

#### OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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November 16, 2020

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

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

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

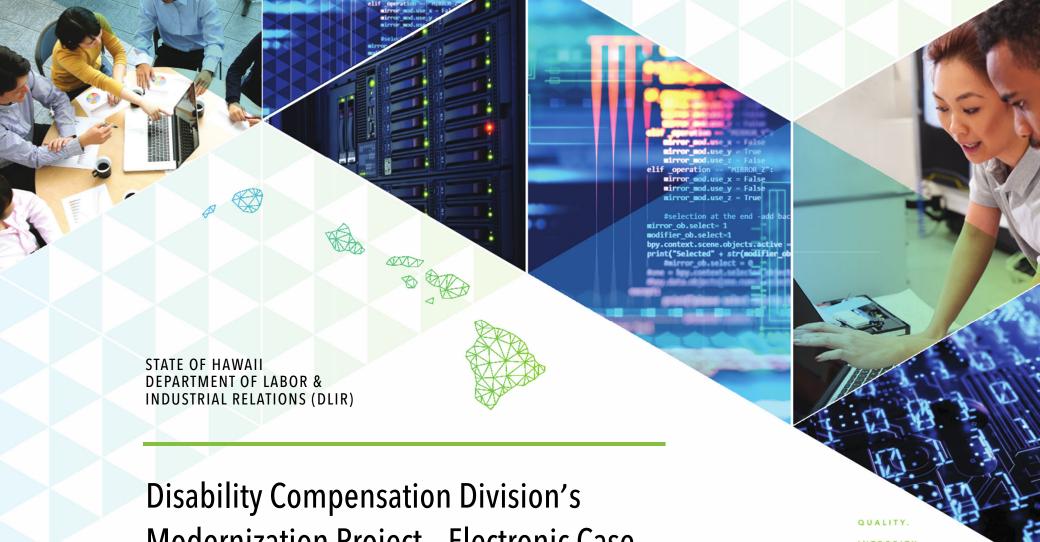
Pursuant to HRS section 27-43.6, which requires the Chief Information Officer to submit applicable independent verification and validation (IV&V) reports to the Legislature within ten days of receiving the report, please find attached the IV&V report the Office of Enterprise Technology Services received for the State of Hawaii Department of Labor& Industrial Relations Disability Compensation Division's Modernization Project – Electronic Case Management System.

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

Sincerely,

DOUGLAS MURDOCK Chief Information Officer State of Hawai'i

Attachment (1)



Disability Compensation Division's Modernization Project – Electronic Case Management System (eCMS)

MONTHLY ON-SITE IV&V REVIEW REPORT

REPORT FINALIZED

September 28, 2020 | Version 1.0

October 30, 2020



INSIGHT.

CERTIFIED
PUBLIC
ACCOUNTANTS









# Document History

DATE	DESCRIPTION	AUTHOR	VERSION
10/09/20	Monthly On-site IV&V Review Report Draft created	Julia Okinaka	0.0
10/30/20	Monthly On-site IV&V Review Report Final updated to reflect no comments submitted in Appendix F. One additional document listed in Appendix C.	Julia Okinaka	1.0



## **EXECUTIVE SUMMARY**

#### **BACKGROUND**

The State of Hawaii (State), Department of Labor and Industrial Relations (DLIR) contracted DataHouse Consulting, Inc. (DataHouse) for the Disability Compensation Division's (DCD) Electronic Case Management System Project (eCMS Project). DLIR contracted Accuity LLP (Accuity) to provide Independent Verification and Validation (IV&V) services for the eCMS Project.

The Initial On-Site IV&V Review Report (IV&V Initial Report) was issued on August 30, 2019 and provided an initial assessment of project health as of June 30, 2019. Refer to the full Initial Report for additional background information on the eCMS Project and IV&V. The Monthly On-Site IV&V Review Reports (IV&V Monthly Reports) build upon the Initial Report to update and continually evaluate project progress and performance. Refer to Appendix E: Prior IV&V Reports for a listing of prior reports.

The project resumed Phase 1 development and testing activities and is also in the planning and requirements gathering stage for Phase 2. The focus of our IV&V activities for this report included the completion of a two-month in-depth assessment of requirements, business process reengineering (BPR), and data conversion and the beginning of a two-month assessment of risk management. IV&V has areas of limited visibility or access to project activities and documentation that may prevent a complete identification of project risks.

The IV&V Dashboard on the following two pages provides a quick visual and narrative snapshot of both the project status and project assessment as of September 28, 2020. Additional explanation is included in Findings and Recommendations by Assessment Area for new findings and in Appendix D: Prior Findings Log for prior report findings. Refer to Appendix A: IV&V Criticality and Severity Ratings for an explanation of the ratings.

RISK MANAGEMENT

"All of life is the management of **risk**, not its elimination."

- Walter Wriston



# **PROJECT ASSESSMENT**

AS OF SEPTEMBER 28, 2020

## SUMMARY RATINGS

## **OVERALL RATING**



Deficiencies were observed that merit attention and remediation in a timely manner.

**PROGRAM GOVERNANCE** 



**PROJECT MANAGEMENT** 



**TECHNOLOGY** 



**CRITICALITY RATINGS** 



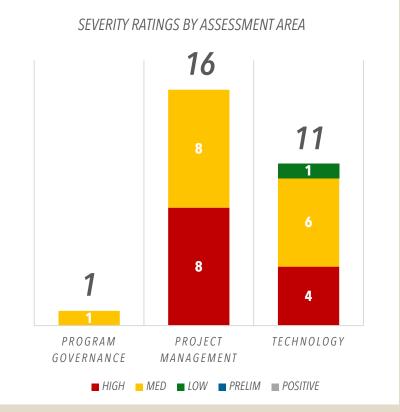




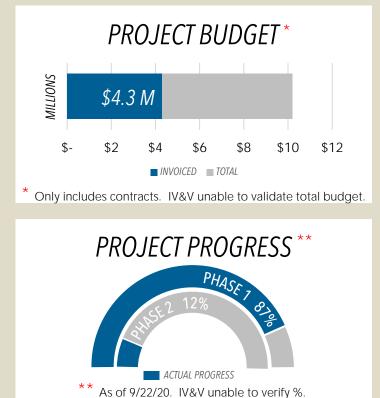


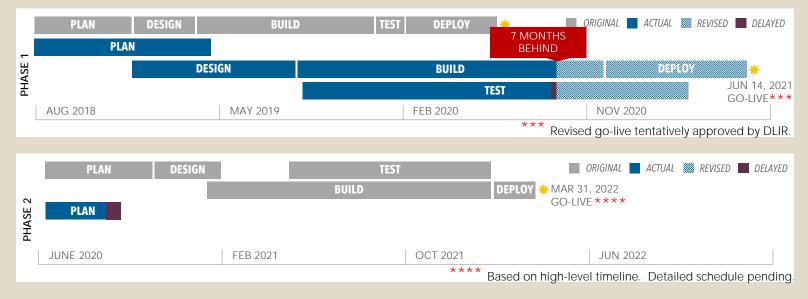


## 28 OPEN FINDINGS



## 47 OPEN RECOMMENDATIONS





# ASSESSMENT AREA & RATINGS SUMMARY

AS OF SEPTEMBER 28, 2020

JUL	AUG	SEP	IV&V ASSESSMENT AREA	IV&V OBSERVATIONS
NA	•	<b>Y</b>	Overall	The eCMS Project significantly increased momentum with both Phase 1 development and testing and Phase 2 requirements gathering activities occurring. Unprecedented demands for DLIR services due to the COVID-19 pandemic continue to impact many DLIR employees. The commitment and efforts of DLIR project resources to participate in and complete eCMS Project work in addition to high operational workloads have kept the project moving forward. DataHouse continues to be flexible and adjust for on-going DLIR project resource constraints. With the Phase 1 Content Management component system scheduled to go live on November 25, 2020 and with several DLIR project resource intensive activities leading up to go-live, managing and coordinating limited resources will be key for smooth and timely project execution.
				Project Schedule: The project is generally tracking to the revised timelines, however, there are slight delays in some underlying tasks. Accuity is unable to fully assess schedule variances (refer to finding 2019.07.PM13).
				<i>Project Costs:</i> Contract costs are within the total contract amounts, however, payment schedules were not revised for changes in deliverable timelines. Accuity is unable to fully assess cost variances (refer to finding 2019.07.PM12).
				Quality: DLIR established success metrics but has not yet finalized quality metrics (refer to finding 2019.07.IT05). Accuity will evaluate progress towards achieving project goals when DLIR begins to collect metrics data.
G	G	G	Program Governance	The eCMS Project Executive Steering Committee (ESC) convened for the monthly meeting. A new DCD Executive Sponsor was appointed for the eCMS Project due to changes in DLIR leadership.
R	R	R	Project Management	Many DLIR project resources were able to participate in project activities again. The Phase 1 and Phase 2 activities are scheduled to occur simultaneously through June 2021. As DLIR project resources are having to balance many departmental priorities, effective resource management will be key to maintaining the project momentum achieved this month. Proactive planning, active project performance monitoring, contingency planning, and other foundational project management processes including schedule, communications, requirements, cost, and risk management are also essential for project success. DLIR and DataHouse resumed efforts to address prior IV&V findings (refer to Appendix D: Prior Findings Log) and scheduled meetings to regularly discuss findings and remediation plans.
<b>₹</b>	<b>•</b>	<b>~</b>	Technology	DataHouse development of the Phase 1 Content Management solution is nearing completion. With the Content Management go-live quickly approaching, complete and clear go/no-go criteria need to be established to ensure proper review, acceptance, and operational readiness. As for Phase 1 Case Management, DataHouse was able to resume development cycles with the return of necessary DLIR project resources. DataHouse completed the Epic 3 build and kicked-off the final Epic 4 efforts. DLIR performed lite user acceptance testing (UAT) for Case Management. IV&V does not have adequate visibility of DataHouse development and testing activities or DLIR testing activities to fully assess methodologies and progress. DLIR continues to evaluate, select, and implement various security tools and controls as part of the security management plan.

## FINDINGS AND RECOMMENDATIONS BY ASSESSMENT AREA



### **OVERALL RATING**

The overall rating is assigned based on the criticality ratings of the IV&V Assessment Categories and the severity ratings of the underlying findings (see Appendix A: IV&V Criticality and Severity Ratings). The tables below summarize the criticality ratings for each IV&V Assessment Category in the three major IV&V Assessment Areas. Six IV&V Assessment Categories improved from the prior report while the rest remained the same. DLIR and DataHouse were able to rebuild momentum in executing Phase 1 and Phase 2 activities simultaneously, however, the overall rating also reflects the need to improve many foundational project processes especially considering the lasting impact of the COVID-19 pandemic on DLIR project resources and the quickly approaching Phase 1 Content Management go-live in November 2020.

### AT-A-GLANCE

Increased **MOMENTUM** 

**COMMITMENT** and **EFFORT** from project resources

Resource management is **KEY** 

Improve FOUNDATIONAL project processes

JUL	AUG	SEP	PROGRAM GOVERNANCE	JUL
G	G	G	Governance Effectiveness	R
Y	Y	Ŷ	Benefits Realization	R
JUL	AUG	SEP	TECHNOLOGY	R
Y	Y	Y	System Software, Hardware, and Integrations	R
G	G	G	Design	R
V	V	Y	Data Conversion	V
R	R	R	Quality Management and Testing	G
			Configuration Management	NA
R	R	R	Security	

JUL	AUG	SEP	PROJECT MANAGEMENT
R	R	R	Project Organization and Management
R	R	R	Scope and Requirements Management
R	R	R	Cost, Schedule, and Resource Management
R	R		Risk Management
R	R	R	Communications Management
₹V	V		Organizational Change Management (OCM)
G	G	G	Business Process Reengineering (BPR)
NA	NA	NA	Training and Knowledge Transfer



## PROGRAM GOVERNANCE

Governance Effectiveness

Benefits Realization



	III I Alia I SED I	SED	SED IV&V ASSESSMENT	IV&V OBSERVATION	FINDINGS		
JUL		CATEGORY	IVAV OBSERVATION	NEW	OPEN	CLOSED	
<b>G</b>	G	G	Governance Effectiveness	The eCMS Project Executive Steering Committee (ESC) meets monthly to discuss project updates and major decisions. A new DCD Executive Sponsor was appointed for the eCMS Project due to changes in DLIR leadership. Continued ESC guidance and oversight are critical for providing workable options with the limited budget and resources and helping the project to maintain current momentum.	0	0	0
Y	Y	<b>1</b>	Benefits Realization	DLIR updated success metric goals and plans for collecting baseline success metric data. DLIR still needs to begin collecting and monitoring success metrics data (2019.07.PG05).	0	1	0



## PROJECT MANAGEMENT

Project Organization and Management

Scope and Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Transfer



## PROJECT MANAGEMENT

	JUL AUG		SEP IV&V ASSESSMENT	NAV OBSERVATION	FINDINGS			
JUL	AUG	SEP	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED	
R	R	R	Project Organization and Management	DataHouse and DLIR worked together to rebuild project momentum and coordinate the many Phase 1 and Phase 2 activities that began occurring simultaneously in the current month. With Phase 1 and Phase 2 scheduled to run concurrently through June 2021, strong project management processes are needed to maintain the current project pace and to adjust for evolving COVID-19 pandemic impacts on DLIR project resources (2020.03.PM01). DataHouse updated the project management plan to include some additional details regarding Phase 2, however, further clarification of project management processes is still needed (2020.08.PM01). Although it is difficult to know the exact road ahead, proactive planning, active project performance monitoring, and contingency planning are critical for anticipating changes, identifying performance issues, and minimizing impacts to the project.  DLIR and DataHouse resumed efforts to address prior IV&V findings (refer to Appendix D: Prior Findings Log) related to a number of foundational project processes (2020.07.PM01).  Improvements to the change management process (2019.09.PM01), project organization and collaboration between DLIR and DataHouse (2019.07.PM02), and deliverable review (2019.07.PM03) are still needed.	0	6	0	



	PROJECT MANAGEMENT
	Project Organization and Management
F	Scope and Requirements Management
F	Cost, Schedule, and Resource Management
F	Risk Management
	Communications Management
	Organizational Change Management
	Business Process Reengineering
	Training and Knowledge Transfer

JUL	AUG SEP	AUG SEP IV&V ASSESSMENT IV&V OBSERVATION	IVO V ORSERVATION	FINDINGS			
JUL	AUG	SEP	CATEGORY	IVAV OBSERVATION	NEW	OPEN	CLOSED
R	R	R	Scope and Requirements Management	Requirements gathering for Phase 2 continued throughout September. DataHouse made improvements to streamline the requirements gathering processes for capturing and confirming user stories through real-time sharing of requirements documentation. DataHouse indicated they are a little behind on requirements gathering activities and plan to increase the number of sessions with DLIR subject matter experts (SMEs) each week to mitigate this. IV&V is unable to assess progress without additional information on the complete scope of Phase 2. Draft user stories for Phase 2 appear to be more complete as compared to Phase 1, however, it is unclear how some types of requirements will be captured. IV&V will review the final Phase 2 requirements deliverable due in October for completeness and traceability.  Phase 1 requirements traceability (2019.10.PM01) and documentation (2019.07.PM10) still need improvement. DataHouse plans to release an updated requirements traceability matrix (RTM) in October. Additionally, DLIR's review of their third-party vendor's requirements assessment results is still pending.	0	2	0



