving supplemental training in a timely manner.	<ul style="list-style-type: none"> <li>Where possible, add automated resolutions to defects/issues discovered during Parallel Testing.</li> <li>Ensure any additional manual resolutions steps are documented in the cutover plan and assessed for expected level of effort, dependencies and overall effect on the cutover timeline.</li> </ul>	<p>11/30/18 - As noted previously, an additional unplanned Parallel Test cycle was executed. This testing cycle included 100% of the Group 3 employee population. The results of this effort allowed the project to increase the number of automated resolutions as well as cleanse more of the inbound data prior to the Group 3 cutover.</p> <p>10/31/18 - IV&amp;V noted an additional and previously unplanned Parallel Testing cycle will be executed. This testing cycle will include up to 100% of the employee population of group 3 departments. The results of this testing cycle should help to identify any remaining unidentified data quality or completeness issues. Additionally, the project may have the opportunity to automate additional data cleansing and configuration tasks which could reduce both the risk and the level of effort required at cutover. IV&amp;V also noted that there are continuing concerns related to the end to end testing of outbound interfaces which may cause unexpected manual data cleanup efforts at go-live.</p> <p>9/26/18 - CRT has made good progress towards automating some data validation processes that have increased the overall quality of incoming data, thereby reducing the number of manual workarounds needed to address test failures. For example, a process was created to better validate UH/DOE inbound HR data, that allows them to send targeted HR files that CRT processes and sends UH/DOE error details so they can troubleshoot/cleanup. This will likely improve conversion as well as parallel testing error rates as HR data has been the source of many parallel test failures.</p> <p>The project contingency plan for poor round 3 parallel results includes instituting an additional internal parallel test (agencies would not need to be involved). This would also serve to test parallel test defect resolution. UH efforts to improve HR data quality has increased the projects confidence in a successful final round of UH parallel testing.</p> <p>8/31/18 IV&amp;V noted that the number of issues discovered during Parallel Testing that require manual resolution may be increasing as the population for each go live group increases. The effort required to resolve these issues during the go live cutover may cause unnecessary risk to the timeline. This Preliminary Concern is being upgraded to a risk.</p> <p>7/31/18 - IV&amp;V observed the project successfully manage the testing defect resolution scope for Group 2; however, the number of potential defects that require manual resolution is not yet known for Group 3. The total scope of manual activities may still become too time consuming for the cutover timeframe.</p> <p>6/8/18 - The Cutover Planning is very detailed for steps and workarounds identified during parallel.</p>	Quality Management	Risk	Low	Open			Ken

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19	Inadequate interface development and testing coordination	The lack of a functioning process and signoff to coordinate both parties regarding the development and comprehensive end to end testing of interfaces may cause unnecessary risk.	It is unclear if each party responsible for the complete end to end testing of an interface has the capacity and capability to complete detailed testing. There does not appear to be any method for the project to get assurance that the testing is planned and executed as needed. To date, there seems to be a low volume of feedback from TPAs and approval of TPA readiness lacks rigorous evaluation from the project. For example, contacts for interfaces need to be confirmed as having the appropriate IT skills and availability to perform the required tasks in the project's timeline.	<ul style="list-style-type: none"> <li>Establish a communications plan and signoff procedure that ensure all parties clearly understand the expectation related to interface testing and signoff that they have the capacity to complete the testing, document defects, re-test and signoff that the interface is fully functional.</li> <li>Establish enhanced validation processes to ensure interface updates are thoroughly validated prior to applying updates to production system data.</li> </ul>	<p>11/30/28 - IV&amp;V noted that an enhanced process to ensure all the interface processes were refined and the results tested by all appropriate parties, was implemented. This enhanced process helped to ensure that all parties involved were focused on the same key issues.</p> <p>10/31/18 - A number of issues regarding key interfaces for group 3 remain open. The project noted that DOE has passed functional tests on some of the inbound interfaces, but further testing remains necessary for others.