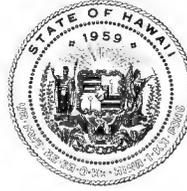


JOSH GREEN, M.D.
GOVERNOR



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February 21, 2024

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

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

Aloha Senate President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawai'i, Department of Human Services, Med-QUEST Division, Health Analytics Program.

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

Sincerely,


Douglas Murdock (Feb 21, 2024 12:27 HST)

Douglas Murdock
Chief Information Officer
State of Hawai'i

Attachment



Hawai'i Department of Human Services Med-QUEST Division Health Analytics Program

IV&V Monthly Status Report
for November 2023

Report Date: November 30, 2023

Overview



- [Executive Summary](#)
- [IV&V Findings and Recommendations](#)
- [IV&V Engagement Status](#)
- [Appendices](#)
 - [A – IV&V Criticality Ratings](#)
 - [B – Risk Identification Report](#)
 - [C – Acronyms and Glossary](#)
 - [D – Background Information](#)



Solutions that Matter

The background is a solid blue color. It features several abstract geometric shapes, including squares and rectangles, some of which are outlined in a lighter blue and others are filled with a slightly darker shade of blue. These shapes are scattered across the page, with a higher concentration on the left side. The text 'Executive Summary' is centered horizontally and positioned in the lower-left quadrant of the page.

Executive Summary

Executive Summary



In November 2023, the State of Hawai'i Health Analytics Program (HAP) Integrated Data and Analytic Platform (IDAP) DDI Project continued to make progress with Data Governance (DG), e.g., mapping flags and indicators to dashboards, understanding flags & indicators for data modeling, data loading and processing perspectives; and continued to evaluate tools for a Master Data Management (MDM) tool. The Project conducted design sessions related to business intelligence (BI) dashboards and Portal which allowed stakeholders the opportunity to provide input to design and development.

The IDAP DDI Vendor made progress with installing and configuring the DG tool. Next steps will include a) designing Purview collections that align with Security profiles; b) developing classifications within Purview; and c) developing the plan to begin IDAP data scans. The Project is developing the DG glossary to include terms specific to the IDAP and Purview tool. The PMO Related Services (PMRS) team established a base data governance framework and a data governance charter. The PMRS team is now focused on creating policies and processes for resolving data quality issues. A new PMRS Data Management team of 7 members has been formed to handle this new work. During this period, the Project evaluated multiple Master Data Management (MDM) tools and narrowed down the options to two (2) tools, Profisee and Rhapsody. The DDI Vendor began preliminary discussions with both vendors. IV&V will examine the system design with associated components over the next few months to determine any potential risks or issues. *IV&V Finding #6 - Risk: A Data Governance framework is not yet established* has been reduced in severity to Low due to the work done on the DG framework as well as the go live date being postponed to end of 2024.

Similarly, IV&V has reduced the severity of *IV&V Finding 8 – Preliminary Concern: The lack of existing business rules glossary and designated data stewards could negatively impact data quality and reduce confidence in the accuracy and reliability of the data warehouse* to Low due to the progress made with the flags and indicators and the go live being pushed forward to end of 2024.

IV&V Concerns and Recommendations



Security Recommendations:

- Ensure the State of HI has security personnel in security meetings.
- Add more security meetings to the calendar and meet on a regular basis to ensure proper and timely development of the RBAC and other security documentation such as the System Security Plan.
- Include IV&V in additional meetings where security topics are discussed. IV&V understood the context and topics being discussed in the Security Design calls, however did not have all of the information shared in other meetings. IV&V could provide valuable insight and additional recommendations if included in meetings where critical topics are discussed.

Data Governance/ Data Management Recommendations:

- DDI Vendor uses ALM, the HAP project plans are planning to use Jira. Why not standardize and use one devops tool?
- Data Governance Strategy – Orientation presented a high-level program (an outline) and was user-focused, not data governance (DG) focused. Recommendation to ensure the presentations are appropriate to audience and purpose.
- For course material creation DDI Vendor and PMRS should collaborate to avoid overlap and/or rework.
- UH is currently delivering, e.g., definitions and logic for 10 Flags & Indicators every two weeks. 300 Flags & indicator will take 60 weeks. IV&V recommends timeboxing this effort to allow adequate time (not discuss in so much detail).
- Re: HAP_IDAP_Advanced Analytics Platform (RACI: PORTAL): Not sure if all the participants have an understanding if VDI is needed or not. IV&V recommends defining terms so that the audience understands key acronyms and terms.