## PROJECT MANAGEMENT

Project Organization and Management

Scope and Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Transfer

JUL	AUG	SEP	IV&V ASSESSMENT	IVOV ORSERVATION	_	INDING	S
JUL	AUG	SEP	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
R	R		Cost, Schedule, and Resource Management	The COVID-19 pandemic continues to impact many DLIR employees (2020.03.PM01) and Phase 1 and Phase 2 activities are scheduled to occur simultaneously through June 2021. DLIR project resources are having to balance many departmental priorities and their commitment and efforts to complete eCMS Project work in addition to high operational workloads have kept the project moving forward. Effective resource management (2019.09.PM02) and schedule management processes (2019.07.PM13) are key to maintaining the current project pace. These processes help to align the limited availability of DLIR project resources with required project tasks, maximize efficiency of their time spent doing project work, and ensure that they are not overtasked or overworked. DLIR should also keep exploring options to obtain additional project resources (2019.07.PM14). DLIR and DataHouse are actively monitoring and managing Amazon Web Services (AWS) environment costs. Improvements are still needed to better track and monitor all project costs (2019.07.PM12). Additionally, DataHouse's contract payment schedules are not revised for changes in completion of milestones and deliverables resulting in prepayment of contract funds.	0	4	0
R	R	Y	Risk Management	DLIR resumed weekly risk meetings, prioritized the top three project risks, and began developing remediation or mitigation plans. Additionally, DLIR and DataHouse began discussing prior IV&V findings of risks and issues and scheduled recurring meetings to continue efforts. Improvements to the risk management process to ensure timely execution of remediation plan tasks is still needed (2019.07.PM09). IV&V will continue an evaluation of risk management as a focus area in October 2020.	0	1	0



## PROJECT MANAGEMENT

Project Organization and Management

Scope and Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Transfer

JUL	AUG	SEP	IV&V ASSESSMENT	IV. V ORSERVATION	F	FINDINGS  NEW OPEN CL  0 2	S
JUL	AUG	SEP	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
•	R	®	Communications Management	Monthly ESC meetings and weekly project status meetings between DataHouse and DLIR continued. DLIR and DataHouse are increasing communications with a limited group of external stakeholders involved in the electronic submission process. Improvements are still needed to increase the effectiveness and timeliness of communications with all impacted stakeholders (2019.07.PM07) and within the project team (2019.07.PM06).	0	2	0
V	V	Y	Organizational Change Management (OCM)	Some OCM is occurring again as an indirect result of other project communications and participation in on-going project meetings. A more structured OCM approach is still needed (2019.07.PM08) to ensure stakeholders accept and embrace changes.	0	1	0
G	G	G	Business Process Reengineering (BPR)	DataHouse facilitated discussions of BPR improvements and opportunities during the Phase 2 requirements gathering sessions. While IV&V was able to observe BPR in the user stories discussed and drafted during the requirements gathering sessions, these discussions primarily focused on DLIR's current business process workflows. It is unclear how BPR opportunities outside of the processes performed today will be identified as part of the requirements documentation. IV&V will review the final Phase 2 requirements deliverable due in October to further assess BPR. However, as seen with Phase 1, BPR opportunities continue to be identified and achieved during the design and development stages.	0	0	0
NA	NA	NA	Training and Knowledge Transfer	The Content Management training is scheduled for October 2020. IV&V does not have adequate visibility of on-going training planning activities. Additionally IV&V does not have an understanding of the training approach and knowledge transfer strategy.	0	0	0



System Software, Hardware, and Integrations

Design

Data Conversion

Quality Management and Testing

Configuration Management

Security



JUL AUG SEP IV&V ASSESSMENT IV&V OBS	IV&V OBSERVATION	F	INDING	S			
JUL	AUG	SEF	CATEGORY	IVAV OBSERVATION	NEW	OPEN	CLOSED
	Y		System Software, Hardware, and Integrations	With the return of necessary DLIR project resources, DataHouse was able to resume Phase 1 Content and Case Management development.  Phase 1 Content Management solution is nearing completion. DataHouse held a demo of the Content Management solution and made the current build available in the UAT environment. DataHouse completed the AWS production instance. The setup of the AWS disaster recovery instance and the delivery of the Content Management system configuration and operations deliverables were pushed back to November 2020. With the Content Management go-live quickly approaching, complete and clear go/no-go criteria need to be established to ensure proper review, acceptance, and operational readiness (2020.09.IT01).  DataHouse completed the Phase 1 Case Management Epic 3 development and kicked-off the final Epic 4 efforts.  The interface solution development has been delayed and remains unclear (2019.07.IT02). IV&V does not have adequate visibility of development and integration activities to assess the system and development methodologies.	1	3	0
<b>G</b>	<b>G</b>	G	Design	DataHouse updated the Phase 1 Content Management design document, pending DLIR review. Case Management design is refined during development and the design document is updated after each epic. Security design is covered in the Security IV&V Assessment Category.	0	0	0



System Software, Hardware, and Integrations

Design

Data Conversion

Quality Management and Testing

Configuration Management

Security

	JUL AUG SEP	CED	IV&V ASSESSMENT	IVA V OBSERVATION	FINDINGS		
JUL	AUG	3EP	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
V	V	<b>☆</b>	Data Conversion	DataHouse clarified the Phase 1 Content Management data conversion processes and the expectations for DLIR data validation testing. DataHouse also trained DLIR data validation testers to use the Content Management system efficiently for testing. DLIR timely completed the Content Management data validation testing. DLIR does not have a clear plan for Phase 1 Case Management manual file conversion (2019.11.IT01). DataHouse offered an option for providing data conversion resources to the project that DLIR plans to further explore in October. IV&V does not have adequate visibility of DataHouse data conversion activities to assess the progress or approach for data conversion. Additionally, an unsupported legacy system may impact data conversion (2019.09.IT03).	0	2	0
R	R	R	Quality Management and Testing	After several delays due to the limited availability of DLIR SMEs, DLIR performed the lite UAT for the Phase 1 Case Management Epic 2 and 3 builds. DataHouse is currently performing various system and integration testing. IV&V does not have adequate visibility of DataHouse or DLIR testing activities or documentation to fully assess methodologies and progress. DLIR is still drafting their test plan (2019.10.IT01). DLIR's review of DataHouse's test plan is pending and additional clarification of DataHouse's test plan is needed (2020.02.IT01). The DataHouse and DLIR quality management plans and approach have also not yet been finalized (2019.07.IT05). Complete and clear go/no-go criteria related to testing need to be established for the upcoming Phase 1 Content Management launch to ensure adequate testing is performed and any exceptions are properly addressed or accepted (2020.09.IT01).	0	3	0



System Software, Hardware, and Integrations

Design

Data Conversion

Quality Management and Testing

Configuration Management

Security

JUL AUG	SEP	IV&V ASSESSMENT	IV&V OBSERVATION	F	INDING	S	
	AUG	SEP	CATEGORY	IVAV OBSERVATION	NEW	OPEN	CLOSED
Y			Configuration Management	No significant updates since the prior report.  DataHouse has drafts of the configuration management approaches for the Content Management and Case Management development teams, however, a comprehensive configuration management plan including the DLIR approval process is still pending (2019.07.IT06).	0	1	0
R	R	R	Security	DLIR continues to evaluate, select, and implement various security tools and controls as part of the security management plan. DLIR and ETS are meeting regularly to discuss and align plans for implementing security policies and procedures. DLIR's security management plan (2019.07.IT07) and security policies (2019.10.IT02) are pending and the expected timeline for completion is still unknown. DLIR discussed some tasks for a high-level security timeline. Complete and clear go/no-go criteria related to security need to be established for the upcoming Phase 1 Content Management launch to ensure necessary security tasks are completed and IT operations are ready (2020.09.IT01).	0	2	0



System Software, Hardware, and Integrations

Design

**Data Conversion** 

Quality Management and Testing

Configuration Management

Security

FINDING #: 2020.09.IT01

STATUS: OPEN

TYPE: RISK

SEVERITY:



#### TITLE: UNCLEAR GO/NO-GO DECISION CRITERIA

Finding: Unclear go/no-go criteria may impact the orderly completion of all tasks required for system go-live.

**Industry Standards and Best Practices:** Institute of Electrical and Electronics Engineers (IEEE) 15288-2015 Section 6.2 through 6.4 discusses various quality evaluation criteria, product acceptance and evaluation criteria, and verification and validation criteria that collectively support the decision and processes for transitioning the system into operational status.

Analysis: The criteria for the go/no-go decision are not completely and clearly defined and agreed upon. The decision to go-live involves many areas and tasks of the project including testing, quality management, security, data conversion, training, communications, and deliverable review, as well as the operational readiness of users. Various project plans often include or establish select criteria, however, some of these related plans pending completion or finalization include the test plans (2020.02.IT01 and 2019.10.IT01), the quality management plan (2019.07.IT05), and security management plan (2019.07.IT07). Additionally, acceptance criteria for requirements (2019.10.PM01) and for deliverables (2019.07.PM03) have not been established.

The Content Management system is scheduled to go-live on November 25, 2020 and Case Management on June 14, 2021. With the Content Management go-live date quickly approaching, it is important to establish clear criteria for the go/no-go decision. DLIR is planning to draft a go/no-go checklist to summarize all of the criteria and tasks. DataHouse plans to provide a cutover plan to provide additional information about pre and post go-live tasks.

**Recommendations**: 2020.09.IT01.R1 – Establish complete and clear go/no-go criteria.

- Establish go/no-go criteria in advance of the go-live decision to allow for sufficient time for tasks to be completed and criteria satisfied.
- Ensure all parties agree upon go/no-go criteria including impacted stakeholders.
- Consider go/no-go criteria such as all requirements meet acceptance criteria and are approved by DLIR, end user training is completed, and critical bugs and issues are identified and resolved.
- Consider setting go-live countdown checkpoints (e.g., 15, 30, 60, 90 days) for specific go/no-go criteria or tasks to be reviewed or completed by.



## Appendix A: IV&V Criticality and Severity Ratings

#### **IV&V CRITICALITY AND SEVERITY RATINGS**

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

## **TERMS**

#### **RISK**

An event that has not happened yet.

#### **ISSUE**

An event that is already occurring or has already happened.

#### Criticality Rating

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







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







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







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



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



#### **Severity Rating**

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

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

Findings that are positive or preliminary concerns are not assigned a severity rating.



**SEVERITY 1**: High/Critical level



**SEVERITY 2:** Moderate level



SEVERITY 3: Low level



**TERMS** 

**POSITIVE** 

Celebrates high

performance or

project successes.



# Appendix B: Industry Standards and Best Practices

STANDARD	DESCRIPTION
ADA	Americans with Disabilities Act
ADKAR®	Prosci ADKAR: Awareness, Desire, Knowledge, Ability, and Reinforcement
BABOK® v3	Business Analyst Body of Knowledge
DAMA-DMBOK® v2	DAMA International's Guide to the Data Management Body of Knowledge
HIPAA	Health Insurance Portability and Accountability Act of 1996
MARS-E v2.0	CMS Minimum Acceptable Risk Standards for Exchanges – Exchange Reference Architecture Supplement
MITA v3.0	Medicaid Information Technology Architecture
PMBOK® v6	Project Management Institute (PMI) Project Management Body of Knowledge
SWEBOK v3	Guide to the Software Engineering Body of Knowledge
TOGAF® v9.2	The Open Group Architecture Framework Standard
COBIT® 2019 Framework	Control Objectives for Information and Related Technologies Framework
IEEE 828-2012	Institute of Electrical and Electronics Engineers (IEEE) Standard for Configuration Management in Systems and Software Engineering
IEEE 1062-2015	IEEE Recommended Practice for Software Acquisition
IEEE 1012-2016	IEEE Standard for System, Software, and Hardware Verification and Validation
IEEE 730-2014	IEEE Standard for Software Quality Assurance Processes
ISO 9001:2015	International Organization for Standardization (ISO) Quality Management Systems – Requirements
ISO/IEC 25010:2011	ISO/International Electrotechnical Commission (IEC) Systems and Software Engineering – Systems and Software Quality Requirements and Evaluation (SQuaRE) – System and Software Quality Models
ISO/IEC 16085:2006	ISO/IEC Systems and Software Engineering – Life Cycle Processes – Risk Management



STANDARD	DESCRIPTION
IEEE 16326-2019	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Project Management
IEEE 29148-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Requirements Engineering
IEEE 15288-2015	ISO/IEC/IEEE International Standard – Systems and Software Engineering – System Life Cycle Processes
IEEE 12207-2017	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Software Life Cycle Processes
IEEE 24748-1-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 1: Guidelines for Life Cycle Management
IEEE 24748-2-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 2: Guidelines for the Application of ISO/IEC/IEEE 15288 (System Life Cycle Processes)
IEEE 24748-3-2012	IEEE Guide: Adoption of ISO/IEC TR 24748-3:2011, Systems and Software Engineering – Life Cycle Management – Part 3: Guide to the Application of ISO/IEC 12207 (Software Life Cycle Processes)
IEEE 14764-2006	ISO/IEC/IEEE International Standard for Software Engineering – Software Life Cycle Processes – Maintenance
IEEE 15289-2019	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Content of Life Cycle Information Items (Documentation)
IEEE 24765-2017	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Vocabulary
IEEE 26511-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Requirements for Managers of Information for Users of Systems, Software, and Services
IEEE 23026-2015	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Engineering and Management of Websites for Systems, Software, and Services Information
IEEE 42010-2011	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Architecture Description
IEEE 29119-1-2013	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 1: Concepts and Definitions
IEEE 29119-2-2013	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 2: Test Processes
IEEE 29119-3-2013	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 3: Test Documentation
IEEE 29119-4-2015	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 4: Test Techniques



STANDARD	DESCRIPTION
IEEE 1484.13.1-2012	IEEE Standard for Learning Technology – Conceptual Model for Resource Aggregation for Learning, Education, and Training
ISO/IEC TR 20000- 11:2015	ISO/IEC Information Technology – Service Management – Part 11: Guidance on the Relationship Between ISO/IEC 20000-1:2011 and Service Management Frameworks: ITIL®
ISO/IEC 27002:2013	Information Technology – Security Techniques – Code of Practice for Information Security Controls
SAML v2.0	Security Assertion Markup Language v2.0
SoaML v1.0.1	Service Oriented Architecture Modeling Language
CMMI-DEV v1.3	Capability Maturity Model Integration for Development
FIPS 199	Federal Information Processing Standard (FIPS) Publication 199, Standards for Security Categorization of Federal Information and Information Systems
FIPS 200	FIPS Publication 200, Minimum Security Requirements for Federal Information and Information Systems
NIST 800-53 Rev 4	National Institute of Standards and Technology (NIST) Security and Privacy Controls for Federal Information Systems and Organizations
NIST Cybersecurity Framework v1.1	NIST Framework for Improving Critical Infrastructure Cybersecurity
LSS	Lean Six Sigma



# Appendix C: Interviews, Meetings, and Documents

## **INTERVIEWS**

DATE	INTERVIEWEE
	None

### **MEETINGS**

DATE	MEETING DESCRIPTION
08/24/20	AWS SentinelOne/Tanium Meeting
08/25/20	IV&V DCD Update Meeting
08/25/20	Weekly PM Status Meeting
08/25/20	Phase 2 Requirements Gathering Session
08/27/20	Phase 2 Requirements Gathering Session
08/27/20	Security Working Session
08/28/20	Phase 1 Content Management Data Conversion Meeting
09/01/20	IV&V DCD Update Meeting
09/01/20	Phase 2 Requirements Gathering Session
09/02/20	Weekly DCD Risk Meeting
09/02/20	Phase 1 Content Management Data Conversion Working Session
09/02/20	IV&V DCD Update Meeting
09/03/20	IV&V Update and Planning Meeting
09/03/20	Phase 2 Requirements Gathering Session
09/03/20	Thursday Phase 1 Case Management Scrum Meeting



