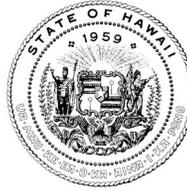


JOSH GREEN, M.D.  
GOVERNOR



DEPT. COMM. NO. 06  
DOUGLAS MURDOCK  
CHIEF INFORMATION  
OFFICER

**OFFICE OF ENTERPRISE TECHNOLOGY SERVICES**

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August 21, 2023

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, Public Utilities Commission (PUC), Content and Document Management System Project.

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

Sincerely,

  
Douglas Murdock (Aug 21, 2023 10:30 HST)

Douglas Murdock  
Chief Information Officer  
State of Hawai'i

Attachment



# Content and Document Management System (CDMS) Project

Hawaii Public Utilities Commission (PUC)

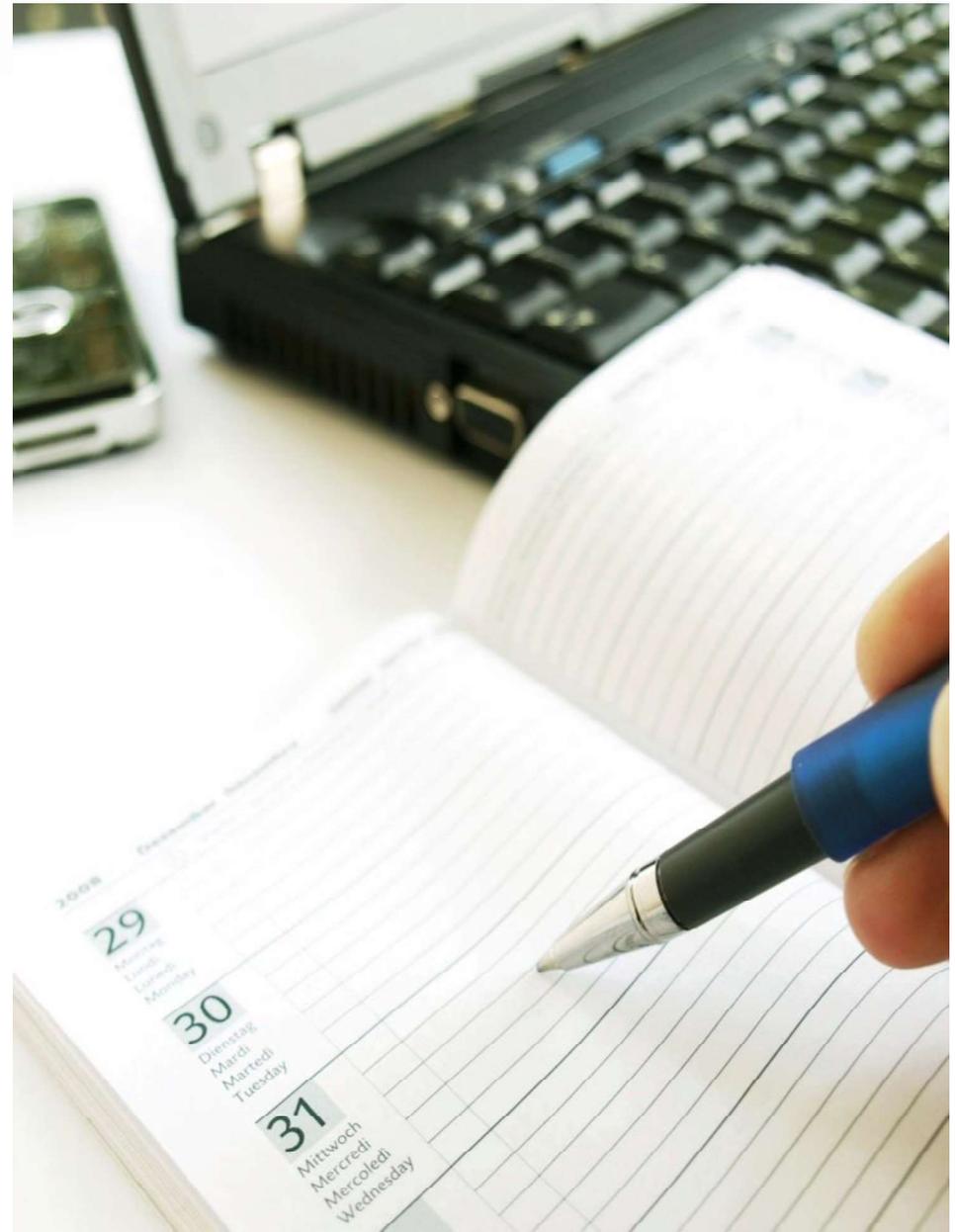
IV&V Monthly Status Report - FINAL  
For Reporting Period: **July 2023**

*Draft Submitted: 8/10/2023*

*Final Submitted: 8/18/2023*

# Overview

- Executive Summary / Go-Live Readiness
- IV&V Findings and Recommendations
- IV&V Preliminary Concerns
- IV&V Scope and Approach
- IV&V Engagement Status
- Appendices
  - A – IV&V Criticality Ratings
  - B – IV&V Inputs
  - C – Upcoming IV&V Activities



# Executive Summary

The CDMS has been in production for approximately 6 weeks and is presently under the 90-day warranty period scheduled to end September 19, 2023. While internal and external users can use the system and perform most of their functions satisfactorily, the Project continues to uncover issues that require attention. For instance, users are currently unable to fully search PDF content in stored case documents within the CDMS. Additionally, users have noted challenges with viewing some documents via the default DocuSign viewer. Moreover, unexpected problems with partial payments and voiding transactions were encountered. Some of these challenges may be a result of the SI's insufficient/inefficient business analyses, lack of comprehensive testing, and lack of attention to process improvement, and, which IV&V has raised in prior reports. The SI is making efforts to address these outstanding issues.