Project Health

[Updated SLIDE]



Sep	Oct	Nov	Category	Health	IV&V Observations
			Project Management		Although this category has outstanding staffing needs, the project has coverage for critical roles and a mitigation strategy to assign essential tasks while the vacancies are being filled. The PMO Vendor and DDI Vendor continue to communicate well and demonstrate strong project management practices.
N/A	N/A	N/A	Quality Management		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	Requirements Management		There are no IV&V findings for this category. The project continued with reviewing existing requirements during this reporting period.
N/A	N/A	N/A	Operating Environment		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	Development Environment		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	Software Development		There are no IV&V observations for this category due to the project's current phase in this reporting period.
N/A	N/A	N/A	System and Acceptance Testing		There are no IV&V observations for this category due to the project's current phase in this reporting period.
			Data Management		The HAP Data Governance framework is not yet established. Yet, the project is making significant strides towards the DG Framework creation and implementation of related tools.
N/A	N/A	N/A	Operations Oversight		There are no IV&V observations for this category due to the projects current phase in this reporting period.
N/A	N/A	N/A	CMS Streamlined Modular Certification		There are no IV&V observations for this category due to the projects current phase in this reporting period.

IV&V Findings and Recommendations

IV&V Findings and Recommendations



Project Management

Finding 3 – Issue: The lack of all required HAP project and program staff may cause delays in the HAP start-up/planning and execution phases.	Criticality Rating*
<p>Significance:</p> <p>Having limited resources to support HAP planning and execution phases could delay critical requirements gathering and validation processes, which could impact the effectiveness of the resulting solution. Also, stretching existing resources could put a strain on the quality of work required to maintain project efficiencies and execution.</p> <p>The Implementation Advanced Planning Document (IAPD) identifies several project resources that have yet to be obtained, including positions within the HAO, the University of Hawaii and AHCCCS. This may have a negative impact on the program and subsequent projects. The resources identified in the IAPD should be available to work on the project prior to the IDAP vendor onboarding to avoid rework, schedule delays, and overall productivity loss of the Program/Project Teams.</p> <p>November 2023 Status Update: HAO continues to procurement efforts for key resource gaps. IV&V will examine in the next reporting period whether sufficient resource coverage is attained to close this finding.</p>	
Recommendations	Progress
<ul style="list-style-type: none"> IV&V recommends continuing with hiring the required staff and/or contractors to fill open positions and roles 	In-Progress
<ul style="list-style-type: none"> If required work is postponed as priorities are established, IV&V recommends planning for the possibility of short- or longer-term additional resource needs to avoid downstream delays. 	In-Progress

* Refer to Slide 20 for Definitions on IV&V Findings Criticality Ratings

IV&V Findings and Recommendations



Data Management

Finding 6 – Risk: A Data Governance framework is not yet established.	Criticality Rating*
<p>Significance:</p> <p>The Data Governance (DG) Framework is a foundational deliverable, essential to informing most of the DG work in progress. Without an approved DG framework, there may be rework required to align the work that is in progress to the DG framework once it is approved.</p> <p>November 2023 Status Update: The PMO Related Services (PMRS) team has established a base data governance framework, a data governance charter and is creating policies and working with the state and partners to help resolve data quality issues. A new PMRS Data Management team of 7 members is forming to handle the new work; the new PMRS team started on October 1, 2023. The State selected Purview (+ Manta) as the DG tool, DDI Vendor has been working to install and configure Purview within the Azure environment. DDI Vendor evaluated multiple Master Data Management (MDM) tools and narrowed it down to two (2) tools, Profisee and Rhapsody; DDI Vendor having preliminary discussions with both vendors, e.g., about cost and implementation. IV&V will examine the system design with associated components over the next few months to determine any potential risks or issues.</p> <p>HAO has communicated that the go-live date is going to be postponed, IV&V will reduce the severity to low.</p>	
Recommendations	Progress
<ul style="list-style-type: none"> IV&V recommends developing a DG Framework, policies, processes, practices, and tools. 	In-Progress
<ul style="list-style-type: none"> IV&V recommends communicating the DG structure to all key and impacted (internal and external) stakeholders. <p><i>* Refer to Slide 20 for Definitions on IV&V Findings Criticality Ratings</i></p>	In-Progress