## MEETINGS (CONTINUED)

DATE	MEETING DESCRIPTION
09/03/20	Security Working Session
09/08/20	IV&V DCD Update Meeting
09/08/20	Weekly PM Status Meeting
09/08/20	Phase 1 Content Management Data Conversion Meeting
09/09/20	Phase 1 Content Management Data Conversion Training
09/10/20	Phase 2 Requirements Gathering Session
09/10/20	Thursday Phase 1 Case Management Scrum Meeting
09/10/20	Security Working Session
09/14/20	Phase 1 Case Management Sprint 3.3 Final Review Meeting
09/15/20	IV&V DCD Update Meeting
09/15/20	Phase 2 Requirements Gathering Session
09/15/20	Phase 1 Case Management Sprint 4.1 Planning Session
09/16/20	Phase 1 Content Management Demo
09/17/20	Phase 2 Requirements Gathering Session
09/17/20	Thursday Phase 1 Case Management Scrum Meeting
09/17/20	Security Working Session
09/18/20	Weekly DCD Risk Meeting
09/18/20	Monthly eCMS Steering Committee Meeting
09/18/20	Phase 1 Case Management Sprint 3.3 Retrospective Meeting
09/22/20	IV&V DCD Update Meeting



## MEETINGS (CONTINUED)

DATE	MEETING DESCRIPTION
09/22/20	Weekly PM Status Meeting
09/22/20	Phase 2 Requirements Gathering Session
09/22/20	Phase 1 Case Management Sprint 4.1 Planning Session
09/23/20	Phase 1 Content Management Data Conversion Working Session
09/23/20	IV&V Prior Findings Working Session
09/24/20	Phase 2 Requirements Gathering Session
09/24/20	Thursday Phase 1 Case Management Scrum Meeting
09/24/20	Security Working Session
09/25/20	Weekly DCD Risk Meeting

## **DOCUMENTS**

ТҮРЕ	DOCUMENT
Request for Proposal	State of Hawaii DLIR DCD RFP No. RFP-17-002-DCD (Release Date 04/12/18)
DataHouse Proposal	DataHouse eCMS Best and Final Offer (BAFO) Proposal (Dated 06/20/18)
Request for Proposal	State of Hawaii DLIR DCD IV&V RFP No. RFP-18-001-DCD (Release Date 12/28/18)
Contract	Contract between State of Hawaii and DataHouse Consulting Inc. (Effective 08/27/18)
Project Management	DataHouse Project Management Plan 1.4 (Updated 09/25/20)
Project Management	DataHouse Project Status Report (Status Date 08/19/20 for reporting period 07/01 – 07/15/20, finalized 08/24/20)
Project Management	DataHouse Project Status Report (Status Date 08/22/20 for reporting period 07/16 – 07/31/20, finalized 08/24/20)
Project Management	DataHouse Project Status Report (Status Date 09/26/20 for reporting period 08/01 – 08/15/20, pending DLIR approval)



## **DOCUMENTS (CONTINUED)**

TYPE	DOCUMENT
Project Management	DataHouse Project Status Report (Status Date 09/26/20 for reporting period 08/16 – 08/31/20, pending DLIR approval)
Project Management	Weekly Status Meeting Agenda Minutes (09/01/20)
Project Management	Weekly Status Meeting Agenda Minutes (09/08/20)
Project Management	Weekly Status Meeting Agenda Minutes (09/15/20)
Project Management	Weekly Status Meeting Agenda Minutes (09/22/20)
Project Management	Change Log (Updated 09/22/20)
Project Management	Change Request (CR006) WC-3A Extraction (Revised 07/21/20)
Project Management	Change Request (CR010) Location Code
Project Management	Change Request (CR010) Attachment - Location Code Mapping (Excel)
Schedule	eCMS Microsoft Project Plan as of 09/22/20 (MPP file)
Costs	DCD eCMS Modernization Project – Services (Excel file) (Updated 08/31/20)
Risk and Issues	RAID (Risk Action Issue Decision) Log (Updated 09/25/20 by DataHouse Project Manager)
Risk and Issues	RAID Log (Updated 09/25/20 by DCD Risk Manager)
Development	DataHouse Development Team Status Meeting Minutes for 08/26/20
Development	DataHouse Development Team Status Meeting Minutes for 09/02/20
Development	DataHouse Development Team Status Meeting Minutes for 09/09/20
Development	DataHouse Development Team Status Meeting Minutes for 09/16/20
Development	DataHouse Development Team Status Meeting Minutes for 09/23/20
Requirements	Phase 2 Case Management Requirements Gathering Sample DCD Enforcement Documents (9 files)
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 08/25/20



## **DOCUMENTS (CONTINUED)**

TYPE	DOCUMENT
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 08/27/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/01/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/03/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/10/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/15/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/17/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/22/20
Requirements	Phase 2 Case Management Requirements Gathering Meeting Notes for 09/24/20
Requirements	Phase 2 Case Management Process Flows (as of 08/24/20)
Requirements	Phase 2 Case Management Process Flows (as of 09/18/20)
Requirements	Phase 2 Case Management Process Flows (as of 09/24/20)
Requirements	Phase 2 Case Management Requirements Gathering Spreadsheet (as of 09/21/20)
Requirements	Phase 2 Case Management Requirements Gathering Spreadsheet (as of 09/28/20)
Development	Phase 1 Epic 3 Sprint 3.3 Documentation (Release notes, retrospective notes, session notes, emails, and release detail) (7 files)
Development	Phase 1 Epic 4 Sprint 4.1 Documentation (Planning list, scrum notes, and session notes) (5 files)
Development	DataHouse Email re: 09/16/20 Demonstration of Content Management End-to-End Solution (09/21/20)
Governance	eCMS ESC Meeting Agenda (09/18/20)
Governance	eCMS ESC Meeting Minutes (09/18/20)
Data Conversion	DataHouse Email re: Action Item from 08/28/20 FileNet Content Conversion Testing (08/28/20)
Data Conversion	DataHouse Email re: Content Management Migration Validation Report (09/25/20)



## **DOCUMENTS (CONTINUED)**

ТҮРЕ	DOCUMENT
Data Conversion	Content Management DLIR Data Validation Testing
Design	Content Management Design Version 1.3 (Updated 09/27/20)
Design	Amazon Web Services (AWS) Environment Solution Design Version 1.0 (Updated 07/31/20)
Security	Security and MO Assumptions Template (Updated 09/01/20)
State	State of Hawaii EM 20-08 FY 21 Budget Execution Policies and Instructions (09/14/20)



Appendix D: Prior Findings Log



#### Appendix D: Prior Findings Log

ESSMENT			ORIGINAL	CURRENT						FINDING		
EGORY		TYPE	SEVERITY	SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE	CLOSURE REASON
ect	2020.08.PM01	Risk	Moderate	Moderate	Inadequate planning and lack of a	DataHouse's updated project management plan and project schedule was		Complete Phase 2 planning.	•Ensure mutual understanding of Phase 2 plan and approach between	Open	09/28/20: DataHouse updated the project management plan to include some	
nization and					detailed project schedule for Phase 2	scheduled for completion in July 2020. The task is not yet completed and			DataHouse and DLIR.		additional details regarding Phase 2 deliverables and several project	
gement					may impact the execution of Phase 2	there is no estimated timeline for completion. Some of the details of the			<ul> <li>Provide adequate details of Phase 2 in the project schedule.</li> </ul>		management processes. Additional clarification of project management	
					activities and result in delays.	Phase 2 planning were verbally discussed including DataHouse's			Consider building contingency plans for COVID-19 into the project		processes (e.g., performance metrics, monitoring DLIR project resource	
						deliverables, assigned resources, and general approach, however,			management plan and processes.		workloads, resolving conflicts, or priorities for phases), contingency plans, and	
						additional planning is needed. The current project management plan was last updated in August 2019 and many of the processes are outdated or	'				the project schedule are still needed.	
						need improvement (2020.07.PM01). Additionally, the eCMS Project is					Accuity will continue to evaluate project management processes and plans.	
						now operating under completely different circumstances due to the					recently will continue to evaluate project management processes and plans.	
						COVID-19 pandemic (2020.03.PM01). The following are some of the						
						project management plan details that are unclear or need improvement:						
						<ul> <li>How Phase 1 and Phase 2 activities will be performed simultaneously</li> </ul>						
						with limited DLIR project resources; priority of Phase 1 or Phase 2 tasks;						
						process for resolving scheduling conflicts.						
						<ul> <li>Detailed project schedule with Phase 2 tasks, due dates, and required</li> </ul>						
						resources.						
						•Improved process for managing DLIR project resource constraints;						1
						contingency plans for DLIR project resources; planning of DLIR project resources ability to work remotely including access, equipment, and						1
						technology.						1
						How the Content Management and Case Management components for						1
						the Phase 2 will be developed; the number of Content Management forms	s					
						in scope for Phase 2.						
						<ul> <li>Roles and responsibilities for Phase 2 DataHouse and DLIR project team</li> </ul>						
						members.						
						<ul> <li>Updated process for project communications for identification of Phase 2</li> </ul>						
						internal and external stakeholders; alternative communication channels in						
						place of standing project meetings or changes in working arrangements.  •Process and metrics for evaluating project progress and performance for						
						timely detection of issues.						
						interference is a second of issues.						
						Although significant uncertainty due to the COVID-19 pandemic makes it						
						difficult to know the exact road ahead, proactive planning and						
						contingency planning are critical for anticipating changes and minimizing						
						impacts to the project.						
	2020.07.PM01	Risk	Moderate	Moderate	Limited progress to address previously	IV&V identified a number of risks and issues since the IV&V Initial Report in	2020.07.PM01.R1	Perform a project assessment.	Consider performing retrospective for project processes.	Open	08/21/20: DataHouse is currently conducting requirements gathering sessions	
ation and					identified deficiencies for foundational	July 2019 related to foundational project processes. Some of the more			<ul> <li>Consider conducting performance assessments for the project team,</li> </ul>		and made improvements to the requirements management processes	
ment					project processes may result in	critical areas requiring improvements include cost management, schedule			individual team members, and governance.		including timely sharing of requirements documentation and reviewing	
					reoccurring issues and delays.	management, resource management, requirements management, change			Document lessons learned and necessary actions or follow-up to		original contract requirements. DLIR plans to prioritize open findings and	
						management, risk management, and testing as these processes impact			prevent reoccurrence of similar issues.		resume efforts to develop and execute mitigation plans.	
						many aspects of the project execution and contribute greatly to overall	2020.07.PM01.R2	Formulate a plan for addressing	Prioritize based on relevance to upcoming activities; consider focusing		00/20/20. DUD and Datallance hold an initial mosting to discovery	1
						project performance and project success. Identified deficiencies		identified deficiencies.	on requirements management and BPR processes to optimize		09/28/20: DLIR and DataHouse held an initial meeting to discuss prior IV&V findings of risks and issues. Recurring meetings were scheduled to continue	1
						contributed to project delays experienced in Phase 1. For example, a significant amount of time was spent clarifying and refining Case			effectiveness and efficiencies of upcoming requirements gathering		discussions and to develop a plan to address all findings. DLIR also discussed	1
						Management user stories due to incomplete and unclear requirements			sessions.  • Powelon high lovel timeline and tacks for addressing deficiencies and		prior IV&V findings at their weekly risk meetings, prioritized the top three	1
						documentation. Additionally, the project was delayed several times for			<ul> <li>Develop high-level timeline and tasks for addressing deficiencies and begin tracking progress.</li> </ul>		project risks, and began developing remediation or mitigation plans.	1
						AWS due to unclear requirements, tasks, and resources needed as well as			begin tracking progress.		3	
						ineffective processes to document and analyze the change and identify					Accuity will continue to evaluate progress to address open findings.	
						and mitigate risks associated to the AWS build.						
												1
						Incremental progress was made for many findings but a majority are still						
						open. Progress was limited by availability of project resources and						
						competing organizational and project priorities. With the kick-off of Phase	:					1
						2 in August, this is a great opportunity to review identified deficiencies,						1
						evaluate the effectiveness of current project processes, reflect on lessons learned on the project to-date, and make necessary improvements for						1
						upcoming activities. Additionally, addressing deficiencies will better						
						position the project to handle and adjust to changes going forward including potential rapidly evolving circumstances related to the COVID-						