</p> <p>9/30/18 - CRT has sought to increase the quality of interfaces through full volume in/outbound interface testing, improved interface mechanics, and created sandbox environment for testing.so departments don't have to wait for the next parallel to retest.</p> <p>9/26/18 - Interface specifications, testing, validation, and defect resolution continues to improve. However, a limited number interface issues continue to crop up. For example, the FAMIS interface has proven to be especially problematic with recurring failures; recent failures stem from missing UAC codes. The project is working with CRT to manage these problems and resolve FAMIS interface issues.</p> <p>Other interfaces have been problematic due to their inherent complexity. For example, HHSC interfaces are run through multiple systems (HIP, ETS mainframe, and DOH) before they are finally consumed by HHSC. CRT has had difficulty mimicking mainframe processing that to produce output the mimic legacy data, but has made recent progress to resolve these issues.</p> <p>Still other interfaces, like EUTF, have proven problematic due to EUTFs limited ability to correct their SSNs due to limitations of their antiquated systems.</p> <p>Finally, the role of interface problem reporting, escalation of defects to CRT, and logging of defects to ServiceCloud (help desk ticketing system) continues to performed HawaiiPay PM which is not typically a PM responsibility.</p> <p>8/31/18 - IV&amp;V noted that additional resources have been assigned to assist with interface development and testing for DOE and UH. The deployment of these resources appears to have had a positive effect on the process, but it remains unclear if the interfaces can be completed in time to ensure through testing prior to Group 3 go live.</p> <p>7/31/18 - Although IV&amp;V observed significant improvement in interface development and testing procedures, a number of errors were reported in the UPA interface. These issues may have been caused by a lack of clear and comprehensive documentation regarding the operational processes required to generate the correct interface data. <i>When reliance on human interaction, documented procedures can help mitigate the possibility of human errors.</i></p>	Quality Management	Risk	Medium	Open			Ken
22	Lack of departmental readiness could impact project budget/schedule	Departments transitioning to the Hawaii Information Portal (HIP) as part of the HawaiiPay project are expected to perform readiness activities and meet specified milestone deadlines. If any department does not transition to HIP by their designated rollout date, the HawaiiPay project schedule and budget could be negatively impacted.	<p>Departments transitioning to HawaiiPay have each been assigned to one of three rollout groups and the project's budget and planned coordination activities allow for little to no flexibility in group rollout dates. The HawaiiPay project contract and budget is currently limited to the three rollout groups, departments who have not transitioned by the final rollout group will need to find alternative means for producing payroll outside of HIP.</p> <p>While details of the impact of any department not transitioning to HawaiiPay in their planned group is unclear, there will likely be a negative impact to DAGS and the HawaiiPay project schedule and budget.</p> <p>Any department unable to transition to HIP would likely either request extended use of the existing DAGS mainframe or seek non-DAGS payroll alternatives. If departments are allowed to continue on the mainframe payroll system, the planned benefits of moving off this antiquated and problematic system may not be fully realized. DAGS would then be faced with having to plan for and acquire additional resources for maintaining two payroll systems (HIP and the mainframe system). Departments that opt out of DAGS payroll services altogether would have little time to plan for, procure and implement their own payroll system. Further, DAGS, and/or the HawaiiPay project team, will likely have limited time and resources to assist departments with any alternative as they will be in the midst of HawaiiPay group implementation. IV&amp;V was informed that additional funding for the project will likely not be approved by the state legislature, therefore expansion of HawaiiPay contract scope to accommodate departments that are unable to meet readiness deadlines may not be possible.</p>	<ul style="list-style-type: none"> <li>Ensure readiness deadlines/milestones are clearly communicated to department leaders.</li> <li>Provide clear expectations regarding readiness activity deadlines and important milestones to each department.</li> <li>Document missed readiness deadlines, communicate the possible consequences of missed deadlines clearly to department leaders in a timely manner to help ensure leadership is not surprised and has ample opportunity to respond and manage the risks.</li> <li>Consider implementing a strategy of over-communication for departments that may have communication challenges.