The PUC and IV&V are concerned that software bugs and enhancements that are identified during the 90-day warranty period may not be addressed as part of the 90-day warranty period because there may be disagreement between what items are bugs and enhancements due to suboptimal designs (fixes included in the pre-paid 90-day warranty) versus enhancements due to new requirements (fixes paid out of the post-90-day support contract). It is important for the Project to clarify these items to minimize disagreements at the end of the warranty period.

Although the Project activated the HUI Pro/PUC Experience ticketing system and is currently using it to track system tickets, the system is not meeting the Client's expectations. For example, the system does not effectively track prioritization, lacks sufficient categories to manage tickets, does not allow ticket editing once submitted, and fails to categorize tickets as defects or enhancements. Without these features, the Project may miss opportunities to address defects/issues or prioritize tickets effectively. The Client continues to use their MS Planner Task System to track tasks for internal and external requests, as well as requests that are sent to the ticketing system as a way to manage feedback and tasks.



# Executive Summary

Jul '23	Category	IV&V Summary
L	Project Management	Overall, project deliverables and resource management remain low risk. However, the Project has concerns with the ticketing system, how defects and issues are being managed and prioritized, and whether these issues will be addressed during the 90-day warranty period free of charge or will require PUC to pay out of their post-90-day warranty support contract. This lack of understanding should be addressed before the 90-day period runs out.

Jul '23	Category	IV&V Summary
L	Software Development	The project's lack of sufficient focus on overall business analysis and process improvement during the development phase resulted in some suboptimal design and development. Some of the issues are high priority and require quick attention, such as the inability to search and filter documents across the entire system and the challenges with viewing PDFs using the DocuSign viewer.

Jul '23	Category	IV&V Summary
M	Testing	The Project continues to encounter system defects and issues. Though the number of issues are not high, the issues are impactful and there is a concern that the system might not fully meet all the contractual needs of PUC. One specific issue that was detected is the inability to perform unrestricted full-text searches across all content stored in the document repository.



# Executive Summary

Jul '23	Category	IV&V Summary
	Data Management	The Project has successfully completed merging the majority of active duplicate accounts and is currently working on merging the remaining accounts. Despite ongoing account clean-up, IV&V is unaware of material data quality issues causing any problems thus far. The Project is also in the process of cleaning up fiscal data, specifically payment adjustments and waivers. As a result, PUC's fiscal data may not be entirely accurate until this data cleanup is finished.

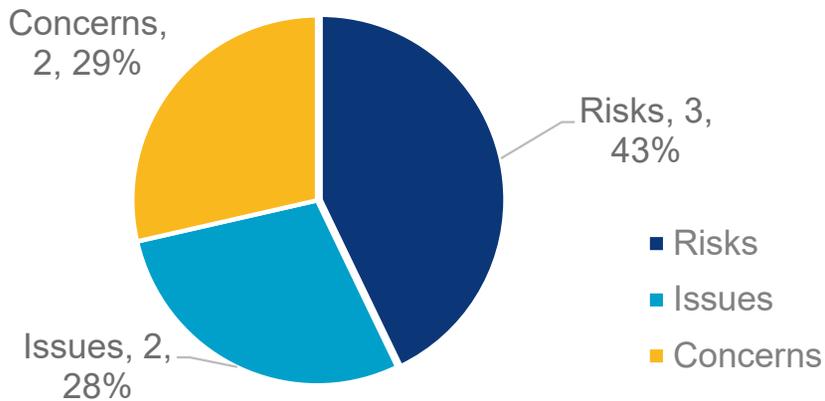
Jul '23	Category	IV&V Summary
	Training (OCM)	Overall, the OCM (Organizational Change Management) messages and communications from PUC were successful. However, there were instances where external users may not have received adequate support and communication. The Project has made efforts to address these gaps and promptly addressed them by providing supplementary support and communication as required.