IV&V Findings and Recommendations



Data Management

<p>Finding 8 – Preliminary Concern: The lack of existing business rules glossary and designated data stewards could negatively impact data quality and reduce confidence in the accuracy and reliability of the data warehouse.</p>	<p>Criticality Rating*</p>
<p>Significance:</p> <p>Having foundational data dictionaries, rules, and workflow documentation could prevent delays or ineffective resolution of data quality issues. Delays in unresolved data quality could lead to decreased confidence in the accuracy and reliability of the data warehouse.</p> <p>November 2023 Status Update: Flags & Indicators, e.g., are a basis for the business glossary and business rules. University of Hawaii (UH) delivered a list of 300 Flags & Indicators on August 14th, 2023, which the DDI Vendor is building into the data model and must deliver as part of Task Order 1 and is mapping Flags & Indicators to dashboards. UH is currently delivering, e.g., the logic for 10 Flags & Indicators to the DDI Vendor every two (2) weeks. IV&V will continue to monitor the progress over the next few months to determine any potential risks or issues.</p> <p>The HAO has communicated that the go-live date is going to be postponed, IV&V will reduce the severity to low.</p>	<p>L</p>
<p>Recommendations</p>	<p>Progress</p>
<p>To mitigate this risk, it is essential to establish clear and comprehensive documentation of business glossary rules and designate data stewards to oversee the process. This approach will help to ensure that the IDAP vendor can quickly and effectively address any data quality issues that arise and maintain a high level of confidence in the accuracy and reliability of the data warehouse. Additionally, as data stewards are identified, it is important to document and communicate the level of effort, time commitment, and responsibilities of the data steward.</p>	<p>In-Progress</p>

* Refer to Slide 20 for Definitions on IV&V Findings Criticality Ratings

IV&V Findings and Recommendations



Organizational Change Management

Finding 9 – Preliminary Concern: Lack of early formal Stakeholder identification in the DDI phase, may result in low-end user adoption and increased end-user error.	Criticality Rating*
<p>Significance:</p> <p>The lack of a formal stakeholder matrix that identifies user types like Super Users, Change Champions/Change Catalysts early in the DDI phase, before the JPAS/JAD sessions, may result in low-end user utilization/adoption rates and increased probability of end-user error rates in production. Having the right stakeholders in the JAD/JPASS sessions will encourage more comprehensive elicitation sessions and business requirements.</p> <p>November 2023 Status Update: The Project continues to keep stakeholders informed and includes key stakeholders in critical design sessions. IV&V will determine at which point this finding may be closed.</p>	
Recommendations	Progress
<p>IV&V recommends identifying end-user types and including these types in the requirements and design sessions so that the resulting Solution addresses their needs and supports high-quality user experiences.</p>	In-Progress
<p>IV&V recommends updating the OCM plan to include more detail in how change will be communicated with a communication matrix and schedule for OCM activity execution. The plan should also include how end users will be engaged during DDI through to M&O.</p>	N/A