ASSESSMENT	FINIDING ID TYPE	ORIGINAL	CURRENT	FINIDIALC	ANALYCIC	DECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING	FINDING STATUS UPDATE	CLOSED DATE	CLOCUPE PEACON
Project	2020 02 DM01	SEVERITY	Moderate	The COVID 10 needening is imposting	The COVID 10 and design has prosted uncertaints with account to the	2020.03.PM01.R1	Explore possible ways to keep the	Evaluate DLIR SMEs availability and bandwidth to work on the project.	STATUS	04/24/20: Some preliminary discussions were held and limited progress was	CLOSED DATE	CLOSURE REASON
Organization and		ivioderate	The COVID-19 pandemic is impacting	The COVID-19 pandemic has created uncertainty with respect to the timely completion of the project and its cost. Understandably, DLIR has	2020.03.PW01.RT	project moving forward with	Consider reshuffling of user stories in current and upcoming sprints and		made to formulate contingency and mitigation plans and to adjust the project			
Management				the impact to project costs and the	diverted project resources to the UI Division to respond to the		available resources.	how to best utilize available DLIR SMEs.		schedule and budget for COVID-19 impacts. DLIR plans to have an ESC		
ivialiagement					skyrocketing number of unemployment claims. This finding focuses on the		available resources.	HOW to best utilize available DEIK SIVIES.		meeting in May 2020. IV&V understands that other DLIR priorities are		
				impacts to quality and project success	impacts of COVID-19 specific to the eCMS Project.					affecting the project's ability to respond effectively and timely.		
				are currently indeterminable.	impacts of COVID-17 specific to the colvis (Toject.					anecting the project's ability to respond effectively and timery.		
				are currently indeterminable.	The following is a summary of the related events and facts:					05/22/20: DataHouse and DLIR discussed and tentatively agreed on a plan to		
					•All eCMS Project meetings were cancelled beginning March 17, 2020	2020.03.PM01.R2	Formulate a plan for how to	DataHouse and DLIR, with input from the ESC, must come together to		move Phase 2 project work up to keep the eCMS Project moving forward.		
					following directives for non-essential state workers to stay home.		respond to COVID-19 impacts to	decide on how to best proceed.		DataHouse is in the process of formalizing this proposed plan in a change		
					Subsequent state-wide stay-at-home orders were put into effect through		the project.	Carefully assess the situation and individually log all of the specific		request for DLIR approval. DataHouse only has a couple weeks left of Phase 1		
					April 30, 2020.			impacts to the project in the risk register, including direct and indirect		work that can be done without key DLIR project resources. The change		
					•Currently only a few DLIR project resources, including the DCD Executive			impacts.		request for the proposed plan to begin Phase 2 work needs to be prepared		
					Sponsor and DLIR Project Manager, are still working in the office or			Evaluate alternative courses of action and contingency plans for each     actific impact identified.		and approved timely and prudently. To prevent further delays, it is also		
					remotely but time dedicated to project work has been drastically reduced			specific impact identified.  •Consider adjusting the frequency of communications and reviews of		critical for DLIR and DataHouse to work together to carefully plan out the new		
					due to competing priorities. DLIR ceased actively performing or			response plans to support the pace of evolving circumstances.		project course, identify impacts, and develop risk mitigation strategies.		
					participating in many key project management activities.			response plans to support the pace of evolving circumstances.				
					•Key DLIR Subject Matter Experts (SME) are currently unavailable to the					06/26/20: Accuity decreased the severity rating from Level 1 (High) to Level 2		
1					eCMS Project. The DLIR SMEs are critical to the Case Management					(Moderate) as DataHouse presented the high-level plan and timeline to move		
1					system development process due to the valuable knowledge and input of					Phase 2 project work up at the ESC meeting in June 2020. Additionally, a		
					business operations they provide to the development teams to clarify and					formal change request was also submitted which similarly summarized the		
					refine requirements.					high-level plan and included the timeline and payment schedule for Phase 2		
					Many DLIR SMEs have been temporarily assigned to assist the UI					and 3. DLIR approved the change request but additional clarity is needed		
					Division's overwhelmed operations and a timeline of when they would					regarding the path forward. Details regarding tasks, dates, and specific State		
					return to DCD or eCMS Project work is unknown.					resources are critical to minimize further delays as the COVID-19 pandemic is		
					•Even when stay-at-home orders are lifted, the mounting DCD operational					still significantly limiting the availability of DCD, DLIR EDPSO, and ETS		
					work will limit DLIR SME capacity to participate in or perform project work.					resources. A detailed schedule for at least the next rolling two months will		
					*The Office of Enterprise Technology Services (ETS) and DLIR Electronic  Pate Personning Systems Office (EDSC) states and are playing an accounted.					help State resources to have a clear understanding of the new plan and		
					Data Processing Systems Office (EDPSO) stakeholders playing an essential role in project governance and project security management activities are					sufficient lead time to be able to adequately prepare for upcoming project activities. Risks and risk mitigation plans related to the new plan also need to		
					busy addressing other pressing department and state IT issues.					be managed and communicated.		
					DLIR's plans to procure necessary testing, data conversion, and cloud					be managed and communicated.		
					support resources has been put on hold due to COVID-19.					07/29/20: COVID-19 continues to impact the availability of DLIR project		
					Although a few DataHouse resources were reassigned to assist with					resources. A few of the DLIR project resources, including the DLIR Project		
					higher priority and more urgent UI Division system support, DataHouse					Manager, returned to the project on a limited basis and additional DLIR		
					continues to move forward with development work. However,					project resources are expected to have some availability in the upcoming		
					DataHouse's progress is partially limited due to dependencies on DLIR's					months as DCD employees are slowly transitioned back from the UI Division.		
					completion of assigned tasks.					With recent increases in cases in Hawaii, circumstances could potentially		
										evolve rapidly. While the plan to move forward with Phase 2 work gives		
					The drastic reduction in already constrained DLIR project resources has					DataHouse more options to keep the project moving forward, some level of		
					almost entirely halted project work on the state side which will impact					DLIR project resources will always be needed. Making improvements for		
					project costs and schedule and potentially impact quality and project					identified deficiencies (2020.07.PM01) in a few key foundational project		
					success. Estimates of potential impacts to project costs and schedule have					processes including schedule management (2019.07.PM13), resource		
					not yet been determined and progress has not been made to develop					management (2019.09.PM02), change management (2019.09.PM01), and risk		
					mitigation plans that would help to reduce or limit the impacts.					management (2019.07.PM09) will better position the project to handle and		
1					L					adjust to changes going forward.		
1					The severity rating and the following IV&V recommendations are based on							
					a project-focused perspective, with an understanding that higher DLIR					08/21/20: DataHouse kicked-off Phase 2 requirements gathering sessions.		
			1		department level priorities may limit the project's ability to respond					With Phase 1 activities scheduled to resume simultaneously with on-going		
					effectively and timely. Although this finding is reported under the Project					Phase 2 activities, additional clarity is still needed regarding the path forward.		
					Organization and Management IV&V Assessment Category, this finding also impacts the criticality ratings for the Governance Effectiveness; Cost,					Additionally, the worsening COVID-19 situation in Hawaii creates a lot of uncertainty with regards to DLIR project resources and work arrangements. A		
1					Schedule and Resource Management; Risk Management; Communications					clear understanding of intended project activities as well as contingency plans		
1					Management; Data Conversion; Quality Management and Testing; and					for key project resources and possible work-from-home arrangements are		
					Security categories. In addition to the specific recommendations made as					essential to minimizing further delays.		
					a part of this finding, the IV&V recommendations made at findings					essential to minimizing further delays.		
					2019.09.PM02, 2019.07.PM06, 2019.07.PM09, 2019.07.PM12,					09/28/20: No updates to report.		
					2019.07.PM13, and 2019.07.PM14 will also help to address this issue.					onzorzo. No apartos to report.		
					to address this issue.					Accuity will continue to evaluate COVID-19 response and plans.		
			1				1			, and the same of		

ASSESSMENT		ORIGINAL	CURRENT						FINDING			
Quality Management and Testing	FINDING ID TYPE 2020.02.IT01 Risk	SEVERITY High	SEVERITY High	The DataHouse Test Plan is incomplete and does not adequately inform DLIR of the testing approach and scope which	ANALYSIS  DataHouse drafted the Test Plan Version 0.0, pending DUR review and approval. The test plan does not include or clearly explain the following:  *The scope of the test plan is incomplete (e.g., performance, load,	RECOMMENDATION ID 2020.02.IT01.R1	RECOMMENDATION  Clarify the test approach.	SUPPLEMENTAL RECOMMENDATION  -Perform a deliverable review (refer to finding 2019.07.PM03) to ensure ODLIR understands the test plan and scope.  -Consider making improvements to the test documentation.	Open	FINDING STATUS UPDATE 03/27/20: A meeting was scheduled for early March to discuss and review DataHouse's Test Plan, however, this meeting was cancelled due to COVID- 10	CLOSED DATE	CLOSURE REASON
				may impact the execution of testing activities.	volume, AWS environments).  *The testing approach differs from DataHouse's Best and Final Offer (BAFO) (e.g., regression testing, test-driven development (TDD)).  *The security testing does not address all security requirements outlined in the DataHouse (e.g., AWS vulnerability scan).  *Specifics of the test approach are not detailed (e.g., test design techniques for all testing types, automation testing tools, test data requirements, data scrubbing procedures, metrics for test cases and coverage of code).  *The test tasks included in the project schedule are incomplete (e.g., security test, test plan Section 8 tasks).  *Incomplete test deliverables and unclear delivery (e.g., missing a test completion report, defect reports not delivered to DLIR, test results delivered through the requirements traceability matrix (RTM).  *There are no defined test management monitoring and control processes.  *A naming convention of test documentation files is not established for easy retrieval and location.  A lack of clarity of DataHouse's testing approach may not allow DLIR to appropriately develop their own test plan or ensure testing activities are adequately performed. Additionally, a lack of mutual understanding and inadequate test management processes could impact the execution of testing activities.	2020.02.IT01.R2	Develop adequate test management processes and procedures.	Consider a process for monitoring and reporting test status and results.     Consider a process for authorization of test data.		04/24/20, 5/22/20, and 06/26/20: DLIR's review and approval of the DataHouse Test Plan is still pending due to COVID-19.  07/29/20 and 08/21/20: DataHouse is currently performing various system and integration testing, however, IV&V does not have adequate visibility into DataHouse testing activities or test documentation to provide an assessment.  09/28/20: DLIR plans to clarify the testing that DataHouse will be performing for Content Management in order to develop their own test plan.  Acculty will reassess when meetings are held regarding the DataHouse test plan and evaluate any improvements made to test processes.		
Data Conversion	2019.11.IT01 Risk	Moderate	Moderate	Unclear data conversion plans and processes may reduce DuR's ability to prepare for proper data conversion.	The Content Management Conversion and Migration (version 1.2 pending DUR approval) and Case Management Conversion and Migration (version 1.1 pending DUR approval) describe the data conversion process and roles and responsibilities between DataHouse and DUR. DUR is responsible for performing UAT on the data and ultimately signing off on the final reconditation reports but has not yet formalized plans for these tasks. The data conversion plans do not provide sufficient details and DUR does not have insight to the DataHouse data conversion teams' activities, tools, reports, risks and issues, and testing. As such, DUR is unable to properly prepare for their part in the process and will not be able to adjust their data conversion test plans for reasons current paper files to ensure necessary data quality to support system use at go-live. The IV&V recommendations made at 2019.07.PM02.R3 and 2019.07.PM03.R2 regarding DataHouse including DUR in project activities and adding detailed tasks to the project schedule will also address this finding. Below are additional recommendations to further improve data conversion plans and activities.	2019.11.IT01.R2	data conversion process.	- Explain how data conversion tools perform validation and reconciliation steps and share available reports and logs Explain the process for how the data conversion plans will be updated for changes in system requirements Provide details on timing, number of data extractions and tests to be performed, and necessary remapping of data.  - Focus DLIR tests to address identified data conversion risks and issues Estimate data conversion test resource needs and ensure adequate resources are identified, trained, and scheduled (refer to findings 2019.09.PM02 and 2019.07.PM14).  - Evaluate the impact on operations and project success of different data conversion scanning approach options Estimate scanning time requirements and begin to schedule or acquire necessary resources (refer to findings 2019.09.PM02 and 2019.07.PM14).	Ореп	12/20/19. The Content Management data conversion plan v1.3 was updated to include a sample report from the data conversion tool. DLIR still needs to understand what the report represents and what steps the data conversion tool is performing to generate the report.  01/24/20: DLIR plans to procure additional resources to support data conversion activities.  02/21/20: DataHouse provided additional details of Case Conversion tasks and dates.  03/27/20: DLIR's plan to procure additional details of Case Conversion tasks and dates.  03/27/20: DLIR's plan to procure additional resources for data conversion activities is on hold due to COVID-19.  04/24/20: DataHouse is exploring options to improve the Case Management data quality and data conversion process. Changes to the documented process should be adequately discussed with DLIR to ensure changes are understood and appropriately approved (see also the 2019 09.PM01 Change Management finding).  05/22/20 and 06/26/20: No updates to report.  07/29/20: The Content Management data conversion plan v1.4 was updated for one of the recent Content Management change requests. IN&V does not have adequate visibility of data conversion activities to assess the progress or approach for data conversion.  08/21/20: DataHouse and DLIR have a meeting planned for late August to discuss Content Management data conversion processes and the DLIR data conversion testing scheduled for September 2020.  09/28/20: DataHouse and DLIR have a meeting planned for late August to discuss Content Management data conversion processes and the DLIR data validation testing. DataHouse also confirmed that the Case Management data conversion processes and the septential for for DLIR data validation testing. DataHouse also trained DLIR data validation of the timing of data extraction and validation of the recent Confirmed that the Case Management data conversion processes on the activity for testing. DataHouse also confirmed that the Case Management data conversion processes on the was a clear plan for Phase		

ASSESSMENT		ORIGINAL	CURRENT						FINDING			
CATEGORY	FINDING ID TYPE	SEVERITY	SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Scope and Requirements	2019.10.PM01 Risk	High	High	The current RTM documentation and tool may hinder traceability, which may	Added complexity to requirements traceability is due to the current requirements management process. Requirements documentation was	2019.10.PM01.R1	Improve requirements traceability.	<ul> <li>Trace contract requirements to requirements subsets used by the development teams to ensure completeness.</li> </ul>	Open	11/22/19 and 12/20/19: The Case Management development team began adding acceptance criteria for user stories. No other significant		
Management				impact the ability to ensure the overall	developed separate from the DataHouse contract requirements and more			Consider identifying high-level requirements that duplicate more		improvements for traceability were made.		
				eCMS solution fulfills all requirements and provides context and expectations	detailed requirements were developed by the Content Management and Case Management development teams to use for development. As a			detailed requirements to reduce redundancy in traceability to design and testing	d	01/24/20: DLIR and DataHouse discussed and clarified the process for		
		for design, development, and testing.	result, there is duplication of requirements in the RTM which will likely			Trace requirements to the project objectives success metrics (refer to		traceability. Additionally, DataHouse confirmed that all Case Management				
					impede traceability to requirements throughout the life of the project.  DataHouse made incremental improvements to the RTM. The			finding 2019.07.PG05) to ensure each approved requirement adds		user stories and Content Management use cases will be traced to testing documentation.		
					requirements documentation were traced to the use cases used by the			Add acceptance criteria to the RTM to ensure stakeholder satisfaction.		documentation.		
					Content Management development team or user stories used by the Case			Consider use of a requirements management tool with greater		02/21/20: DLIR plans to procure a resource to assist with evaluating		
					Management development team. DataHouse contract requirements were also added to the RTM but have not yet been traced to the requirements			functionality.		requirements and the traceability of the RTM.		
					used for development. Requirements are not currently traced to project					03/27/20, 04/24/20, 05/22/20, and 06/26/20: DLIR procured a resource to		
					objectives and success metrics to ensure requirements add business value or to acceptance criteria to ensure stakeholder satisfaction. Additionally,					help with their review of requirements documentation for completeness and traceability, however, DLIR did not complete their review of the vendor's		
					the RTM is maintained in Microsoft Excel which limits version-control,					results due to COVID-19.		
					efficient collaboration and review, and integration with testing.							
										07/29/20: IV&V did not observe or have access to information to verify any progress made in the current month.		
										08/21/20 and 09/28/20: DataHouse is reviewing contract requirements during the Phase 2 requirements gathering sessions. IV&V does not have		
										access to an updated RTM.		
										A CONTRACTOR OF THE CONTRACTOR		
Overlite	2010 10 ITOS	Martini	Hink	Last of annual to the last of the second to	According to the Decical Management Disc (see 5.2) the Fig. 1	2010 10 ITO1 21	Cincline the test of	Identify and leader deaders	0.00	Accuity will evaluate the RTM as improvements are made.		
Quality Management and	2019.10.IT01 Risk	Moderate	High	the execution and quality of test	According to the Project Management Plan (version 1.3), the DataHouse test plan was scheduled for completion on September 3, 2019. Due to	2019.10.1101.R1	Finalize the test plan.	Identify applicable test standards and requirements.     Delineate roles and responsibilities between DataHouse and DLIR (reference).	Open	11/22/19: DataHouse and DLIR test plans were not finalized as planned.  DataHouse is performing some testing activities, however, Accuity does not		
Testing				activities and documentation.	the need to focus resources on the AWS setup and network connections,			to finding 2019.07.PM02).		have insight into testing activities to provide an update or assessment of		
					DataHouse is now targeting to complete the test plan in November 2019.  DLIR planned to complete the DLIR test plan in October 2019. Due to			•Estimate test resource needs and ensure adequate resources are identified, trained, and scheduled (refer to findings 2019.09.PM02 and		testing.		
					resource constraints and the need to work on other DLIR IT initiatives, the			2019.07.PM14).		12/20/19: The Case Management development team walked through the		
					DLIR test plan expected completion date was revised to November 2019 and the plan may be combined with the DataHouse test plan.					tool that will be used and the steps to perform and document preliminary UAT for each user story at the end of each development Epic. The		
					and the plan may be combined with the Datahouse test plan.					DataHouse and DLIR test plans are still pending.		
					As DataHouse test activities are scheduled to begin in November 2019,							
					DLIR needs to understand DataHouse's test strategy and test needs. DLIR also needs to establish their own test strategy as well as identify, train, and					01/24/20: The DataHouse test plan is targeted for completion in February 2020. DLIR plans to procure additional resources to assist with the		
					schedule DLIR test resources.					development of the DLIR test plan and support testing activities.		
										02/21/20: DataHouse drafted their test plan, pending DLIR review and		
										approval. Refer to finding 2020.02.IT01. DLIR's test plan is still pending.		
										03/27/20: DLIR's plan to procure additional resources to assist with testing		
										activities is on hold due to COVID-19. DLIR was able to begin drafting their		
										test plan, however, an estimated time of completion is uncertain given limited		
										DLIR project resources.		
										04/24/20: DLIR's plan to procure additional resources to assist with testing		
										activities is still on hold. DLIR continued to make progress drafting the DLIR test plan but the plan can't be completed with limited resources.		
										05/22/20: No updates to report.		
										06/26/20: DLIR plans to have SMEs perform the lite UAT review on the Epic 2		
										and 3 builds in July. Without the DLIR test plan, DLIR SMEs may not have a		
										clear understanding of the review purpose and process to effectively perform the testing.		
										07/29/20 and 08/21/20: DLIR's lite UAT review of Epic 2 and 3 builds is still on-going. IV&V does not have adequate visibility of the DLIR SME review to		
										report the progress or assess the effectiveness of this testing.		
										09/28/20: DLIR performed the lite UAT for the Phase 1 Case Management		
										Epic 2 and 3 builds, however, it is unclear the completeness of the testing as		
										DLIR indicated that they will continue their review. IV&V does not have		
										adequate visibility of DLIR testing activities or documentation to fully assess methodologies, completeness, or progress. DLIR plans to clarify the testing		
										that DataHouse will be performing and the test documentation DataHouse		
										will be providing in order to develop DLIR's own test plan.		
										Accuity will evaluate DLIR's test plan when finalized.		