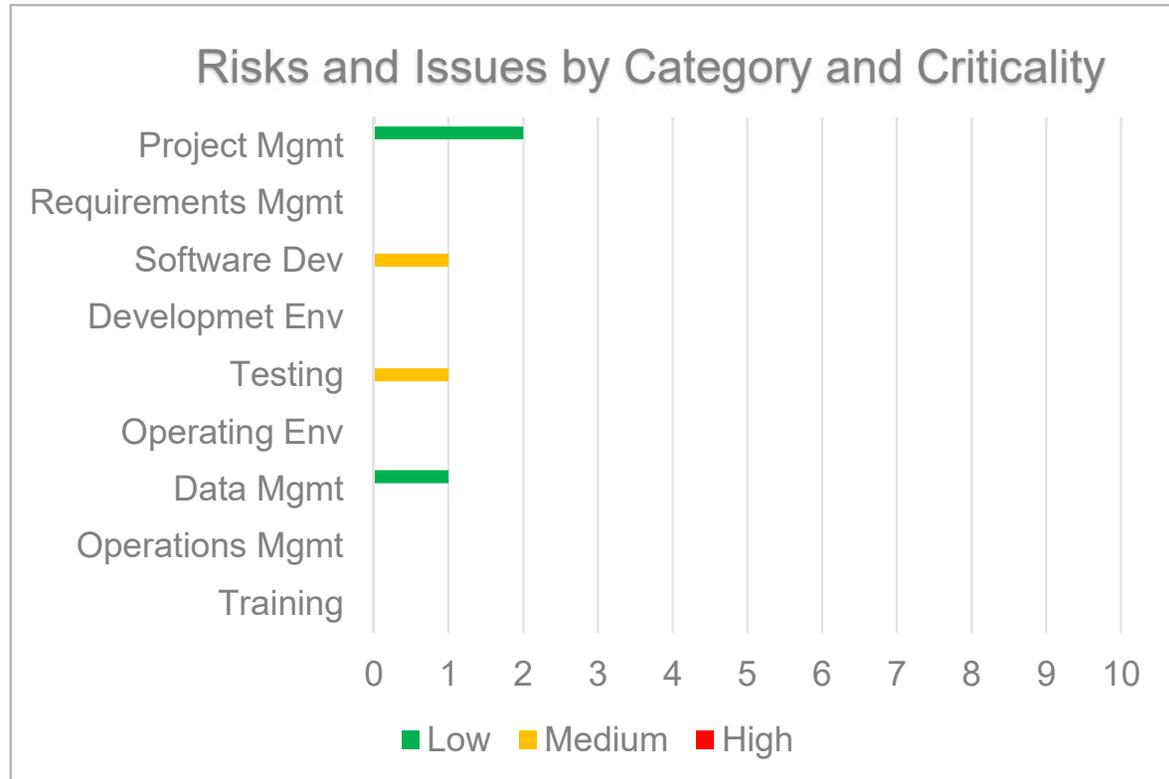
# Executive Summary

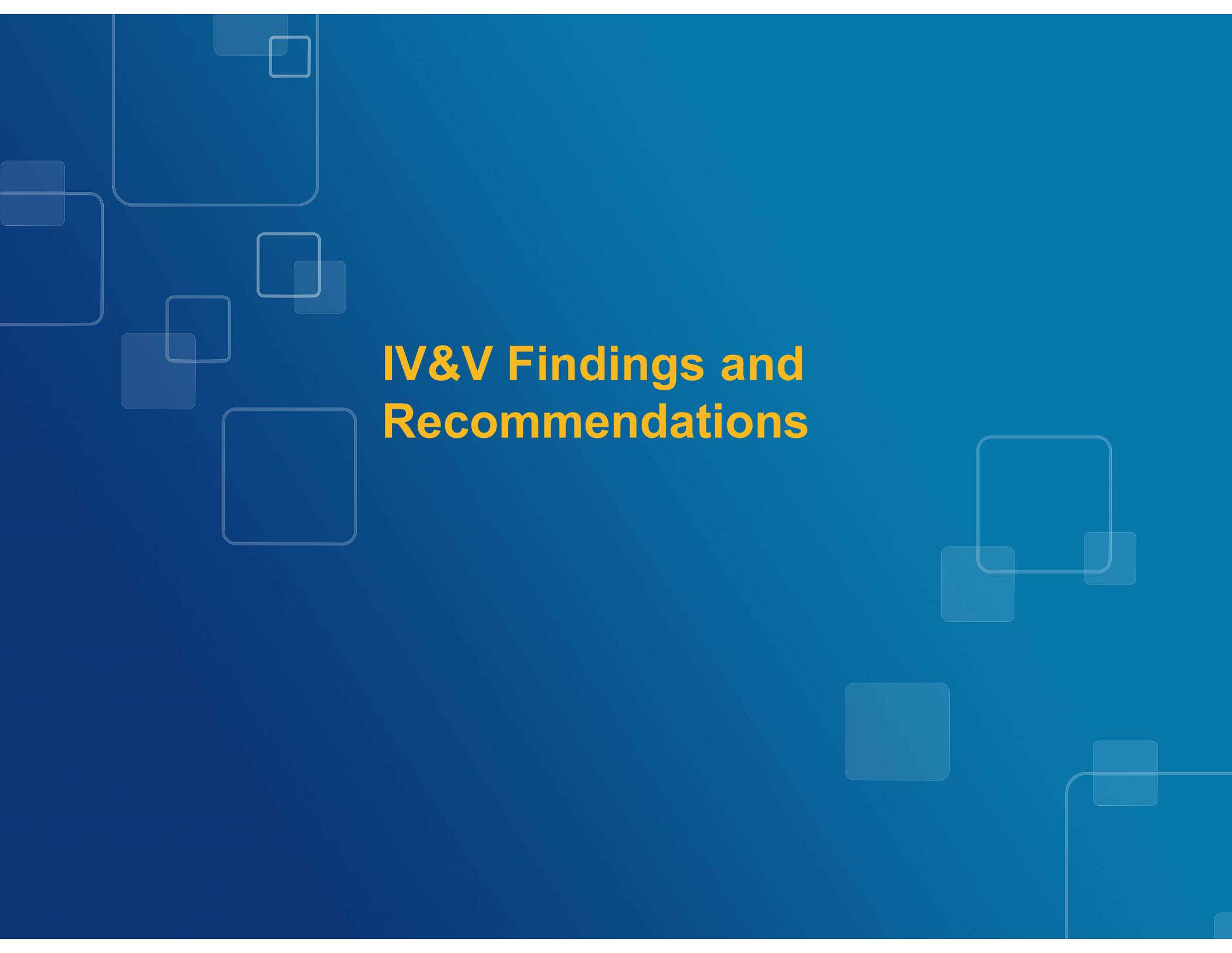
IV&V is monitoring seven findings. One finding (OCM #23) was closed and one concern (Warranty #28) was opened. Project Management accounts for two low risks and the two concerns. The two medium issues are Software Development and Testing Related (Insufficient Process Improvement #24 and Insufficient Testing #28). Data management remains low and OCM/Training was closed.