* Refer to Slide 20 for Definitions on IV&V Findings Criticality Ratings

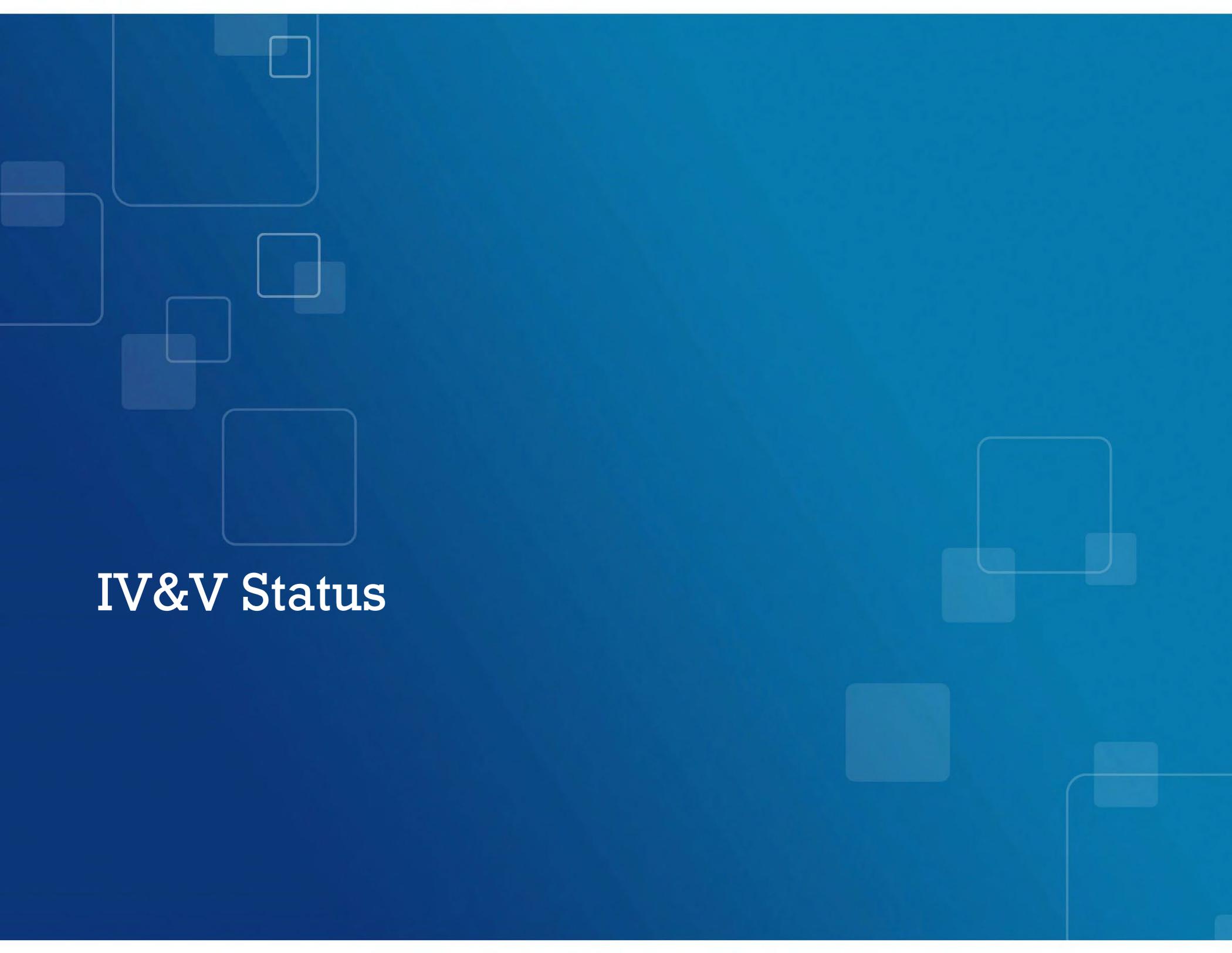
IV&V Findings and Recommendations



CLOSED FINDINGS

Finding #	Category	Finding Statement	Finding Type	Reason for Closing	Resolution Date
1	Project Management	The HAP Sponsor and team are visible and provide dedicated leadership to the Program.	Positive Finding	Expired*	5/31/2022
2	Project Management	The PMO is planning to begin OCM earlier than planned.	Positive Finding	Expired*	5/31/2022
5	Project Management	Lack of a centralized program-level document repository may cause rework and delays by the project team to find the information needed to perform their activities.	Preliminary Concern	The PMO Vendor established a SharePoint site for all project aspects (State and Vendor) to share	6/30/2022
7	HAP Annual Conference	The HAP Annual Conference promoted a sense of coordination and collaboration in a multi-vendor environment prudent for the success of the HAP.	Positive Finding	Expired*	4/30/2023

* Positive Findings automatically expire in the next quarterly reporting period.

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IV&V Status

IV&V Engagement Status

IV&V Engagement Area	Nov	Comments
IV&V Budget		No changes to the IV&V budget.
IV&V Schedule		There are no IV&V schedule updates in this reporting period.
IV&V Deliverables		IV&V discussing deliverables with HAO for FY24.
IV&V Staffing		IV&V added a Certified Data Management Specialist and Technical Expert for Enterprise Architecture and Testing
IV&V Scope		HAO discussing IV&V team scope changes in this reporting period.
CMS Streamlined Modular Certification		The HAO regularly reports to CMS on project activities and continues discussions with CMS.