ASSESSMENT			ORIGINAL	CURRENT						FINDING			
CATEGORY	FINDING ID	TYPE	SEVERITY	SEVERITY	FINDING  Lack of formalized security policies and	ANALYSIS  DLIR currently does not have formal security policies to determine security	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Security	2019.10.IT02	Risk	High			I requirements for the eCMS Project and does not have security procedures in place to adequately protect eCMS Project data. The lack of policies primarily impacts the completion of the AWS setup and the Content Management solution component. Security requirements for the cloud environment must be determined and controls implemented before the AWS environments can be used for planned data conversion and testing		Formalize security policies.	-Work with ETs to align DUR policies with State policies and/or a standard security frameworkConsider prioritizing security policies that are most relevant for use of cloud services and data protection (e.g., security logging and monitoring, MFA, remote access, encryption of data-at-rest and data-intransit)	Open	11/22/19: DUR began working with EDPSO and ETS to identify security requirements.  12/20/19 and 01/24/20: Efforts are underway to identify minimum security requirements with a focus on AWS and implementing security controls to allow AWS to be ready for use.		
							2019.10.IT02.R2	Formalize and implement security procedures.	Clarify roles and responsibilities for security controls between DUR and ETS. Identify specific resources to perform security procedures. Consider prioritizing security procedures that are necessary for the operation of the AWS environments.		02/21/20: The EDPSO vendor drafted an access management policy and is targeting the end of February 2020 to complete drafts of other security policies. DLR scheduled a meeting for the end of February to discuss AWS security with ETS. DLR DCD and DLR EDPSO are considering procurement of resources to assist with AWS security and M&O.  03/27/20: The EDPSO vendor drafted 32 security policies at the end of February 2020, however, DLR's review was not completed due to COVID-19.  04/24/20, 05/22/20, 06/26/20, and 07/29/20: The review of the draft security policies is still on hold due to unavailability of DLR project resources.  08/21/20 and 09/28/20: DLR and ETS discussed security frameworks and possible options for formalizing security policies and procedures.  Acculty will evaluate the security policies, requirements, and procedures as they are finalized.		
Project	2019.09.PM01	1 Issue	Moderate	High	The documented change management		2019.09.PM01.R1	Document changes in Change		Open	10/25/19: DataHouse began to summarize changes in the Change Log.		
Organization and Management					process was not followed as prescribed.	and a Change Log. The change to AWS (refer to finding 2019.07.1701 in Appendix D) and the revision of the Content Management go-live date were approved by DUR but not documented in Change Requests or a Change Log. Additionally, the change management process does not have built in mechanisms to ensure that immagneted documents are undated		Requests, with an impact assessment, and the Change Log in accordance with the Project Management Plan.			Datahouse is in the process of formalizing Change Requests for the project schedule and AWS. DLR is also evaluating AWS Control Tower options whic may result in a Change Request. DLIR also defined thresholds for changes that are reported to the eCMS Executive Steering Committee (refer to finding 2019.07.PGO2) and Datahouse initiated discussions on the requirements prioritization and change process (refer to finding 2019.07.PM05).		
						for the change and changes are appropriately communicated to impacted stakeholders.	2019.09.PM01.R2	Refine the change management process for greater clarity and effectiveness.	Consider setting thresholds or criteria for changes that go through different approval processes.  Define the different approval processes (e.g., project manager, product	:	11/22/19: Entries were added to the Change Log but the Change Requests for the project schedule and AWS were still not drafted.		
									owners, change control board, steering committee).  •Implement additional columns in the Change Log to ensure updates are		12/20/19 and 01/24/20: No updates to report.		
									made to all impacted project plans, documents, or deliverables and changes are communicated to all impacted stakeholders.				
									consignation communicated to an impacted state rooted s.		02/21/20: Acculty increased the severity rating from Level 2 (Moderate) to Level 1 (High) as the change requests identified in the September 2019 repor are still outstanding and need to be finalized and agreed upon soon. Acculty reviewed the draft AWS change request and noted inconsistencies with what was verbally discussed and approved between DataHouse and DLIR in July 2019 as a no cost change. The change request also does not include the impact analysis prescribed by the Project Management Plan. There have not been any drafts of change requests for schedule changes including dates that extend beyond the DataHouse contract period. 03/27/20: No updates to report.		
										04/24/20: Two change requests for the Content Management solution were approved by DLIR. Critical change requests for AWS still need to be agreed on and schedule changes that extend beyond the DataHouse contract period still need to be formally documented and approved. Additionally, changes to baseline plans (e.g. Case Management data conversion 2019.11.1T01) and reasons for changes should be documented and approved.	ed iod s to		
									05/22/20: DataHouse is in the process of drafting the change request for the proposed plan to address COVID-19 impacts. The change request should include an impact assessment as outlined in the Project Management Plan. A thorough analysis should performed to ensure the proposed plan is feasible and the path forward is clear. The change request should include details such as specific DLIR resource requirements, project schedule changes, adjustments to the payment schedule for revised milestone completion, and any risks and mitigation plans related to the proposed plan. The change request should also document the other options considered and reasons supporting the selection of the specific option. Other critical change request identified in previous months are still pending.	1			
											06/26/20: The COVID-19 change request was approved by DLIR, however, the change request did not include a thorough impact analysis, risks and mitigation plans related to the new plan (2019.07.PM09), details of required DLIR resources and hours/dates needed to execute the new plan (2019.07.PM13), or revisions to the Phase 1 schedule and payment schedule for the delayed Phase 1 completion (2019.07.PM12). Other critical change requests identified in previous months are still pending.  07/29/20. 08/21/20, and 09/28/20: No updates to report.  Acculty will review the change requests as they are finalized and evaluate improvements to the Change Log.		

ASSESSMENT		ORIGINAL CURRI	NT					FINDING			
CATEGORY	FINDING ID TYPE	SEVERITY SEVER	TY FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
ASSESMENT CATEGORY Cost, Schedule ar Resource Management	RINDING ID TYPE and 2019.09.PM02 Risk	ORGINAL CURRESEVERTY Prelim High	Indefined resource management processes and procedures may result unidentified resource requirements, inadequate resources, or project resources that are not optimally utiliz (Updated)	This was originally reported in the September 2019 IV&V Monthly Report in as a preliminary concern but is upgraded to a risk in this report. The Project Management Plan (persion 1.3) Includes a human resource management section that outlines the high-level roles and responsibilities of various team members but does not define a process for how resources will be managed. This will become more critical for DUR as the project sears up for more resource demanding activities including data conversion, testing, and sprint reviews. Additionally, DUR project team resources are not fully dedicated to the project and still perform other job dutiles. Developing processes and procedures to track and quantify upcoming resource needs, identify available resources, procure or obtain commitments of resources, and their supervisors, and train resources for assigned tasks will help to minimize project delays.  DUR developed a rough estimate of hours to perform scanning and data entry of Case Management paper files but more precise estimates based on a trial run of sample cases and a decision on what cases must be converted by go-live is needed (refer also to finding 2019.11.1101). Additionally, DUR needs to perform an analysis to determine how many resources can be acquired twith budgeted funds and whether those acquired resources will be able to complete necessary data conversion activities by the targeted go-live.  DUR has not yet completed a test plan (refer to finding 2019.10.IT01), estimated resource requirements for testing, or formalized a plan for scheduling testers.  The IV&V recommendations made at 2019.07.PM14.R1 and 2019.07.PM14.R2 regarding evaluating resource needs and resource reports will also address this finding. Below are additional recommendations to further improve data conversion plans and activities.		RECOMMENDATION  Develop procedures to estimate and refine DLIR resource requirements.  Develop processes to optimize utilization of DLIR project resources	Detail necessary steps and information needed to estimate and refine resources requirements. Consult DataHouse for input on upcoming activities that require DUR resources and clarify expectations of resources. Assign responsibility for and establish target due dates to develop resources estimates for major project activities (e.g., data conversion, testing).  -Consider working with managers of project resources to reassign team	FINDING STATUS Open	TINDING STATUS UPDATE  10/25/19 and 11/22/19: Acculty will continue to monitor this preliminary concern as the testing, data conversion, and sprint reviews with stakeholders activities are underway.  12/20/19: This was changed to a risk in the December 2019 IV&V Monthly Report.  01/24/20: DUR implemented a new tool to manage resource assignments and deadlines to better utilize and manage existing project resources. DUR also plans to procure additional resources to support data conversion and testing activities.  02/21/20 and 03/27/20: No updates to report.  04/24/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as the need to better estimate resource requirements and optimize utilization of limited DUR project resources will be critical for making realistic and feasible adjustments to the project schedule to account for COVID-19 impacts.  05/22/20: Specific DLIR resource requirements should be included as a part of the proposed plan (refer to finding 2020.03 PMO1), related change request (refer to finding 2019.09 PMO1), and revised project schedule (2019.07 PM13). This will help to ensure that any DUR resources that are required in the scheduled dates and have adequate bandwidth to complete the assigned tasks within the expected timeframe.  06/26/20: DUR resource requirements related to the new plan were not provided. DataHouse is still in the process of updating the project schedule for the new plan. With very limited availability of DCD, EDPSO, and ETS resources, it is critical that resources are managed effectively.  07/29/20: DataHouse's revisions to the project schedule for Phase 1 tasks were entained by approved by DUR, however, dealist of resource requirements for Phase 2 work were not provided. State resources need a clear understanding of upcoming project activities and sufficient lead time to adequately prepare for and complete project tasks.  08/21/20: The necessary DUR SMEs were able to participate in the Phase 2 equirements gathering sessions. With Phase 1 and Pha	CLOSED DATE	CLOSURE REASON
									current project pace as well as timely coordinate, assess capacity, manage workloads, and make adjustments within DLIR project resource constraints.		
System Software, Hardware and Integrations	2019.09.IT02 Prelim	Prelim Mode	ate Unclear M&O roles and responsibilitimg impact operational readiness aft transition. (Updated)			Clarify M&O roles and responsibilities.	Discuss terms of DataHouse support option to understand level of support, cost structure, and timing of transition.     Clarify any shared responsibility with ETS and enterprise tools that can be leveraged.	Open	Accuity will continue to evaluate resource management practices.  10/25/19, 11/22/19, 12/20/19, and 01/24/20: Accuity will continue to monitor this preliminary concern as the plan for M&O is developed.  02/21/20: DataHouse clarified that the Content Management and Case Management systems will be turned over to DLIR at the go-live in November 2020. Further discussion is needed to clarify interim M&O processes and the knowledge transfer plan to prepare DLIR for turnover.  03/27/20, 04/24/20, 05/22/20, 06/26/20: No updates to report.  07/29/20: This was changed to a risk in the July 2020 IV&V Monthly Report.  08/21/20: DLIR began clarifying responsibility and enterprise tools with ETS and plans to begin discussions with DataHouse in September 2020.  09/28/20: DLIR drafted a M&O assumptions template that DataHouse reviewed and agreed to. IV&V recommends that DLIR formalize the agreed upon roles and responsibilities in writing with DataHouse and ETS.  Accuity will continue to evaluate M&O as roles and responsibilities are clarified.		

ACCECCMENT	ODICINAL	7					FINIDING			
ATECODY FINDING ID	CEVERITY CEVER	V FINIDING	ANIAL VOIC	DECOMMENDATION IS	DECOMMENDATION.	CURRIE FAFAITAL DECOMMENDATION	CTATUS	FINIDING CTATUS HIDDATE	CLOCED DATE	CLOCUPE PEACON
TEGORY FINDING ID TYPE SEVERITY SEVERITY tata Conversion 2019.09.IT03 Prelim Prelim Low	Y FINDING Unsupported IBM Lotus Notes Domino Case Management may impact the execution of data conversion activities. (Updated)	as a preliminary concern but is upgraded to a risk in this report. The	r n n RR d d	Explore options for obtaining support.	SUPPLEMENTAL RECOMMENDATION  -Consider working with ETS or other State agencies still using Lotus  Notes to get vendor approved and support contract in place.	Open Open	FINDING STATUS UPDATE  10/25/19, 11/22/19, 12/20/19, 01/24/20, and 02/21/20: DUR is working with the State of Hawaii State Procurement Office (SPO) and the vendor to get the maintenance service required.  03/27/20: No updates to report.  04/24/20 and 05/22/20: DUR and DataHouse's evaluation of options for COVID-19 responses should include consideration of Lotus Notes maintenance support if the Phase 1 go-live date and DUR's reliance on Lotus Notes is extended.  06/26/20: Consideration of the unsupported Lotus Notes was not included in the change request for COVID-19. It is still unclear what the new Phase 1 go- live date will be and plans to address potential risks for continued reliance on Lotus Notes.  07/29/20: This was changed to a risk in the July 2020 IV&V Monthly Report.		CLOSURE REASON	
								08/21/20 and 09/28/20: No updates to report.  Accuity will continue to monitor this preliminary concern.		
Benefits Realization 2019.07.PG05 Risk	High Modern		and The eCMS Project does not have a project charter that would have helped s to 10 formalize the project goals, target benefits, and success metrics at the start of the project. Based on informal recommendations made by Team Acculty during the initial IV&V on-site review, DLIR is in the process of creating a project charter that includes clear goals and success metrics. The lack of clear and measurable goals and success metrics makes it difficult to determine if the project and technical solution will achieve the desired level of improvement or benefits that justify the projects financial investment. Goals and success metrics need to be defined before going any further in the project as they should be guiding all key decisions throughout the entire project.	e n e	Formalize measurable goals and success metrics in a project charter control of the control of th	satisfaction, user adoption, return on investment, or cycle or processing times.  - Consider project management, organizational change management, and benefits realization management objectives as well as alignment to DUR goals.  - Consider methods for collecting data such as surveys, queries, observation, open forums, or actual performance testing.  - Consider sources of data such as legacy systems, operations, and internal and external stakeholders.		09/20/19. Acculty decreased the severity rating from Level 1 (High) to Level 2 (Moderate). The DCD Business Manager has been assigned the task of developing and monitoring eCMS Project success metrics with the support and oversight of the DCD Executive Sponsor. The DCD Business Manager drafted some preliminary metrics for consideration that will continue to be refined and finalized.  10/25/19: DLIR continued to refine the success metrics and began to identify data sources for baseline metrics. Success metrics are expected to be finalized and communicated to stakeholders in November 2019.  11/22/19 and 12/20/19: DLIR is close to finalizing and plans to post to the new DLIR website.  01/24/20: DLIR formalized project success metrics. DLIR still needs to communicate these measures of success and begin collecting data.  02/21/20: DLIR began to communicate project goals and success metrics to stakeholders through the DCD website. DLIR plans to also communicate the		
								success metrics to the DataHouse development team and develop a timeline to collect baselines for all metrics.  03/27/20: DLIR shared the goals and success metrics with the DataHouse Case Management development team. DLIR also developed a timeline to collect baseline data for all metrics, however, the timing may now be impacted by COVID-19.  04/24/20, 05/22/20, 06/26/20, 07/29/20, and 08/21/20: Progress on the success metrics stalled due to shifting priorities and changes in DLIR project resources.		
								09/28/20: DLIR updated success metric goals and plans for collecting baseline success metric data. DLIR presented the updated metrics at the weekly project managers meeting but should also share and periodically remind all eCNB Project team members of the success metrics to help align project decisions and discussions (e.g., requirements gathering) with project goals.  Accuity will continue to evaluate the collection and monitoring of success metrics data.		