### All Findings by Type



### Risks and Issues by Category and Criticality





# IV&V Findings and Recommendations

# IV&V Findings and Recommendations

IV&V ID #15	Type: Risk	Status: In progress	Category: Project Management
	Rating: Low		Date Opened: September 30, 2021

**Title:** Project deliverables and artifacts that lack sufficient detail could lead to project delays, misunderstandings, inefficient project execution, and rework.

**Observation:** Early SI submissions of project deliverables lacked sufficient detail.

**Context:** Project planning documentation such as the Project Plan, Risk Management Plan, Communication Plan and Change Management Plan, can be effective tools for projects of this size to increase stakeholder understanding of the goals, approach, steps, timelines, roles and responsibilities. Additionally, conceptual designs, requirements traceability matrices, and process maps can also provide important information for successfully developing a system that meets PUC's needs.

**Impact:** Failure to provide sufficient detail in project deliverables can lead to project team confusion, missteps, project delays, misunderstandings, inefficient project execution, and rework.

## Updates

7/31/2023: The draft 7.1 As-Built System Documentation was delivered. PUC is still reviewing the document but preliminary feedback indicates the deliverable is too high-level and not sufficiently complete. PUC requested additional time to review.



# IV&V Findings and Recommendations

<b>IV&amp;V ID #15 (cont.)</b>	<b>Type: Risk</b>  <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Project Management</b>  <b>Date Opened: September 30, 2021</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
Although DEDs were developed for all deliverables, the SI should involve PUC before providing the draft deliverable to obtain feedback and expedite review cycles.			Long term	In progress
The SI should perform additional QA of deliverables prior to submission			Long term	In progress



# IV&V Findings and Recommendations

<b>IV&amp;V ID #18</b>	<b>Type: Issue</b> <b>Rating: Medium</b>	<b>Status: In progress</b>	<b>Category: Software Development</b> <b>Date Opened: October 28, 2021</b>
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**Title:** Lack of attention to process improvement can lead to a system that simply automates existing processes instead of improving them

**Observation:** The extent to which the Project intends to focus on process improvements remains unclear. Pain points do not seem comprehensively tracked or considered during design sessions or whether all stakeholders are aware of or are actively utilizing the pain points list. While IV&V recognizes that change is difficult, some stakeholders appear to be hesitant to let go of familiar processes during the design sessions. It remains unclear if PUC has assigned the role of change champion to drive organizational process improvements.

**Context:** IT Projects that assign change champions and prioritize process improvement have an increased likelihood of resulting in systems that meet the organization's future business needs and improve system acceptance.

**Impact:** Lack of attention to process improvement can lead to a final product that fails to provide maximum value to users. Tracking pain points can be an effective OCM strategy to promote user adoption and increase user buy-in by providing visibility into how the system can resolve their pain points. Also, identifying and implementing opportunities for process improvement avoids SME frustration and rework.

## Updates

7/31/2023: The Project's lack of sufficient focus on process improvement and overall business analysis during the development phase resulted in some designs that were suboptimal. At the time, users were unable to effectively visualize the final product which contributes to discovering around 40-60 production issues to date. Among these issues, some are high priority and require quick attention, such as the inability to search and filter documents across the entire system and the default viewing of PDFs in the users' viewer instead of the DocuSign viewer. As users gain access to more parts of the system and experience its completed functionality in production, addressing these issues is important to ensure a satisfactory user experience.



# IV&V Findings and Recommendations

IV&V ID #18 (cont.)	Type: Issue Rating: Medium	Status: In progress	Category: Software Development Date Opened: October 28, 2021	
Recommendations/Action Items			Period	Status
Communicate to users and stakeholders process improvement that may not be optimized upon go-live but may be addressed during M&O.			Medium Term	In progress
Identify a PUC process improvement resource to drive/coordinate organizational process improvement efforts and assure system related processes are optimized. This resource could attend design sessions and validate designs support process improvement.			Short term	Not started
Work closely with the SI to identify opportunities for process improvement and implement associated features in the system being careful not to overwhelm users with too much change.			Long term	In progress
Formally engage stakeholders in identifying and tracking pain point and out-of-scope requirements so they are not forgotten and can be revisited in future project phases or other organizational initiatives.			Long term	In progress
Formally track readily available details of out-of-scope requirements that could be beneficial to users so they are not forgotten and they can be easily revisited in future project phases or other organizational initiatives.			Long Term	In progress



# IV&V Findings and Recommendations

ID #19

Type: Risk

Rating: Low

Status: Open

Category: Project Management

Date Opened: November 30, 2021

**Title:** Key PUC project resources performing multiple roles could lead to schedule delays and significant project disruption.

**Observation:** IV&V has noted that at least two of the PUC project team members perform multiple roles and responsibilities on the project which may impact their ability to be successful if project demands increase.