Engagement Status Legend

	The engagement area is within acceptable parameters.		The engagement area is somewhat outside acceptable parameters.		The engagement area poses a significant risk to the IV&V project quality and requires immediate attention.
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IV&V activities in the November reporting period:

- Continue attending project meetings
- Assess project documentation and activities
- Begin new assessment period for IV&V Quarterly Assessment Report (October – December 2023)
- Finalize October IV&V Monthly Status Report
- Develop draft November IV&V Monthly Status Report

Planned IV&V activities for the December reporting period:

- Continue attending project meetings
- Assess project documentation and activities
- Assess project activities for IV&V Quarterly Assessment Report (October – December 2023)
- Finalize November IV&V Monthly Status Report
- Develop draft December IV&V Monthly Status Report

Deliverables and Artifacts Reviewed



The following are a list of documents and artifacts reviewed during this period:

#	Documents/ Artifacts	Dates
1	HAP-PMRS-Del 6.1.7-Data Governance Charter Del 6.1.10-Hierarchy	10/1/2023
2	HI HAP DDI - Bi-Weekly Status Report	11/1/2023 11/15/2023
3	HAP UH: Discussion – Topic: Infrastructure/Architecture Meeting Minutes	11/2/2023
4	Flags & Indicators Discussion Minutes	11/3/2023 11/17/2023
5	HAP UH: Discussion - Topic: Training/ Technical Support Meeting Minutes	11/6/2023 11/13/2023 11/14/2023
6	Technical Sponsor: Certification	11/7/2023
7	HAP DDI: All Things Data Minutes	11/7/2023 11/14/2023 11/27/2023
8	Technical Sponsor: Critical Path & MVP Minutes	11/20/2023
9	UAT Overarching Approach Meeting Minutes	11/21/2023 11/27/2023
10	HAP PMRS - Del 6.1.8 - HAP Data Sharing Agreement Policy v0.1_draft	11/22/2023
11	DG vs DM Discussion Notes	11/28/2023

Deliverables and Artifacts Reviewed



The following are a list of documents and artifacts reviewed during this period:

#	Documents/ Artifacts	Dates
12	HAP UH: Discussion – Topic: Dashboard Mockup Review Meeting Minutes	11/29/2023
13	Data Quality Feedback Loop Minutes	11/29/2023
14	Change Control Management Workflow	N/A
15	Data Sharing Agreement - Workflow v2	N/A
16	Program Orientation (as presented by PMRS)	N/A
17	DG Hierarchy - Draft of Committee Roles & Responsibilities	N/A
18	HAP DG Handbook	N/A
19	HAP DDI - First 10 Dashboards requested from State	N/A

Additional Inputs



The following are a list of meetings IV&V attended during this period:

#	Meetings and Work Sessions Attended	Date
1	HAP IDAP - Security Design Session - Weekly	11/1/2023
2	HAP PMO - RAID	11/6/2023
3	HAO PMRS - Data Governance - Strategy Meeting Data Sharing Agreement	11/6/2023 11/7/2023 11/13/2023 11/27/2023 11/28/2023
4	HAP PMO – UH Touchpoint	11/6/2023 11/13/2023 11/27/2023
5	HAP IDAP Hawaii Dashboard Design Meetings (RACI: Portal)	11/9/2023 11/16/2023 11/30/2023
6	HAP PMO - Data Quality Feedback Loop – Strategy	11/29/2023
7	HAP IDAP Advanced Analytics Platform (RACI: Portal)	11/29/2023



Appendices

Appendix A – IV&V Criticality Ratings

Criticality Rating	Definition
	<p>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.</p>
	<p>A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely, and a different approach may be required. Mitigation strategies should be evaluated and implemented as soon as feasible.</p>
	<p>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.</p>

Appendix B – Findings Log

The complete IV&V Findings Log for the DHS Health Analytics Project is provided in a separate file with the Quarterly Assessment Reports.