</li> <li>Coordinate regular readiness discussions between HawaiiPay and departments that may have readiness challenges.</li> <li>Request the SI offer departments that are struggling to provide prerequisite files for UAT/Parallel testing, a technical resource to offer in-person guidance and assistance to their technical staff.</li> </ul>	<p>11/28/18 - UH leadership remains concerned with previous parallel results that identified some inaccuracies. However, the project is making good progress towards quickly fixing bugs and documenting expected variation in payroll numbers. Unclear if UH leadership fully understands false positives (known variances) which are not a reflection of system problems and this seems to have created a lack of confidence in the system accuracy.</p> <p>11/28/18 - UH has made the decision to implement Multi Factor Authentication (MFA) and will require their payroll users to enroll in MFA before they can access HIP. MFA implementations can be challenging, especially for non-technical users. Combining rollout of MFA with their transition to HIP could increase UH readiness risks. The project has advised against UH combining MFA with HIP go-live.</p> <p>10/31/18: The project has made good efforts to implement IVV recommendations, still, UH/DOE continues to have challenges with complying with project instructions. UH/DOE do not fall under the authority of the SOH Executive branch and therefore cannot be compelled to follow project directives. The project remains concerned with UH lack of responsiveness to project communications and that UH pre-go-live employee payroll communications have yet to be broadly distributed. Unclear why UH system interface concerns have only recently been communicated to the project, leaving the project little time to assist with resolving their issues before go-live in December. While DOE/DAGS communications have improved, DOE continues to make requests of the project that seem to distract from go-live activities; DAGS has now set clear boundaries with DOE on what the project can and cannot assist with given their constrained capacity due to go-live activities.</p> <p>10/17/18 - UH and DOE not able to provide a functional pass for all integration testing. The project has made multiple attempts to clarify functional pass criteria for both UH and DOE. Contingency plan to mitigate the risk of lack of departmental outbound interface testing/validation is for the project to perform G23m their own detailed logic review and to treat all post-go-live outbound interface problems as defects and troubleshoot as time permits.</p> <p>9/26/18 - Some UH single sign on (SSO) issues remain unresolved. The project has reported that UH continues to be unresponsiveness at times to project communications. IV&amp;V will continue to monitor.</p> <p>9/26/18 - Despite project requests to review all HawaiiPay related DOE employee communications before distribution, DOE has not always done so. DOE employees have reported some of these inaccurate communications to HawaiiPay help desk. DOE has stated they have corrected these communications. More recently, the project initiated communications with the DOE Public Information Officer who has since committed to a better communications plan and to submitting future employee communication for project review prior to distribution. Departments that fail to provide accurate HawaiiPay information to their employees could negatively impact readiness.</p> <p>9/24/18 - The project has created a more detailed, web accessible project plan to track UH/DOE required activities and instituted escalation procedures for due dates that are not met. Good progress has been made towards Group 3 interface testing/validation, all but 2 have received a testing "pass" status. CRT resources continue to be embedded (now remotely) with</p>	Cost and Schedule Management	Issue	Medium	Open			Michael

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23	<b>Lack of detailed turnover plan</b>	The lack of a detailed turnover plan may lead to insufficient planning and execution of important turnover activities which could lead to stakeholder confusion and cause a delay in project closure or transitioning of system support responsibilities to appropriate state staff.	<p>Turnover plans typically describe the detailed activities involved in transitioning a new system to the new owners, usually in the form of detailed checklists that assign accountability to individuals responsible for ensuring activities get done and are validated. Turnover plans are typically utilized to ensure that important transition details are not overlooked and are effectively coordinated. Turnover plans can also be used an effective communication tool to stakeholders to ensure there is full understanding of turnover activities, roles, and responsibilities. Proper awareness of turnover plans and activities provided early on to stakeholders can go a long way toward managing stakeholder expectations and triggering important discussions, help manage expectations and support effective resource planning.