ASSESSMENT		OPIGIN	IAI CUDDENT						EINDING		
CATEGORY	FINDING ID T	YPE SEVERI	TY SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE CLOSED D.	ATE CLOSURE REASON
Project Organization and Management	2019.07.PM02 R	Risk High	Moderate	The current project management organization may hinder project performance.	The eCMS Project has failed to achieve team synergy between DLIR and DataHouse project team members and appear to work as separate teams instead of one. DataHouse works almost exclusively off-site except for designated meetings, workshops, and design sessions and DLIR is not included in many project design or development activities. The unclear confract terms regarding roles and responsibilities between DLIR and DataHouse (refer to finding 2019.07.PG03), physical separation of the project team, and limited collaboration or DLIR involvement have all contributed to the siloed workstreams. This has also led to ineffective communications within the project team (refer to finding 2019.07.PM06).	2019.07.PM02.R1	Clarify roles and responsibilities between DLIR and DataHouse.	<ul> <li>-Consider revising project management plans to identify the person responsible and list specific responsibilities for each project management area.</li> <li>-Consider the need to include an outline of DUR and DataHouse roles and responsibilities in a contract modification (refer to finding 2019.07.PG03).</li> </ul>	Open t	99/20/19. Acculty decreased the severity rating from Level 1 (High) to Level 2 (Moderate). Although DataHouse does not plan to work onsite at DLIR, they began to include DLIR in sprint planning, review, and retrospective meetings. This has given DLIR more insight into project status and roles and responsibilities. The DLIR Project Manager and DCD Executive Sponsor feel that there is more overall project cohesion and that the DataHouse Project Manager's communication is effective via phone, email, text, Go To Meetings, and in-person meetings. As noted above at finding 2019 O7 PCO3, DLIR plans to clarify roles and responsibilities in project plan updates. The Case Management Conversion and Migration Plan (version 1.0) did delineate some responsibilities between the DataHouse Conversion and Migration Team and DLIR.  10/25/19: Progress was made to clarify roles and responsibilities in the areas	
						2019.07.PM02.R2	The DataHouse Project Manager should work onsite at DLIR through project completion to improve DLIR and DataHouse project team cohesion.			of security and network connections, however, further clarification is still necessary particularly in the areas of testing and M&O.  11/22/19: Roles and responsibilities for Content Management data conversion were clarified. DataHouse has included DUR in Case Management development but DUR is not sufficiently included in DataHouse's data conversion, integrations, and testing activities in order to be able to adequately prepare for DUR's part in the process or be able to identify any risks or issues from a business/user perspective.  12/20/19: The Scrum methodology employed for the Case Management development promotes collaboration or at least the process or between DUR and DataHouse. Increased collaboration or at least	
						2019.07.PM02.R3	Include DLIR in project activities and			understanding of other aspects of the project is still needed.	
						2019.07.PM02.R3	Include DLIR in project activities and communications to increase DLIR and DataHouse project team cohesion.			01/24/20: No updates to report.  02/21/20: The project organization of the Case Management development team is working very well. There is limited visibility and collaboration in other areas of the project which have impacted DUR's understanding of and ability to properly prepare for upcoming tasks particularly for Content Management. DUR plans to implement regular meetings with the Content Management development team and also with the other DataHouse team members responsible for data conversion, AWS setup, and interfaces. Clarification of roles and responsibilities is still needed for testing and M&O.  03/27/20: Due to COVID-19, DUR project resources were unavailable to work on the project and DUR cancelled all project meetings effective March 18, 2020. DataHouse continues to do what they can, however, project execution is impacted without DUR participation or collaboration.  04/24/20: As the DUR Project Manager was temporarily reassigned, weekly project status meetings are still on hold. Some of the Case Management sprint meetings resumed with a few DUR project resources. A few project status meetings are tentatively scheduled for May 2020.  05/22/20: Although the DUR Project Manager is still reassigned, the DCD Executive Sponsor and the DataHouse Project Manager began holding weekly project status meetings. The weekly Scrum standup meetings for Case Management and periodic Content Management check-in meetings are still on hold.	
										Significant improvements in project organization and collaboration are not possible at this time due to limited availability of DLIR project resources and should be reassessed as resources return to the project.  07/29/20: The DLIR Project Manager returned to the project on a part-time basis and is resuming weekly project status meetings.  08/21/20: The DLIR Project Manager returned to full-time status on the project and began resuming more standing DLIR meetings as well as scheduling additional meetings to make progress in critical areas of the project.  09/28/20: The weekly Scrum standup meetings for Phase 1 Case Management and internal DLIR weekly risk and test meetings resumed. Periodic Content Management check-in meetings previously discussed are still on hold. DLIR, DataHouse, and ETS made progress to clarify M&O as roles and responsibilities. Further clarification of testing roles and responsibilities is still needed.  Acculty will continue to evaluate the clarity of roles and responsibilities and observe the effectiveness of project organization.	

ASSESSMENT CATEGORY	FINIDING ID	TVDE	ORIGINAL	CURRENT	FINIDING	ANALYCIC	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Project	2019.07.PM03	ITTPE	Moderate	High	The current deliverable review and	DataHouse prepares project deliverables and submits to DLIR for review.		Establish deliverable acceptance	Consider including acceptance criteria in the quality management plan	Open	09/20/19: Accuity has kept the severity rating as Level 2 (Moderate).	CLOSED DATE	CLOSURE REASON
Organization and	2017.07.FIVIO3	issue	iviouerate	riigii	acceptance process has contributed to	As DLIR has had limited involvement in project activities or the	2019.07.FIVIOS.K1	criteria.	(refer to finding 2019.07.IT05), in a contract amendment (refer to finding		Although Accuity abserved DataHouse and DLIR meetings to review draft		
Management					project delays and resulted in the	preparation of deliverables (refer to finding 2019.07.PM02), DLIR does not		citicità.	2019.07.PG03), or in Deliverable Expectation Documents (DED).		deliverables and DLIR has expressed greater satisfaction in the deliverable		
Management						have an understanding of the purpose of the deliverables or the thought	`		2017.07.1 Gody, of its betterable expectation became its (beb).		review and acceptance process, the process to evaluate deliverables against		
					meet industry standards.	process and factors that were considered in developing the deliverables.					established acceptance criteria has not yet been implemented. Additionally,		
					, , , , , , , , , , , , , , , , , , , ,	This has led to protracted review periods and acceptance of deliverables					the impact of deliverables on project schedule, roles and responsibilities,		
						that do not meet industry standards (refer to finding 2019.07.PM10). A					design, migration, etc. is not consistently clear.		
						lack of a clear deliverable listing or acceptance criteria (refer to finding							
						2019.07.PG03), a lack of a quality management process and resource to					10/25/19, 11/22/19, 12/20/19, and 01/24/20: No updates to report.		
						verify deliverables (refer to finding 2019.07.IT05), and over tasked project	2019.07.PM03.R2	Hold joint DLIR and DataHouse					
						managers (refer to finding 2019.07.PM14) also contribute to an ineffective		deliverable review meetings to walk			02/21/20: DataHouse scheduled a deliverable review meeting for the AWS		
						deliverable review and acceptance process. The delay in the approval of		through deliverables.			Environment Design document but a meeting of the DataHouse Test Plan wa	s	
						deliverables has been cited by the eCMS Project team as one of the					not scheduled.		
						reasons the Phase 1 go-live dates were extended. Based on informal IV&V	/						
						recommendations, DataHouse and DLIR started to implement joint					03/27/20: A meeting was scheduled for early March to discuss and review		
						deliverable review meetings beginning June 2019.					DataHouse's Test Plan, however, this meeting was cancelled due to COVID-		
											19.		
							2019.07.PM03.R3	Implement formal deliverable	•Include both the scope validation process for acceptance and the		04/24/20: Accuity increased the severity rating from Level 2 (Moderate) to		
								review and approval processes.	quality control process for correctness (refer to finding 2019.07.IT.05).		Level 1 (High) and reopened the 2019.07.PM03.R2 recommendation. DLIR's		
									<ul> <li>Include an evaluation of deliverables against acceptance criteria and</li> </ul>		review and approval of DataHouse's AWS Environment Design document and	i	
									requirements documentation.		Test Plan are still pending. Delays in DLIR's review and approval of		
									DLIR should understand how each deliverable impacts the project		DataHouse deliverables may cause delays in the completion of the overall		
									schedule, roles and responsibilities, and ultimately the quality of the		project, as was previously experienced. DLIR and DataHouse's evaluation of		
									technical solution and success of the project.		options for COVID-19 responses should include consideration of DLIR project		
									, ,		resources to perform timely deliverable reviews.		
											05/22/20 and 06/26/20: No updates to report.		
							1				07/20/20. DUD with the excistence of ETC timely reviews 1		
											07/29/20: DLIR, with the assistance of ETS, timely reviewed and approved		
											AWS vulnerability scan reports and results. Other critical DataHouse deliverables are still pending review.		
											deliverables are still periodity review.		
							1				08/21/20: DLIR completed their review of DataHouse's AWS Environment		
							1				Design document.		
											Dongii doddiidii.		
											09/28/20: With several key Phase 1 Content Management deliverables		
							1				scheduled to be delivered over the next two months, DLIR needs to establish		
							1				acceptance criteria and scope validation and quality control processes as a		
							1				part of deliverable review and acceptance. See also related finding		
											2020.09.IT01.		
							1						
							1				Accuity will continue to evaluate the effectiveness of the deliverable review		
							1				and acceptance process.		
			1										

ASSESSMENT CATEGORY	50100101010	ORIGINAL	CURRENT	ENIBALO	*********		RECOMMENDATION	ALIDAL EN IENTAL DE A ON MISNION ATTON	FINDING	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
	2010 07 DMO(	SEVERITY	SEVERITY	Patallaces in effective and untimely	Communication activities listed in the Project Management Plan (conics			SUPPLEMENTAL RECOMMENDATION	STATUS		CLOSED DATE	CLOSURE REASON
Communication Management	2019.07.PM06 Issue	High	High	DataHouse's ineffective and untimely communications with the DLIR Project	Communication activities listed in the Project Management Plan (version 1.0) did not occur as planned as the weekly project status meetings did	2019.07.PM06.R1	Implement daily touch point meetings between DataHouse and		Open	09/20/19: Accuity decreased the severity rating from Level 1 (High/Critical) to Level 2 (Moderate). The DataHouse and DLIR Project Managers have daily		
ivialiagement					not begin until April 2019 and the first progress report was not completed		DLIR Project Managers.			touch points through various methods (in-person meetings, Go To Meetings,		
					until February 2019. Despite the commencement of regular project		DLIK Project Managers.			email, phone, and text). Furthermore, as noted above at finding		
					communications, misunderstandings and miscommunications between the					2019.07.PM02, DLIR has been included in more DataHouse meetings		
				activities.	DataHouse and DLIR project teams continued to occur. DLIR project team					including sprint planning, reviews, and retrospectives.		
				activities.	members had a piecemeal understanding of the technical solution (refer					including sprint planning, reviews, and retrospectives.		
					to finding 2019.07.IT02) and project risks and issues (refer to finding					10/25/19: Some improvement of communications were made through DLIR's		
					2019.07.PM09). Additionally, information regarding upcoming project					participation in more Case Management development team meetings and		
					activities was not provided timely. For example, DataHouse did not timely					DataHouse's facilitation of DLIR conversations with ETS. Communications		
					communicate to DLIR what to expect for the design stage sessions (e.g.,					regarding upcoming project activities, milestones, and due dates need to be		
					what would be covered each day, which end users needed to participate).					revamped to increase effectiveness (e.g., regular project schedule reports		
					There has also been a lack of communications regarding the upcoming					filtered for DLIR resources only and sorting by start dates).		
					build stage activities (refer to finding 2019.07.PM05).					interest of Bentresources only and sorting by start dates).		
		1								11/22/19, 12/20/19, and 01/24/20: No updates to report.		
		1			The IV&V recommendations made at 2019.07.PM02.R2 and							
		1			2019.07.PM02.R3 regarding DataHouse working on-site and including					02/21/20: Accuity increased the severity rating from Level 2 (Moderate) to		
		1			DLIR in project activities will also address this finding. Below are					Level 1 (High) as immediate improvements are needed particularly for		
		1			additional recommendations to further improve project team					Content Management to increase the effectiveness of communications		
					communications.					regarding the status of project activities or issues, upcoming due dates, the		
										technical solution, and impacts of decisions or actions. Communications with		
										the Case Management development team have been effective and timely.		
										, , , , , , , , , , , , , , , , , , , ,		
										03/27/20: The unavailability of DLIR project resources and cancelling of		
										project meetings as a result of COVID-19 impacted communications between		
										DataHouse and DLIR. Additionally, plans to implement new Content		
										Management meetings in March were put on hold due to COVID-19.		
										04/24/20: Weekly project status meetings and plans for new meetings		
										between DLIR and DataHouse are still on hold. A few project status meetings		
										are tentatively scheduled for May 2020. New methods need to be explored		
										to ensure communications are timely and effective even with limited DLIR		
										project resources.		
										05/22/20 and 06/26/20: Although the DLIR Project Manager is still		
										reassigned, the DCD Executive Sponsor and the DataHouse Project Manager		
										began holding weekly project status meetings. All other standing meetings		
										are still on hold.		
										07/00/00 The DUD Device Management of the Manage		
										07/29/20: The DLIR Project Manager returned to the project on a part-time		
		1								basis and is resuming weekly project status meetings.		
		1								08/21/20: The DLIR Project Manager returned to full-time status on the		
		1								project and began resuming more standing DLIR meetings, however, it is		
		1								unclear when DLIR and DataHouse joint standing meetings will resume. The		
		1								DLIR Project Manager did schedule some additional meetings between		
		1								DataHouse and DLIR for critical project areas.		
		1								programme progra		
		1								09/28/20: The weekly Scrum standup meetings for Phase 1 Case		
		1								Management resumed but periodic Content Management check-in meetings		
		1								previously discussed are still on hold. With many Phase 1 Content		
		1								Management activities scheduled over the next two months, effective and		
		1								timely communications are needed for smooth project execution.		
1		1										
										Accuity will continue to evaluate the effectiveness of these project		
		1								communication channels.		