Appendix C – Acronyms and Glossary

Acronym	Definition
AHCCCS	Arizona Health Care Cost Containment System
APD	Advance Planning Document
BAA	Business Associate Agreement
CFR	Code of Federal Regulations
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMS	Center for Medicare and Medicaid Services
CR	Change Request
DDI	Design, Development and Implementation
DED	Deliverable Expectation Document
DCCA	Hawaii Department of Commerce and Consumer Affairs
DHS	Hawaii Department of Human Services
DLIR	Hawaii Department of Labor and Industrial Relations

Appendix C – Acronyms and Glossary

Acronym	Definition
DOTAX	Hawaii Department of Taxation
EA	Enterprise Architecture
EFT	Electronic Funds Transfer
EPHI	Electronic Protected Health Information
ETS	State of Hawaii Office of Enterprise Technology Services
FAR	Federal Acquisition Regulation
HAR	Hawaii Administrative Rules
HHDC	Hawaii Health Data Center
HHS	U.S. Department of Health and Human Services
HIPAA	Health Information Portability and Accountability Act of 1996

Appendix C – Acronyms and Glossary

Acronym	Definition
HPMMIS	Hawaii Pre-paid Medical Management Information System
HRS	Hawaii Revised Statutes
HST	Hawaii Standard Time
IDAP	Integrated Data And Analytic Platform
IEEE	Institute of Electrical and Electronic Engineers
IRS	Internal Revenue Service
ITIL	Information Technology Infrastructure Library
IV&V	Independent Verification and Validation
KOLEA	Kauhale On-Line Eligibility Assistance
M&O	Maintenance & Operations
MQD	Hawaii Department of Human Services MedQuest Division
NIST	National Institute of Standards and Technology

Appendix C – Acronyms and Glossary

Acronym	Definition
OBC	Outcomes Based Certification
OE	Operating Environment
OIT	Department of Human Services Office of Information Technology
PHI	Protected Health Information
PIP	Performance/Process Improvement Plan
PMBOK®	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project/Program Management Office
PMP	Project Management Plan
QA	Quality Assurance
QM	Quality Management

Appendix C – Acronyms and Glossary

Acronym	Definition
RMP	Requirements Management Plan
RTM	Requirements Traceability Matrix
SEI	Software Engineering Institute
SLA	Service-Level Agreement
SMC	Streamlined Modular Certification
SME	Subject Matter Expert
SOW	Statement of Work, Scope of Work
VVP	Software Verification and Validation Plan
XLC	Expedited Life Cycle

HI DHS Health Analytics Program

The State of Hawaii through the Department of Human Services (DHS) is building a health analytics program by developing an integrated data and analytics platform to consolidate multiple data sources into a single integrated analytic platform, evolving its capacity for advanced analytics, and maturing the data governance processes of Medicaid data sources that will contribute data to the platform.

Health Analytics IV&V Project

IV&V performs objective assessments of the project beginning with the oversight and evaluation of the design, development, and implementation (DDI) phase of the establishment of the health analytics project. IV&V will support DHS in developing an evaluation framework that will endure beyond the scope of the DDI phase of the project, into future maintenance and operations (M&O) phases. This project shall establish an evaluation strategy and structure that continues to facilitate the growth, evolution, optimal operations and maturity of DHS' health analytics project.

The six key areas of the IV&V scope of work are:

1. Planning
2. Implementation
3. Recommendations
4. Evaluation
5. Reporting
6. Other Requirement

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's Eclipse IV&V® Technical Assessment 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

Logic Model Approach

PCG will leverage the Eclipse Assessment Methodology described above to perform traditional IV&V activities and blend it with a project logic model to focus on project outcomes (answering the question, “Is the integrated data and analytic platform and Data Governance Program helping DHS’ Medicaid program achieve its desired outcomes?”) with the underlying objective of achieving CMS certification through the OBC process. Using this blended approach, we will evaluate the inputs, activities, outputs, short-term outcomes, intermediate outcomes, and long-term outcomes of the project and will inform project stakeholders of significant risks or issues as the Health Analytics Project is planned, developed and deployed.

Appendix D – Background Information

IV&V Assessment Categories for the Health Analytics Project:

- Project Management
- Quality Management
- Training
- Requirement Management
- Operating Environment
- Development Environment
- Software Development
- System and Acceptance Testing
- Data Management
- Operations Oversight



Solutions that Matter