In addition to serving as PUC's CDMS PM, this position also performs the following roles: Organizational Change Management lead, Process Improvement lead, Business Analyst Co-lead, User Acceptance Test (UAT) Co-lead, and Contract Administrator. In addition to performing ongoing operational responsibilities, the PUC CDMS Technical Lead is the Project IT Sponsor, Data SME, BA Co-Lead, and User Acceptance Test Co-Lead, and is heavily relied on for business analysis.

While these team members have indicated a strong commitment to project success, each has multiple competing priorities. The team members stated their support staff, including the new communications lead, will take on more responsibility to alleviate demands on their time. Also, the team members believe that the overall future workload will lessen.

It remains unclear if PUC staffing levels are appropriate for this project.

**Context:** Typically, Hybrid Agile projects require an increased level of customer engagement through all phases of the project. Overreliance on key resources can not only overtax and thereby reduce the effectiveness of these key individuals but also present a risk of significant project disruption in the event of their departure.

**Impact:** If the PUC PM and Technical SME are unable to transfer some responsibilities to other PUC resources, this could stretch them beyond their capacity which may lead to project delays and a decrease in quality in the project tasks they perform.

## Updates

7/31/2023: The Project effectively manages the time of the Client PMs and technical SMEs without negatively impacting its progress. At present, there is no expectation that upcoming project activities will demand an excessive allocation of these resources. Nevertheless, the project team made the decision to direct help-desk questions to PUC instead of the vendor. However, it remains uncertain whether this will burden PUC resources. Furthermore, it has come to light that PUC does not have a resource plan in place that clearly identifies roles and responsibilities as the project transitions to M&O. This lack of clarity may pose challenges during this phase.



# IV&V Findings and Recommendations

IV&V ID #19 (con't)	Type: Risk Rating: Low	Status: Open	Category: Project Management Date Opened: November 30, 2021	
Recommendations/Action Items			Period	Status
Continue to focus on high priority and critical items			Medium term	In progress
Continue to leverage analyst to relieve the demand on the PUC PM			Medium term	In progress
The Project should plan for different contingencies depending on when the third PM becomes available.			Medium term	Complete
The Project should plan for different contingencies depending on the role of the original PM moving forward.			Medium term	Complete
Consider temporary staff augmentation options to both augment the existing project team and augment the operations staff to offload operational responsibilities from key resources			Long term	Complete
Executive leadership regularly monitor the workload and job satisfaction of these key individuals as well as assist with workload management, clarification of priorities, and establishment of a sustainable pace.			Long term	Complete
Temporarily re-allocate operational responsibilities from key resources until project responsibilities are reduced.			Long Term	Complete



# IV&V Findings and Recommendations

<b>ID #20</b>	<b>Type: Risk</b> <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Data Management</b> <b>Date Opened: March 31, 2022</b>
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**Title:** Data cleansing challenges could overwhelm PUC SMEs and could confuse users, reduce user buy-in, and/or lead to schedule delays if the Project went live with some bad data

**Observation:** IV&V is concerned with the poor quality of the legacy system data and whether PUC has the capacity to effectively cleanse their data. Further, if the project aims to meet data conversion milestones, the project may elect to go-live with some bad data to meet their planned go-live date.

**Context:** Typically, any bad data is addressed prior to go live to facilitate user adoption and to increase perceived system quality.

**Impact:** If all important data is not cleaned up prior to go-live, user adoption may be challenged, and user perception of the system may be diminished.

## Updates

7/31/2023: The Project has successfully completed the merging of the majority of active duplicate accounts and is currently working on merging the remaining accounts. Despite ongoing account clean-up, there have been no reports of these data quality issues causing any problems thus far. In addition to this, the Project is also in the process of cleaning up fiscal data, specifically payment adjustments and waivers. The source MS Access database lacked the necessary consistency to accurately transfer this data. As a result, PUC's fiscal data may not be entirely accurate until this data cleanup is finished. However, PUC does not expect any upcoming audits at the moment. In the event of an audit, PUC can still account for and trace data using the old system, ensuring that the audit process can be managed effectively.



# IV&V Findings and Recommendations

<b>IV&amp;V ID #20 (cont.)</b>	<b>Type: Risk</b> <b>Rating: Low</b>	<b>Status: In progress</b>	<b>Category: Data Management</b> <b>Date Opened: March 31, 2022</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
The Project determine how long it will take to complete the post go live cleanup activities and if possible, complete after go-live is complete, but prior to production users using the system.			Medium term	In progress
Communicate to users and stakeholders the expected bad data and provide timelines and processes for fixing the bad data.			Medium term	In Progress
Develop additional automation / pre-go-live strategies to clean data			Medium term	In Progress



# IV&V Findings and Recommendations

ID #23

Type: Risk

Rating: Low

Status: Closing

Category: Training (OCM)

Date Opened: February 28, 2023

**Title:** Lack of PUC OCM resources could hinder OCM effectiveness

**Observation:** PUC has limited capacity to perform comprehensive OCM activities. OCM is currently being led by the PM with assistance from the PUC communications officer, both of which have limited capacity.

**Context:** A major goal of OCM is to ensure an organization adopts new systems and processes without causing negative impacts.

**Impact:** Insufficient OCM can lead to user dissatisfaction and a lack of buy-in. The need to address user concerns and confusion as they struggle to adapt to the new system/ processes could weigh heavily on project leadership and PUC staff the week of go-live.