ASSESSMENT	EINIDING ID	ORIO	GINAL CUF	RRENT		ANALYCIC	RECOMMENDATION ID	RECOMMENDATION	CURRIENTAL RECOMMENDATION	FINDING	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Communication	2019.07.PM07 F	Risk Mon	lerate Mo	derate	The lack of tailored project	Communications management is a part of the Project Management Plan		Further refine communication	SUPPLEMENTAL RECOMMENDATION  •Segment stakeholders into groups by communication needs such as by	Open	09/20/19: Accuity decreased the severity rating from Level 2 (Moderate) to	CLOSED DATE	CLOSUKE REASON
Management	2017.07.11007	TVIOC	iciate ivio	derate	communications for all impacted	developed by DataHouse, however, the plan is not comprehensive and	2017.07.1 11107.111	management plans.	department unit (e.g., Hearings, Enforcement, or Records and Claims), by		Level 3 (Low). DLIR plans to hold two sessions on October 1, 2019 to update		
					· ·	primarily reflects project meetings, status reporting, and issue reporting.			position (e.g., manager, supervisor), or internal and external (e.g.,	1	the DLIR internal stakeholders (including neighbor island staff) on what has		
					and stakeholder buy-in.	The approved Project Management Plan (version 1.2) was updated to			claimants, insurance agencies).		been happening for the last year on the eCMS Project including a brief demo		
						include a communication matrix that outlines additional communication			Consider the list of communication methods listed in DataHouse's		by DataHouse of how the new system will work and look. DLIR also plans to		
						activities. While this is an improvement over the previous version, the			BAFO.		update the DLIR website to include project information that is accessible by		
						latest draft plan still does not provide adequate details regarding			<ul> <li>Due to limited DLIR resources available for communication activities,</li> </ul>		internal and external stakeholders.		
						communication activities as all stakeholders are grouped together for			the specific groups and communication activities should be prioritized to				
						three broad communication methods and activities.			focus resources most efficiently.		10/25/19: DLIR held two sessions for internal stakeholders to provide an		
						A formal communication requirements analysis was not conducted to			<ul> <li>Update the project schedule for communication activities and assigned resources (refer to finding 2019.07.PM14).</li> </ul>		update on the project progress and timeline. DLIR worked on plans to updat the website and draft the carrier newsletter to include project updates. As	e	
						determine the information needs of internal and external project			resources (refer to finding 2017.07.FW14).		noted above at finding 2019.07.PM05, the Scrum methodology should be		
						stakeholders. There is not a process to ensure the timely distribution of					communicated to all stakeholders who will be participating in sprint activities		
						project information and there is no dedicated role or adequate resources							
						assigned to communications management (refer to finding					11/22/19: Accuity increased the severity rating from Level 3 (Low) to Level 2		
						2019.07.PM14). As such, communication activities have occurred					(Moderate) as plans to update the website and send out a letter to carriers		
						haphazardly. The limited communication activities is somewhat mitigated					regarding upcoming changes were not completed as expected. It is		
						as the DLIR Project Manager involves internal stakeholders in project-					important for communications with impacted stakeholders to be executed		
						related meetings and working sessions. However, this informal approach					timely.		
						does not include all internal stakeholders or any external stakeholders.							
											12/20/19: The letter to carriers was sent out, however, the website has not		
											yet been launched. There is a lot of opportunity to leverage the eCMS DLIR Core Team members to communicate project updates to internal		
											stakeholders on a more frequent basis, however, the network of core team		
											members should be extended to include neighbor island representatives.		
											01/24/20: No updates to report.		
											02/21/20: The project website was launched with high-level background,		
											timeline, and success metrics. DLIR plans to develop videos for project		
											communications.		
											03/27/20: No updates to report.		
											04/24/20 and 05/22/20: Project communications with internal stakeholders were an indirect result of DLIR SME participation in project meetings. With a		
											majority of DLIR SMEs unable to participate in project meetings, new		
											methods for communication project updates need to be explored.		
											06/26/20: DLIR initiated communications with external stakeholders		
											regarding upcoming changes to the electronic form submittal process. Other		
											stakeholder website and video communications are on hold due to unavailability of DLIR project resources.		
											unavariability of DEIK project resources.		
											07/29/20: DLIR made some updates to the project website.		
											08/21/20: DataHouse and DLIR held an initial meeting with a limited group		
											of external stakeholders and plans to hold periodic update meetings going		
											forward.		
											en (no (no. Dup 4 D. + 1)		
											09/28/20: DLIR and DataHouse scheduled a follow-up meeting with and plans to hold help desk hours for the electronic submission process external		
											plans to noid neip desk nours for the electronic submission process external stakeholders.		
											Stake Holders.		
											Accuity will continue to evaluate project communication plans and activities.		

ASSESSMENT CATEGORY	FINDING ID TYPE	ORIGINAL E SEVER <u>ITY</u>	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Organizational Change Management	2019.07.PM08 Risk	Moderate	Moderate	not identify pockets of resistance or adequately enable individual change.	There is no formal OCM plan or approach. DataHouse's BAFO lists various OCM activities but these were not formalized in a plan or processes. There are no OCM specific tasks or resources assigned for OCM activities in the project schedule (refer to finding 2019.07.PM14). Although there is no formal or coordinated OCM approach, some elements of OCM occur through regular project management communication and training activities. The DUIR Project Managers inclusive and collaborative approach with internal stakeholders (refer to finding 2019.07.PM01) and the DCD Executive Sponsor's active and visible support of the project (refer to finding 2019.07.PG01) also mitigates the lack of a formal approach.  Although projects may progress without a formal OCM approach, industry best practices support that a structured OCM approach compliments project management approaches in increasing probability of project success. Performing activities with an OCM focus will help to better prepare, equip, and support individuals throughout the project and to ensure that the solution is ultimately adopted and embraced by employees.		Develop and Implement a structured OCM approach.	-Collect baseline change awareness and readiness measurements through surveys or interviewsCreate and mobilize a change coalition group of managers, supervisors, and key influencersIncorporate and align OCM into communication, business process engineering (BPR), and training activitiesDevelop OCM activities to address identified awareness gaps or pockets of resistanceImplement reinforcement mechanisms to support change and increase adoption.		09/20/19. Accuity decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). A number of communication activities are planned to provide awareness of the upcoming project activities including the DLIR internal stakeholder meeting and DLIR website discussed above at finding 2019 07.PM07.  10/25/19. Communication activities were executed or are in progress which help to partially address OCM. ETS has assigned an OCM resource to assist with the eCMS Project.  11/22/19, 12/20/19, and 01/24/20: OCM activities are not executed continually or consistently to keep stakeholders engaged.  02/21/20: DLIR met with the ETS OCM resource to discuss OCM ideas. The ETS OCM resource provided a script template for the planned project video communications as well as sample flyers.  03/27/20: No updates to report.  04/24/20: Accuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate). OCM was occurring indirectly through DLIR SME participation in project meetings, Noewer, almost all DLIR project resources are now unable to participate in project meetings. New OCM methods need to be explored for DLIR SMEs as well as all impacted stakeholders.  05/22/20: No updates to report.		

ASSESSMENT		ORIGINAL	CURRENT						FINDING			
CATEGORY	FINDING ID TYPE	SEVERITY	SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Risk Managem	nt 2019.07.PM09 Issue	High	Moderate	Risks and issues have not been clearly	Only three risks and two issues have been identified by DataHouse on the	2019.07.PM09.R1	Formalize the Risk and Issue	A formalized process should clearly define responsibilities and steps in	Open	09/20/19: Accuity decreased the severity rating from Level 1 (High/Critical) to		
					project to date with no history of any risks being closed. DLIR project		Management process.	identification, resolution and action items tracking, and escalation		Level 2 (Moderate). A DLIR Risk Manager was assigned in August 2019 and		
				in the lack of understanding of potential impacts across project team members	team was not tracking any of its own risks or issues related to the project.  A risk regarding the delay in the completion of the MOU agreement with			procedures.  •The project team must encourage open, transparent discussion about		has begun to use mind mapping and a log to identify and document risks. Risks and issues have been included on the agenda for weekly project status		
				and there are no mitigation plans to	DHS (refer to finding 2019.07.PM04 and 20109.07.IT01) was never			risks and issues.		and monthly Executive Steering Committee (ESC) meetings. The risk		
				adequately address them.	identified and the risk identified in the Content Management Conversion			11363 dild 133de3.		management process needs to be further refined to combine the DataHouse		
				adoquatory address morn.	and Migration (version 0.0) document (refer to finding 2019.07.IT.04) was					and DLIR logs into one source, assign risk owners, and develop mitigation or		
					not included in the risks and issues log, indicating an ineffective risk and					remediation plans for each risk or issue.		
					issue management process. Based on information IV&V recommendations							
					made during the assessment period, both DLIR and DataHouse have					10/25/19: Risks were discussed at the weekly status meetings and monthly		
					communicated a plan to start identifying and logging risks jointly onto					ESC meetings. The DLIR Project Manager and DLIR Risk Manager also meet		
					DataHouse's log and reviewing them together weekly. As identification					weekly to review and discuss the risk log. The risk management process		
					and mitigation of risks and issues are critical to project success, a formal					improvements noted as of 9/20/19 are still open.		
					process should be implemented before moving forward in the project.					11/22/19, 12/20/19, and 01/24/20: No updates to report.		
										02/21/20: DLIR began to develop mitigation plans for all high IV&V risks and		
										issues. DLIR plans to meet with DataHouse in March 2020 to continue		
										developing mitigation plans.		
										03/27/20: Accuity increased the severity rating from Level 2 (Moderate) to		
										Level 1 (High/Critical) and reopened the 2019.07.PM09.R2 recommendation.		
										Discussions of risks were paused as weekly project status and monthly ESC		
										meetings were cancelled from early March. DataHouse and DLIR developed		
										risk mitigation plans and detailed tasks for high risk IV&V findings in early March, however, the timing will need to be reevaluated for COVID-19.		
										Additionally, resuming risk management activities is crucial during periods of		
										significant uncertainty and will help to reduce individual threats and overall		
						2019.07.PM09.R2		Include DataHouse and DLIR and, on occasion, the executive steering		project risk exposure.		
							project risks and issues.	committee (refer to finding 2019.07.PG02).  •Perform a detailed review of new items, status of open items, risk/issue				
								owners, and mitigation plans.		04/24/20: Discussions of risks at weekly project status and monthly ESC		
								owners, and mitigation plans.		meetings are still on hold. Some of the meetings are tentatively scheduled to		
										resume in May 2020.		
										05/22/20: Some discussions of risks resumed with weekly project status and		
										monthly ESC meetings, however, additional focus on risk identification and		
										mitigation plans is needed as the proposed plan to address COVID-19		
										impacts is formalized and executed (refer to findings 2020.03.PM01 and		
										2019.09.PM01).		
										06/26/20: The formalized change request for COVID-19 did not include		
										identification of risks associated with the new plan. Adequate discussions and		
										execution of risk mitigation plans are still not occurring.		
										07/29/20 and 08/21/20: No updates to report.		
										09/28/20: Accuity decreased the severity rating from Level 1 (High/Critical) to		
										Level 2 (Moderate). DLIR resumed weekly risk meetings, prioritized the top		
										three project risks, and began developing remediation or mitigation plans.		
										Additionally, DLIR and DataHouse began discussing prior IV&V findings of		
										risks and issues and scheduled recurring meetings to continue efforts.		
										Accuity will continue to monitor the risk management process.		
			1									

ASSESSMENT	FINIDING ID	TVOE	ORIGINAL	CURRENT	FINIDING	ANALYCIC	DECOMMATAID ATION ID	DECOMMENDATION.	CURDI FAMENTAL DECOMMENDATION	FINDING	FINDING STATIC LIDEATE	
Scope and	2019.07.PM10	Issue	High	Moderate	The Content Management and Case	The requirements for both Content Management and Case Management	2019.07.PM10.R1	RECOMMENDATION Revise Content Management and	Ensure requirements follow SMART (specific, measurable, actionable,	Open	69/20/19: Accuity decreased the severity rating from Level 1 (High/Critical) to	
Requirements			3		Management requirements	have already been approved, however, the requirements are incomplete		Case management requirements	realistic and time bound) guidelines.		Level 2 (Moderate). The RTM has been updated to include more detailed and	
Management					documentation is incomplete.	(e.g. do not incorporate all contract requirements and all three project		documentation and RTM.	Ensure requirements documentation include all requirements listed in		specific requirements and user stories from the Case Management and	
						phases) and the descriptions in the Requirements Traceability Matrix (RTM) lack sufficient detail. The current RTM also does not link operational and	)		the DataHouse contract, all requirements identified during the stakeholder sessions, and for all three phases of the eCMS Project.		Content Management development teams. DataHouse is in the process of enhancing their RTM to crosswalk and merge all requirements into one master	
						project objectives to design artifacts. Furthermore, the RTM does not			Ensure requirements include functional, performance, process, non-		document including all contract requirements. With the staggered	
						include non-functional requirements, including compliance with Hawaii			functional, security, and interface requirements.		development of the Content Management and Case Management solutions	
						Revised Statues, Hawaii Administrative Rules and security requirements.					and the iterative nature of Scrum methodology, additional requirements will	
											continue to be identified throughout Case Management development which	
						Requirements management is a part of the Project Management Plan					could have implications to Content Management. As noted above at finding	
						developed by DataHouse, however, the plan is not comprehensive. The Project Management Plan (version 1.2) was updated to include additional					2019.07.PM05, the process for approving and prioritizing requirements still needs to be set. Formalizing the process for managing requirements remains	
						details regarding requirements management. While this is an					kev	
						improvement over the previous version, the latest draft plan still does not						
						provide adequate details regarding the requirements prioritization					10/25/19: DataHouse provided training to the DLIR Product Owners that	
						process, the traceability structure, and how requirements will be reported.					included how requirements are managed in the development sprints (refer to	
						A construction of the foundation for					2019.07.PM05) and clarified responsibility for security requirements (refer to	
						As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation					2019.07.IT07). Contract requirements were added to the RTM, however, those requirements were not traced to the requirements subsets used by the	
						are complete and meet industry standards and best practices.					development teams for completeness.	
						Requirements documentation should be revised and requirements					The second secon	
			1			management processes should be improved prior to moving forward in					11/22/19 and 12/20/19: Case Management requirements are refined through	
			1			the project.	L			1	user stories during each sprint. No other significant updates regarding	
							2019.07.PM10.R2		Ensure that there is a clear understanding between DataHouse and		contract, integration, or security requirements to report.	
								processes.	DLIR regarding who is responsible for identifying and tracking different types of requirements.		01/24/20: The DataHouse Case Management development team clarified the	
									Develop a process for prioritizing and reporting requirements.		process for approving new or revised user stories.	
			1						Develop a process for tracing requirements to specific system design		11,	
									elements.		02/21/20: The DataHouse Case Management development team continues	
											to spend a lot of time to clarify and refine user stories. The new process for	
											approving Case Management user stories changes was implemented. DLIR	
											plans to procure a resource to help with their review of requirements documentation for completeness.	
											documentation for completeness.	
											03/27/20: The Case Management development team continued to make	
											improvements to the process for creating and approving new user stories and	
											the user story tracking tool. DLIR procured a resource to help with their	
											review of requirements documentation for completeness and traceability,	
											however, DLIR did not complete their review of the vendor's results due to COVID-19.	
											COVID-19.	
											04/24/20 and 05/22/20: DLIR's review of their third-party vendor's	
											requirements assessment results are still pending due to limited project	
											resources. Documentation of requirements (e.g., security, performance,	
											hardware, AWS, acceptance criteria) is still incomplete.	
											06/26/20: Accuity reopened the 2019.07.PM10.R2 recommendation as IV&V's	
											in-depth review of requirements noted that improvements and clarification of	
			1								the process are still needed. IV&V's review also reconfirmed that	
											documentation of requirements (e.g., functional, integrations, security,	
											performance, hardware, AWS, acceptance criteria) is still incomplete.	
			1								Requirements brought up during sprint sessions were not adequately captured and tracked. Requirements processes, roles, and responsibilities	
			1								should be reevaluated and rediscussed for Phase 2.	
			1									
											07/29/20: IV&V did not observe or have access to information to verify any	
			1								progress made in the current month. With requirements gathering sessions	
											scheduled for August, the requirements processes, roles, and responsibilities	
											should be reevaluated and improved to increase efficiency and avoid the setbacks and delays experienced in Phase 1.	
											serbacks and delays experienced in Friase 1.	
			1								08/21/20: DataHouse made improvements to the requirements management	
			1								processes including real time review of updated workflows and drafted user	
											stories during the Phase 2 requirements gathering sessions, as well as timely	
			1								sharing of draft requirements documentation and meeting notes after sessions for DLIR review and reference.	
			1								SESSIONS FOR DEITA REVIEW BITCH REFERENCE.	
											09/28/20: Draft Phase 2 user stories appear to cover the DLIR business	
											process workflows more completely from start to finish as compared to Phase	
			1								1, however, it is unclear how requirements related to work assignment,	
											dashboards, reporting, integrations, forms, and Phase 1 updates will be	
											captured.	
			1								Accuity will continue to evaluate the requirements documentation and	
			1								processes.	
	1	1		1	1		1		1	1		