</p> <p>Commonly reported system turnover challenges include stakeholders being caught unaware of activities, roles, and responsibilities they were expected to perform. Typically, turnover activities involve a multitude of activities carried out by multiple groups and stakeholders. Coordination of these activities can be a significant challenge; ensuring turnover effectiveness can be even more challenging. Ensuring proper understanding by state personnel of each process the SI has been performing for the past several months/years requires careful planning. Ensuring they are fully equipped to not only maintain and enhance the system but are also fully able to troubleshoot problems when critical system incidents occur (e.g. when the system goes down) can be even more challenging without a detailed plan.</p> <p>The SI is typically responsible for producing a transition plan deliverable, however, this deliverable was not a contractual deliverable for HawaiiPay.</p>	<ul style="list-style-type: none"> <li>• Request the SI utilize detailed checklists for turnover to ensure an effective turnover to the state and that nothing is overlooked.</li> <li>• The state immediately draft and take ownership of a turnover plan and request the SI review and offer guidance.</li> <li>• Assign turnover tasks to individuals and require task signoff by task owners once they validate tasks have been effectively completed.</li> <li>• Utilize readiness checkpoints and key performance indicators (KPI's) to monitor readiness effectiveness and report to project leadership. KPI's can be utilized to assure a timely and effective system turnover as well as provide project leadership an opportunity to shore up efforts when turnover efforts are not achieving expected results.</li> <li>• Request the SI update relevant documents to ensure an effective turnover to the state for M&amp;O.</li> </ul>	<p>11/28/2018 - The project has created production checklists that should assist turnover to new resources, but it remains unclear who production tasks will be turned over too. The project is currently supplementing Payroll operations staff as needed due to recent staff departures. The project has an informal plan in place to continue to support payroll operation shortfalls. The project also has an informal turnover plan but has not assigned staffing to the defined roles. The Project does intend to create a more comprehensive turnover plan.</p> <p>10/17/18 - Project will seek to revise the B05 (M&amp;O support) deliverable to include technical requirements as well as create a document library with technical architecture documentation and plan for additional turnover training sessions. Architecture has been documented and knowledge transfer has begun. The project acknowledges that functional team and interface support need additional knowledge transfer from the SI. Project currently has an end of year activity checklist as well as production payroll checklist.</p> <p>9/30/18 - As the number of activities required for end-of-year and group 3 go-live activities mount, turnover activities are more likely to be put off, deprioritized, or ignored. Post implementation roles remain unclear, though, the technical track lead is in the process of planning some post-implementation resource reallocation and roles and responsibilities, however, there are currently no plans for documenting them. Further, it is still unclear if current key project resources will be available for M&amp;O activities, including the Functional Track Lead that has played a pivotal role during system implementation.</p> <p>8/31/18 - The project seems to be realizing more and more that details of M&amp;O activities still need to be worked out. Recently, the project was faced with a production defect that could have been avoided had someone been assigned to monitor the batch file logs and if measures had been in place to ensure batch processes are run in the proper order. The project will address this gap at the next RIOD meeting to clarify this role and define this operational process in more detail to ensure, for example, log files are checked and batch files are run in the appropriate order. IV&amp;V will continue to recommend documenting these processes in detail as part of a turnover plan document created by the state and request the SI include them as updates to the M&amp;O plan deliverable.</p> <p>8/29/18 - The SI has indicated that key SI resources may no longer be available to the state HIP M&amp;O team. Instead the state will have to rely on CRT Managed Services for tier 3 support once Phase 1 development is complete. IV&amp;V is concerned that several critical problems have been averted in large part due to intervention by these 4-5 CRT individuals. CRT Managed Services struggled to resolve a recent production bug because they lacked knowledge of the HIP system details and had to rely on these individuals to troubleshoot. Lack of good turnover planning for knowledge transfer from these and other SI resources could lead to significant payroll turnover efficiency as well as checks and balances.</p>	Knowledge Transfer	Issue	Medium	Open			Michael