## Updates

7/31/2023: The Project has been effectively managing OCM and stakeholder communications despite limited resources. Staff communications are consistently up-to-date, and the Project has introduced a CDMS Help Channel to provide further support for communication needs. While some challenges have been encountered with system functionality, the majority of PUC users have embraced and are actively using the system. Due to this positive adoption and usage, IV&V is now closing this finding.



# IV&V Findings and Recommendations

<b>IV&amp;V ID #23 (cont.)</b>	<b>Type: Risk</b> <b>Rating: Low</b>	<b>Status: Closing</b>	<b>Category: Training (OCM)</b> <b>Date Opened: February 28, 2023</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
PUC could consider pushing the May 15, 2023 go-live date further out to provide more time to complete all OCM activities satisfactorily.			Medium term	Complete
PUC strategically plan to implement select OCM activities that will provide the greatest OCM benefit.			Medium term	Complete
Focus efforts towards public portal users given the greater risk of bad press if communications are insufficient.			Medium term	Complete



# IV&V Findings and Recommendations

IV&V ID #24	Type: Issue Rating: Medium	Status: Open	Category: Testing Date Opened: February 28, 2023
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**Title:** Insufficient testing could lead to unexpected delays, increased burden on PUC testers, and reduced user buy-in.

**Observation:** The tests scripts the SI provided for system and user acceptance testing (UAT) were not comprehensive enough to assure full test coverage of the system. Given the significant number of defects (over 200) found in the first round of UAT, it remains unclear if SI system tests, prior to UAT, were comprehensive. The SI has yet to revise their test scripts to PUCs satisfaction. PUC has stated it appears SI regression testing efforts may be insufficient.

**Context:** One of the goals of testing is to reduce the number of defects found in subsequent project phases. For example, prior to UAT, system test should be conducted to minimize the number of defect introduced into the UAT environment so that UAT users can concentrate on determining if the system meet their needs instead of defects that should have been caught earlier.

**Impact:** Insufficient SI testing could increase the UAT level of effort if they are left with the additional burden of discovering defects missed by the SI, resulting in further Project delays. Further, overall impressions of the system and the improvements it will bring could be overshadowed by negative opinions voiced by PUC testers and thereby reduce user buy-in. If testing is not completed in a timely manner and/or if the SI is unable to assure each requirement has been fully met and comprehensively tested, system go-live could be delayed.

## Updates

7/31/2023: The Project continues to encounter system defects and issues. Though the volume of these problems does not seem to be high, there is a concern that the system might not fully meet all the contractual needs of PUC. One specific issue that has come to light is the inability to perform unrestricted full-text searches across all content stored in the repository. It was only during production usage that PUC became aware of this missing feature.



# IV&V Findings and Recommendations

<b>IV&amp;V ID #24 (cont.)</b>	<b>Type: Issue</b>  <b>Rating: Medium</b>	<b>Status: Open</b>	<b>Category: Testing</b>  <b>Date Opened: February 28, 2023</b>	
<b>Recommendations/Action Items</b>			<b>Period</b>	<b>Status</b>
As UAT is the last phase before production extend UAT as long as necessary to ensure the system is ready for go-live to PUC's satisfaction.			Medium term	Complete
PUC and the SI perform significant ad-hoc testing			Medium term	Complete
PUC could consider pushing the May 15, 2023 go-live date further out to provide more time to complete all Project activities satisfactorily. PUC reported no significant business impact if go-live is further delayed.			Medium term	Complete



# IV&V Findings and Recommendations

<b>IV&amp;V ID #27</b>	<b>Type: Concern</b> <b>Rating: n/a</b>	<b>Status: Open</b>	<b>Category: Project Management</b> <b>Date Opened: June 30, 2023</b>
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**Title:** Upon its implementation, the SI failed to introduce a ticketing system, potentially leading to missed opportunities for enhancements and delays in addressing user needs.

**Observation:** The SI did not deliver its Help Desk Ticketing System upon go-live to track user feedback post-go-live. To mitigate this, PUC created an interim Task System utilizing an existing enterprise tool, Microsoft Planner, to track feedback and internal and external user requests.

**Context:** A help desk ticketing system is helpful to track user feedback and support items during Maintenance & Operations

**Impact:** Without a sufficient Ticketing System, it becomes challenging to track and manage issues which could result in missed opportunities, limited visibility into the system and inability to prioritize issues. This can cause user confusion and delays in addressing user needs.

## Updates

7/31/2023: The Project activated the HUI Pro/PUC Experience ticketing system and is currently using it to track system tickets. However, the ticketing system is not meeting PUC's expectations. For example, the system does not track prioritization effectively, there are not a lot of categories to help manage tickets, tickets are not editable once submitted, and the tickets are not categorized by defects or enhancements. Without these enhancements, the Project may miss opportunities to address defects/issues, or unable to prioritize tickets effectively. However, PUC continues to use their MS Planner Task System to track PUC Tasks for internal and external requests, as well as requests that are sent to the HUI system. PUC reports this has been effective to manage feedback and tasks.



# IV&V Findings and Recommendations

<b>IV&amp;V ID #28</b>	<b>Type: Concern</b> <b>Rating: n/a</b>	<b>Status: Open</b>	<b>Category: Project Management</b> <b>Date Opened: July 31, 2023</b>
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**Title:** Lack of agreement regarding scope of the 90-day warranty can lead to disagreement, missed fixes and additional cost.

**Observation:** There appears to be a misunderstanding between PUC and the SI as to what items are considered warranty items to be addressed as part of the 90-day warranty period.