25	<b>Insufficient data validation, checks and balances</b>	Data validation processes and procedures to ensure data accuracy are insufficient and have resulted in data errors during payroll processing.	<p>Insufficient data validation processes and procedures resulted in system errors including inaccurate paychecks and reports.</p> <p>Recently HawaiiPay ran (legacy) payroll for two pay periods in a row that included a significant number of incorrect deductions for UH employees. The state reported that already constrained HawaiiPay mainframe IT staff were in the midst of preparations for a major software release when the Janus supreme court ruling came down with no allowable timeframe to implement system changes, requiring an immediate update, creating additional activities to make the next payroll run. Errors may have been avoided if proper data validation processes and procedures (checks and balances) had been in place that could have caught the errors prior to the payroll run. Extensive efforts were required to manage and resolve the errors and reimburse affected employees.</p> <p>Many validation activities are performed manually with limited or no automated support. Overreliance on manual validation processes not only increase error rates but also increase the risk associated with over-allocating key resources (see risk #5, "Impact of project resource attrition"), risk #4, "Group 2 and 3 planning and execution activities overlap", and risk #6, "Insufficient project resources").</p>	<p>* Revisit existing data validation processes and procedures (automated and otherwise) to identify which should be implemented/enhanced and prioritized based on criticality and impact to payroll processing and stakeholder confidence. Once identified, an implementation plan can be created and implemented based on available resources to mitigate this risk.</p> <p>* Automated data validation support can not only increase data accuracy but also reduce the level of effort of manual processes for already constrained project resources.</p> <p>* Explore the feasibility of having the agencies and TPA's to validate the final payroll run data before payroll is run.</p>	<p>11/28/18 - SI has implemented an additional 30-35 data validation support scripts that should help increase data validation efficiency as well as checks and balances.</p> <p>10/31/18 - CRT provided DOE with a file match/update process showing element by element changes which should assist with better validation of their data. IV&amp;V will lower this risks rating to a "low" as the project has made good progress toward improving validation.</p> <p>9/26/18 - CRT has made good progress towards automating some data validation processes that have increased the overall quality of incoming data. For example, a process was created to better validate UH/DOE inbound HR data, that allows them to send targeted HR files that CRT processes and sends UH/DOE error details so they can troubleshoot/cleanup. This will likely improve conversion as well as parallel testing error rates as HR data has been the source of many parallel test failures.</p> <p>8/31/18 - Seems like several recent defects identified this month could have been either prevented or identified early enough in the process through the use of validation techniques (user input validation, onscreen user interface instructions, or validation queries) to minimized negative effects as well as minimize level of effort to correct errors.</p> <p>7/31/18 - Opened as a new issue. To mitigate future UPA interface errors, the project has implemented a manual validation process that must be performed every pay period. This is intended to in place until all employees are migrated off the mainframe (i.e., Group 3 deployment).</p>	Quality Management	Issue	Low	Open			Ken

Id	Title / Summary	Finding Description	Analysis and Significance	Recommendation	Updates	Category	Type	Priority	Status	Closure Reason	Closed Date	Risk Owner
26	DHRD users' access to shared tables could result in corrupt payroll data	Inadequate controls to manage access to update payroll data by both DHRD and Payroll Division users could result in payroll data corruption.	<p>DHRD had access and the privileges to make a change which could have corrupted payroll data since there are no agreed upon controls for managing the shared payroll data. In this instance, the error was caught by Central Payroll before it could impact a production payroll run.</p> <p>Making uncontrolled changes to core payroll data can lead to inaccurate paychecks, loss of data integrity, and time wasted spent tracing the source of data corruption. The project has already reported an instance where DHRD users modified Job data tables which would have generated inaccurate or missing paychecks if the error had not been discovered before payroll processing. Further, it is unclear if efforts to train DHRD users to avoid data corruption have been effective or if DHRD had fully participated in HawaiiPay training efforts. The project is currently in the process of exploring options for controlling edits to key tables to prevent payroll data corruption.</p>	<ul style="list-style-type: none"> <li>Explore methods to secure critical payroll data that DHRD does not need permissions to edit.</li> <li>If securing the data via permissions is not a viable option, recommend engaging DHRD leadership to come up with a plan to effectively train DHRD users to avoid corrupting payroll data. Additionally, explore methods to audit impactful DHRD edits and establish appropriate checks and balances to ensure corrupt data does not impact payroll.</li> <li>Provide documentation to DHRD users (or "cheat sheets") that provide clear guidance when editing sensitive tables that could impact payroll.</li> <li>Immediately establish a cross divisional governance working group to define and document process and data sharing governance (including rules, guidelines, executive decision making processes, and user</li> </ul>	<p>11/28/18 - The project conducted an additional training session for DHRD and is planning to reduce some DHRD permissions over time as they may have some permissions they do not need.</p> <p>10/25/18 - There is still no clear agreement on data governance between DHRD and HawaiiPay (e.g. who can change what). Also, many users have non-standard (custom) profiles which could lead to users inadvertently getting access to data they shouldn't and lead to data corruption. Still, IV&amp;V will reduce this risk status to "Low" as DHRD has demonstrated a better understanding of and better control over changes that could impact payroll and HawaiiPay has made efforts to monitor DHRD changes. Further, the project is close to standing up a Enterprise Configuration Management Board (ECMB) that will include DHRD as participants, and intends to leverage this group to address data governance and other controls to help further mitigate this risk.</p> <p>9/26/18 - The project is currently exploring better methods to mitigate including utilizing granular permissions to control access to payroll impacting data. DHRD is currently utilizing table level audit features to monitor HawaiiPay edits to tables that could negatively impact HR data. The project recognizes the need for better governance/agreements in place going forward. Until governance can be developed and agreed to, the project will continue to work to increase communication and informal agreements to avoid negatively impacting each others data.</p> <p>8/31/18 - IV&amp;V opened a new risk with regard to lack of good data governance. Data governance documentation would typically address how the project would managed shared data access and could address DHRD</p>	Quality Management	Risk	Low	Open			Michael
27	Communications to external entities may be ineffectual	While IV&V has observed good efforts by the project to provide reasonable levels of communications to external entities (departments, TPA, banks, etc.), some communication have been misinterpreted or mishandled and have not produced their intended result.	<p>The project has experienced two different occasions of bank sending inaccurate communications to its state employee members. As part of Group 1 preparations, one credit union sent a letter to all their state employee members describing HawaiiPay changes, even though changes were only applicable to Group 1 employees. During Group 2 preparations, American Savings Bank (ASB) sent a similar errant letter to all of their state employee members when, in fact, only Group 2 employees would be impacted.</p> <p>The project has also noted instances where departmental leadership was unaware of their staff's activities and communications with HawaiiPay. This can create confusion and lead to poor leadership decisions that could negatively impact the project as well as distract HawaiiPay leadership as they manage misunderstandings.</p> <p>Failure to provide overt, persistent, and clear communications to key stakeholders can lead to confusion, frustration, and misunderstanding for external entities with inherent communication challenges and can inadvertently result in a loss of confidence in the project.</p>	<ul style="list-style-type: none"> <li>Enact overt and persistent efforts to address communications that have proven to be ineffective and with organizations that have known communication challenges.</li> <li>Over communicate important messages as well as messages that are likely to be missed. For example, multiple emails can be sent to reiterate important messages or restate them in increasingly simple or overt terms.</li> <li>Reassess existing communications and provide further clarification to TPA's to ensure clear understanding and provide guidance on future communications.