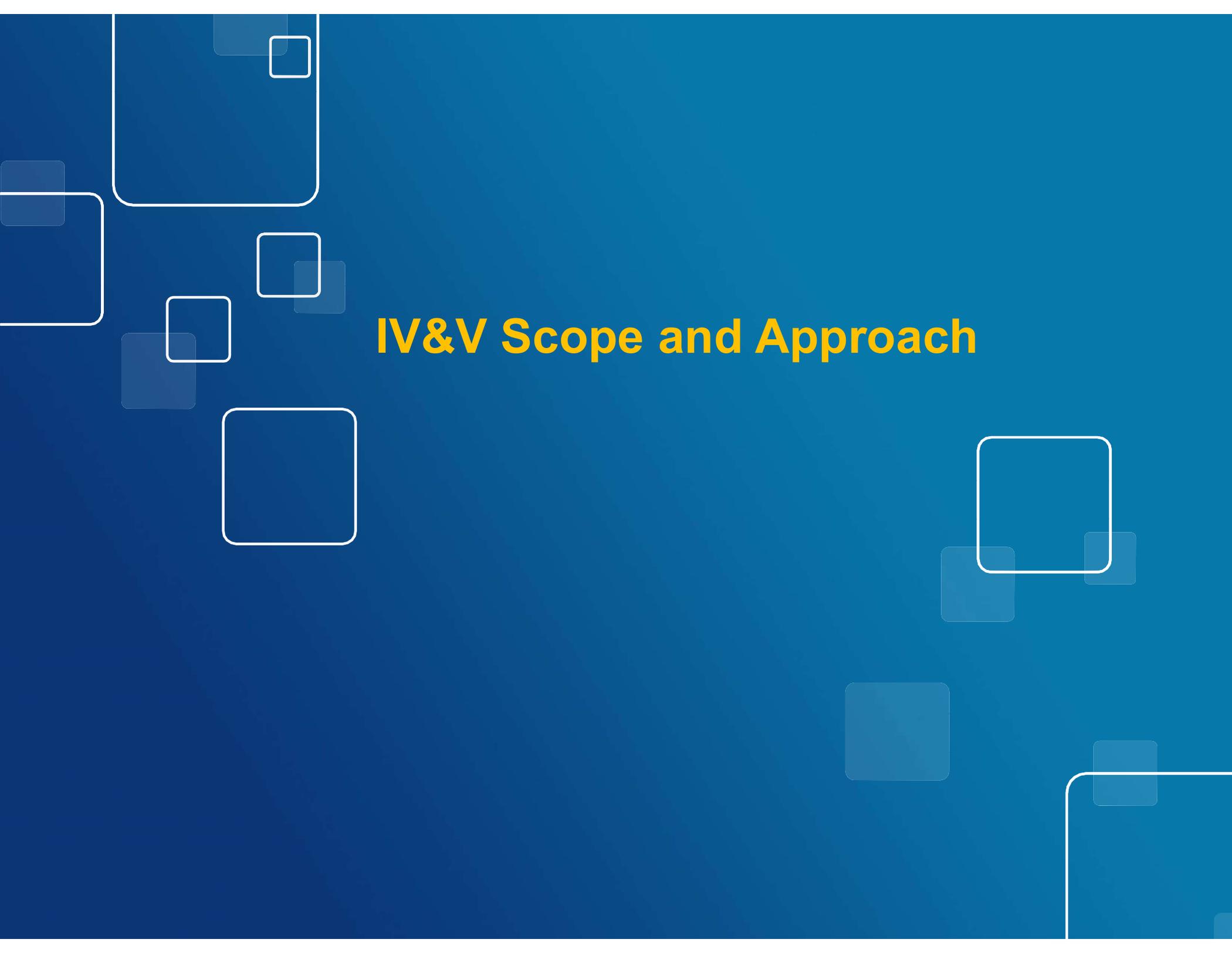
**Context:** Typically, all system bugs and enhancements from bad designs that are identified during the warranty period are addressed as these are typically items that were missed during the design and development phases. This helps ensure the system meets customer needs and performs as expected.

**Impact:** If the warranty period is not effectively used, items that ought to be addressed may not be addressed during the warranty and will require additional cost to fix at a later date. Additionally, items that may impact the user experience may be delayed if not resolved during the warranty.

## Updates

7/31/2023: n/a





# IV&V Scope and Approach

# IV&V Scope

- In accordance with PCG's contract for the CDMS Project at the PUC, the subject areas that are within the scope of IV&V activities include:
  - Project Management
  - Requirements Management
  - Software Development
  - Development Environment
  - System and Acceptance Testing
  - Operating Environment
  - Data Management
  - Operations Oversight
  - Training
- As the CDMS IV&V project progresses, PCG's activities will focus on areas that represent highest risk to the Hawaii PUC.

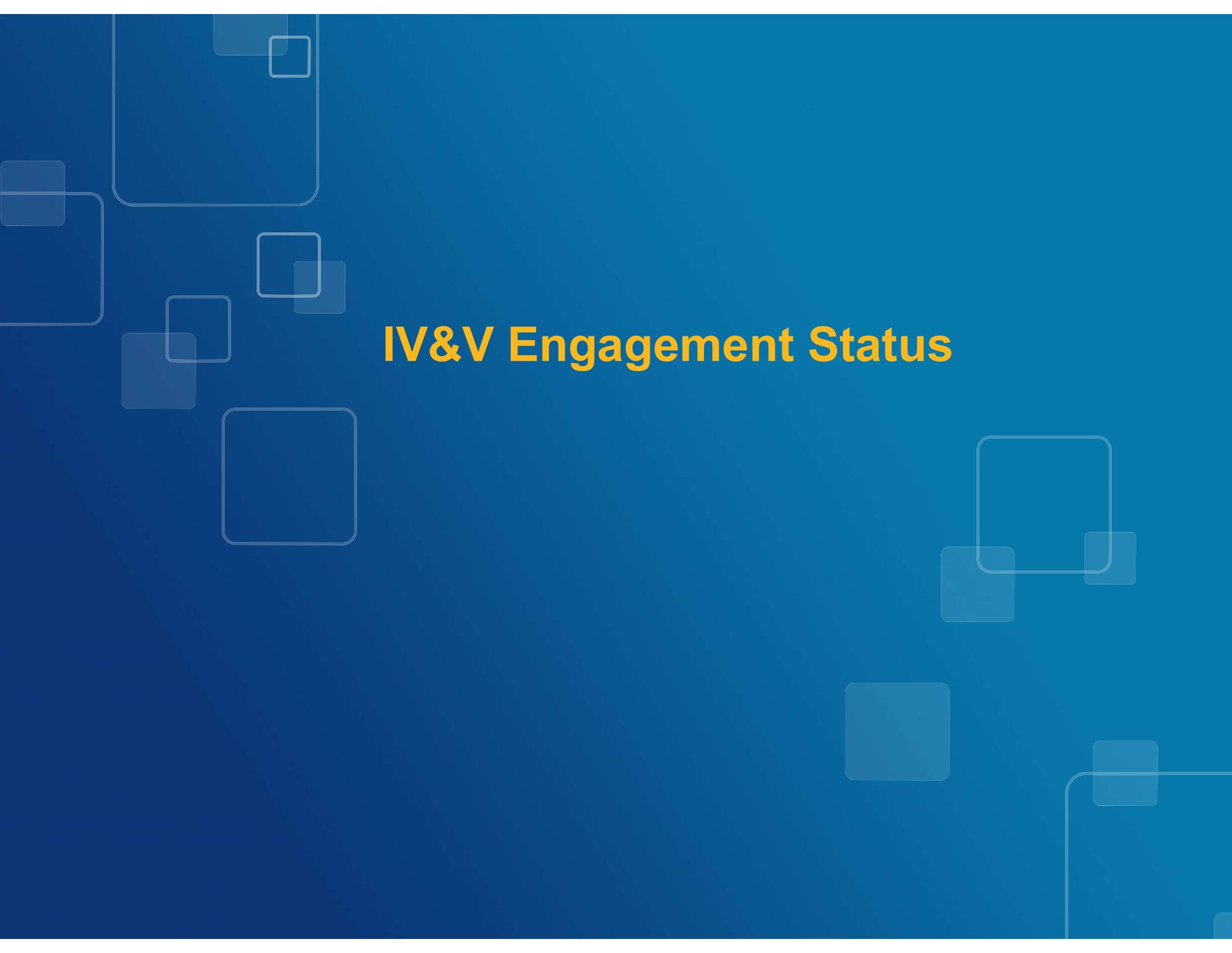


# IV&V Approach and Methodology

- 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.





# IV&V Engagement Status

# IV&V Engagement Status

IV&V Engagement Area	Apr 23	May 23	June 23	Comments
IV&V Budget				The IV&V engagement is deliverables-based and PUC is not at risk of being over budget.
IV&V Schedule				The IV&V engagement aligns with the SI schedule.
IV&V Deliverables				There are no known risks to upcoming IV&V deliverables.
IV&V Staffing				The IV&V team maintains the proposed team and there are no foreseeable changes.
IV&V Scope				The IV&V project continues to operate within the scope of its engagement.

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.

The background is a solid blue color with various decorative elements. On the left side, there are several overlapping squares and rounded rectangles, some with white outlines and others with semi-transparent blue fills. On the right side, there are more squares and rounded rectangles, some with white outlines and others with semi-transparent blue fills, arranged in a more scattered pattern.

# Appendices

# Appendix A – IV&V Criticality Ratings

See definitions of Criticality Ratings below:

Criticality Rating	Definition
 H	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
 M	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely and a different approach may be required. Mitigation strategies should be evaluated and implemented as soon as feasible.
 L	A low rating is assigned if there is a possibility of 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 Inputs

Meetings attended during the reporting period:	Artifacts reviewed during the reporting period:
Weekly check-ins with PUC	Training Materials
Monthly check-ins with PP	
Weekly PM Meetings	
Go, No-Go Meetings	
Training Sessions	



# Appendix C – Upcoming IV&V Activities

Anticipated meetings to attend next period	Anticipated artifacts to review next period
Weekly check-ins with PUC	
Monthly check-ins with PP	
Weekly PM Meetings	
CDMS – Risk Management Meeting	
Deliverable Review Sessions	



# Appendix D – Recommendation Periods

Period	Definition
<b>Short Term</b>	These are recommendations that should be completed within the month and/or require less than a month to complete
<b>Medium Term</b>	These are recommendations that should be completed within 2-6 months and/or require 2-6 months to complete
<b>Long Term</b>	These are recommendations that should be completed within 6 months to a year and/or require > 6 months to complete.





**Solutions that Matter**