</li> <li>Provide template letters to TPA's that provide clear communications that TPA's can modify to meet their needs.</li> <li>Obtain agreements with each department on the process for HawaiiPay to review all HawaiiPay related communications sent to employees.</li> <li>Insist departments and banks forward all of their HawaiiPay related state employee communications to HawaiiPay for review prior to sending.</li> </ul>	<p>11/28/18 - As go-live draws near, UH/DOE seem to have stepped up employee HawaiiPay communications. UH has instituted enrollment drives and their project-led train-the-trainer events have been well attended. UH has created a web site for employees with HawaiiPay instructions which has been reviewed and validated by the project for accuracy.</p> <p>10/31/18 - Unclear if UH will be conducting enrollment drives as they have not been transparent with their OCM/employee go-live communications plans. As the December go-live draws near, the project may be unable to plan for the required level of support to assist UH in preparing for enrollment drives due to lack of UH feedback. UH failure to provide their employees with timely and accurate enrollment and go-live instructions could lead to confusion and increase enrollment errors at go-live, which could reflect negatively on the project. IV&amp;V will continue to monitor.</p> <p>10/24/18 - The project has reached agreement with DOE for providing train the trainer support to DOE to assist with enrollment drives and accurate communications to DOE employees. Still, the project remains concerned that DOE has either misconstrued or ignored project guidance on DOE employee pre-go-live communications.</p> <p>10/18/18 - The project plans to assist central payroll with periodic training and Q&amp;A webinars to assist departmental payroll users and ensure thorough understanding of new processes and system functionality. This should go a long way towards good OCM (reducing confusion and user errors that could impact payroll) and should increase user adoption and positive perceptions of HawaiiPay.</p> <p>10/3/18 - DOE has requested the project review of DOE communications material they are preparing to send to their employees.</p> <p>9/26/18 - The project has initiated communications with the DOE Pubic Information Officer who has since committed to a better communications plan and to submitting future employee communication for project review prior to distribution. Communications with banks continue to improve as the project is working closely with key credit unions and will be review communications before distribution.</p> <p>8/31/18 - If Group 3 is delayed to December/ January, IV&amp;V recommends overt communications to explain why it has to be pushed all the way out to December/January instead of November/December.</p> <p>8/20/18 - DOE has chosen not to fully utilize the communications package and guidance provided by HawaiiPay, which seems to have resulted in the DOE sending inaccurate communications to their employees. DOE has sent</p>	Communications Management	Risk	Medium	Open			Michael
30	Strategy for data management not finalized	Without a finalized data management strategy, data policies and inter-agency agreements may not adequately address the needs of all entities with responsibilities for governing data which may result in ineffective data management and remediation processes.	The project has received feedback from other agencies, notably DHRD, regarding data permissions and processes that need to be implemented or enforced which may or may not be in line with the project's vision or approach. The implementation of the enterprise payroll solution, HIP, warrants enterprise-wide policies and governance of the system, it's data, and it's outputs.	<ul style="list-style-type: none"> <li>Work with appropriate DAGS governance processes to develop an over-arching strategy for data management across the departments</li> <li>Work with impacted departments to codvelop and implement data management policies in support of the HawaiiPay solution.</li> </ul>	<p>11/28/18 - Despite project leadership efforts to institute the ECMB, department leadership has indicated they may not be ready to participate at this time.</p> <p>10/24/18 - ECMB plans have progressed. This committee is the first step towards change management governance as well as improving data governance.</p> <p>9/26/18 - The project has initiated plans to create an Enterprise Change Management Board (ECMB) which is intended to shore up governance on many levels including data management. ECMB is awaiting comptroller approval.</p> <p>8/31/18 - The project initiated a monthly meeting with Payroll and HR SMEs across departments to share information regarding system updates, identify lessons learned, establish best practices, and provide status on project's progress. This forum is likely to help identify data management requirements for inclusion in the project's strategy development efforts with DAGS governance.</p>	Project Organization & Management	Risk	Low	Open			Michael