ASSESSMENT CATEGORY	FINDING ID TYPE	ORIGINAL SEVERITY	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
	2019.07.PM12 Issue	High	High	informal cost management practices ma lead to unexpected costs or overpayments of contracts.	There is no formal cost management plan. A comprehensive total project budget is not created, tracked, or reported. Currently, payments are tracked for the two main eCMS Project contracts. DataHouse SI contract and the Team Acculty IV&V contract. Other costs for licenses and equipment are tracked informally as these are often paid from DCD's regular or excess funds. With the recent DHS development, costs of all required hardware and software for the alternative solution as well as lone rem operational costs need to be properly evaluated and managed (refer to finding 2019.07.101). Additionally, total project costs and funding sources are not formally reported.  The DataHouse contract states that payments are contingent upon receip of services, deliverables, and reports in accordance to the milestones that meet the expectations of the RFP. DataHouse provided DUR with a monthly payment schedule and as of June 30, 2019, DUR has paid DataHouse's invoices through April 2019 (May and June 2019 invoice payments are still pending). Allthough the project schedule, deliverable intellines, and go-live dates have been pushed back, no adjustments were made to the monthly payment schedule which could result in overpayments. Due to the lack of clear and specific deliverable expectations (refer to finding 2019.07.PC03), incomplete understanding of all the schedule delays (refer to finding 2019.07.PM13), and undefined criteria for revising the payment schedule, trama Accult is unable to determine if DataHouse payments are appropriately managed.	2019.07.PM12.R1  2019.07.PM12.R2  2019.07.PM12.R3	Prepare a comprehensive project budget and a schedule of long-ter operational costs (e.g., Ileenses, subscriptions, maintenance, cloud services).  Prepare regular cost reports for management and the executive steering committee.  Clarify DataHouse payment terms and adjust payment schedules for schedule delays.		Open	09/20/19. Acculty has kept the severity rating as Level 1 (High) as a comprehensive project budget and long-term cost schedule have not been created yet. Additionally, regular cost variance reports are not prepared or presented.  10/25/19. Progress has been made to gather cost information and set up budget tracking templates.  11/22/19, 12/20/19, and 01/24/20: No updates to report.  02/21/20: DLIR plans to develop a comprehensive project budget while preparing the 2021-2022 budget.  03/27/20: COVID-19 will impact project costs, however, the extent of the impact is indeterminable. Additionally, DLIR is assessing available funding for planned procurements of resources and other project costs.  04/24/20: DLIR is still reviewing recent expenditure restrictions and guidance from the State Governor that may impact project spending, including planned procurements of additional project resources. Evaluation and discussion of the impact of COVID-19 to the DataHouse contract is also needed.  05/22/20: Accuity changed this finding from a risk to an issue as the DataHouse Phase 1 milestones. An adjustment to the payment schedule for revised milestone completion and payment terms for Phase 2 milestones should be considered as a part of the proposed plan and related change request (refer to findings 2020.03.PMO1 and 2019.09.PMO1).  06/22/20: The change request for COVID-19 did not include a revision to Phase 1 payments. It did include a new payment schedule for Phase 2 and Phase 3, however, the amount of payments for the planning phase did not appear to align with the percentage of completion associated with those tasks. Phase 3 is not schedule to begin until July 2021 but a substantial payment is included for June 2020. DataHouse and DLIR are currently discussing the payment schedule.  07/29/20 and 08/21/20: No updates to report.		

ASSESSMENT CATEGORY FINDING ID TYP	ORIGINAL CUR PE SEVERITY SEV	RRENT VERITY FIN		ANALYSIS		RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
ASSESSMENT CATEGORY FINDING ID TYPE COST, Schedule and 2019.07.PM13 Risk Resource Management	PE SEVERITY SEV  REMARKS  High High	pra mi sch	NOING  adequate schedule management actices may lead to project delays, sixed project admittives, unrealistic hedule forecasts, or unidentified uses for delays.	delays, detailed schedule variance analyses to understand causes and impacts of the delays have not been thoroughly performed, documented, or reported. Decisions or change requests to revise the project schedule are not properly documented or approved in accordance with the Project Management Plan.  DataHouse has prepared a higher-level project schedule and a more detailed task listing. Although the project schedule will need to be updated due to the recent DHS development and selection of an alternative solution, the following deficiencies were noted in the current project schedule:  Does not include all project tasks such as Build stage sprints, communication, OCM, BPR, and quality assurance (refer to findings 2019.07.PM05, 2019.07.PM07, 2019.07.PM08, 2019.07.PM11, and 2019.07.IT05).  Does not include estimated durations. Durations are only included in the more detailed task listing.  Only includes tasks for Phase 1. The Phase 2 and 3 tasks are only included the more detailed task listing.	2019.07.PM13.R1  2019.07.PM13.R2	Prepare regular schedule reports and assigned resources.  Prepare regular schedule reports and schedule variance analyses for management and the executive steering committee.	SUPPLEMENTAL RECOMMENDATION  OF THE PROPERTY O	FINDING STATUS Open	INDING STATUS UPDATE  09/20/19: Acculty has kept the severity rating as Level 1 (High). Although DataHouse updated the project schedule to include additional tasks for Phases 1.2, and 3 and identified specific resources assigned for select tasks, there are still a number of deficiencies noted. The project schedule is not fully resource loaded, is not integrated with subcontractor's detailed schedules, does not include all DLIR project tasks, estimated hours, or adequately detailed tasks for Phases 2 and 3, and does not retain baseline dates for variance analysis. As a result, Accutily is unable to assess the overallocation of resources, identify the critical paths, or determine if time estimates or project progress percentages are reasonable. Additionally, regular schedule variance reports are not prepared or presented.  10/25/19: The project schedule was updated with time percentages for some of the tasks, however, the Content Management go-live date is in jeopardy again. The schedule should be updated to include links for predecessor and successor dependencies related to a security management plan (refer to finding 2019 07.107). Any DIAI tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DLIR (refer to finding 2019 07.107). The Unit task should be included in the project schedule and regularly communicated to DLIR (refer to finding 2019 07.107). Any DIAI tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DLIR (refer to finding 2019 07.107). Any DIAI tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DLIR (refer to finding 2019 07.107). Any DIAI tasks to the project schedule and tasks to the project schedule. There are already some delays in select integrations and Content Management tasks from the project schedu		CLOSURE REASON

Resource may lead to project delays, reduced project Management project performance, or turnover of based or project resources DULR Project resources.	ALYSIS  m Accuity was unable to evaluate resource workloads based on the	RECOMMENDATION ID			FINDING			1
Resource may lead to project delays, reduced project Management project performance, or turnover of based of project resources.  DUR Pr	m Accuity was unable to evaluate resource workloads based on the			SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS LIPDATE	CLOSED DATE	CLOSURE REASON
propert DLIR sh (refer te assigne Resourt states it the revit prepare Staffing noted t (refer te project	ect schedule information (refer to finding 2019.07.PM13), however, etc on observations of the ecMS Project team, the DataHouse and R Project Managers appear to be over-tasked. The DLIR Project nager is the only full-time DLIR employee assigned to the eCMS Project understandably does not have time to perform all of the tasks to perly manage the project or represent DLIR during project activities. A should increase participation in design and development activities et to finding 2019.07.PM02) but would not be able to with the current gned resources.  Durce management is included in the Project Management Plan and es that "resources will be provided based on project needs. This will eviewed with DCD on a quarterly basis." The Project Status Reports bared by DataHouse do not note any resource needs under the fing (Needs, Anticipated Changes) section. However, Team Accuity at that the DataHouse cuality Assurance Lead has not been assigned to finding 2019.07.1705). DataHouse is also considering adding a sect coordinator resource to assist with meeting minutes and getting verables out.	2019.07.PM14.R1	Revaluate project resource needs and acquire additional resources.  Prepare regular resource reports for management and the executive steering committee.	- Perform project shedule updates for the alternative solution (refer to finding 2019.07.ITO1) and missing tasks (refer to finding 2019.07.PM13) Ensure resource levels and skill sets align to assigned tasks.  - Consider including resource needs for unassigned tasks or roles Consider including DLIR resources needed and estimated hours for upcoming project activities (e.g., design sessions, user demonstrations, or user testing).		BINDING STATUS UPDATE  ORY/20/19. Acculty has kept the severity rating as Level 2 (Moderate). Although two of the eCMS DLIR project team members have been assigned additional responsibilities to lighten the load of the DLIR Project Manager, inadequate resources and the timing of upcoming and critical project activities continue to be a concern.  10/25/19. Resource constraints continue to be a challenge. Focus of DataHouse resources on AWS setup and network logistics delayed completion of the test plans and progress on the configuration management plan. DLIR resources were partially assigned to work on other DLIR IT initiatives which delayed completion of test plans and limited progress on addressing prior IV&V findings.  11/22/19. Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (Highl) as resource constraints continue to limit improvements made and the pace of the project activities is picking up putting additional demands on the project team.  12/20/19. No updates to report. See finding 2019.09.PM02.  01/24/20. DLIR plans to procure additional resources to support data conversion and testing activities. DataHouse plans to shift some of the technical work from the DataHouse Project Manager to a technical resource to help alleviate the DataHouse Project Manager's workload.  02/21/20. DLIR assigned an additional EDPSO resource to DCD. DLIR is in the process of drafting procurement documents for additional resources for testing, data conversion, AWS, and requirements.  03/27/20. Acculty changed this finding from a risk to an issue as inadequate DLIR resources is causing project delays. Many key DLIR resources and a few DataHouse resources were pulled to help with the higher priority UI Division's operations. Additionall's project resources for upoming project activities were put on hold due to COVID-19. The timing of when DLIR project resources for upoming project activities were put on hold due to COVID-19. The timing of when DLIR project resources for upoming project activities were put		CLOSURE REASON

ASSESSMENT ORIGINAL CURRENT ORIGINAL CURRENT FINDING COMMENDATION OF TYPE SEVERITY SEVERITY FINDING ANALYSIS RECOMMENDATION SUPPLEMENTAL RECOMMENDATION SUPPLEMENTAL RECOMMENDATION STATUS FINDING STATUS UPDATE		
	CLOSED DAT	CLOSUDE DEASON
	CLOSED DATE	CLOSURE REASON
System Software, 2019.07.1T02 Risk High Moderate An unclear interface solution may impact The Content Management Design (version 1.0) document was approved 2019.07.1T02.R1 Document the interface solution and Document the interface solution and Document that interface so		
Hardware and the design process and require by DLIR on May 6, 2019. Case Management is currently in the design analysis. solution including the following: Moderate). DataHouse included a narrative about the		
Integrations additional effort to correct. phase and design documents have not been provided. Although the		
Content Management design document was completed and Case How files are uploaded to selected Content Management solution from organized two demos of 1) the Salesforce application		
Management design is in progress, the exact interface solution has not Salesforce to get to a web service, and 2) another web service us	ing an iFrame and IBM	
been defined. The interfaces between Content and Case Management are * How metadata is uploaded into Salesforce ICN to get to FileNet.		
integral to the success of the project and should be fully defined in design "Who is responsible for setup, configuration, and maintenance and the		
documents in accordance with industry standards.  steps required for implementation  10/25/19: DataHouse refined the interface design de	tails in the Case	
* What are the costs associated for development and long-term		
Due to the recent up to the attentive southern the metal-ace options will need to also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution also be researched and analyzed depending on the attentive solution and attentive solution are attentive solution.	4/24/20 and 05/22/20.	
also be researched and analyzed depending of the attentiative solution.  Selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected. However, even prior to this development, DLR did not have a better than the project schedule to a selected than the project schedule that the project schedule to a selected than the project schedule to a selected than the project schedule to a selected than the project schedule than the project schedule that the pro		
clear understanding of the interface solution as well as the complete described by the interface solution as well as the compl		
technical solution. DLIR still had questions about the interface solution regarding the technology, connectivity, batch vs. real-time, security, cost 2019.07.IT02.R3 Verify the proposed interface unable to provide a complete update on integration of 2019.07.IT02.R3 Verify the proposed interface	levelopment progress.	
and maintenance of the proposed interface solution between Salution between Salution will work.    Solution will work   Solution william will work   Solution will work   Solution will work   Solutio	imitations of the Content	
and FileNet. The interface solution should be clearly analyzed,  Management solution to provide the desired user exp		
documented, mapped to project requirements, and communicated to		
DUR. regarding the integration solution and limitations are		
fully understands and is made timely aware of any issu		
07/29/20, 08/21/20, and 09/28/20: IV&V does not hav		
integration activities or access to current builds to be a	able to better assess	
and identify potential risks and issues.		
Accults will continue to evaluate the interface colution	n as additional datails	
Acculty will continue to evaluate the interface soling in a final factor of the continuation of the contin		
	ictual solution	
components is made.		
Quality 2019.07.ITO5 Risk Moderate Mode	d 2 (Moderate). The	
Management and management plan and assigned quality June 23, 2019 but was not yet approved by DLIR. The draft plan did not		
Testing assurance resources may impact the include quality metrics, quality standards, or quality objectives of the include quality standards or reference to specific criteria (refer to finding management responsibilities are specific to deliverable)		
quality of project deliverables. project and does not describe how quality control results will be 2019.07.PM03). Acculty will work with DLIR to understand what addition		
documented or reported. Additionally, the Quality Assurance Lead  • Update the project schedule to assign quality assurance resources (refer management activities and metrics need to suppleme	nt the DataHouse	
identified in DataHouse's BAFO is not assigned to the project team at this to finding 2019.07.PM14). quality management plan.		
time.  2019 07 LTDS P2 Perform quality management 10/25/19: DataHouse clarified that the DataHouse Qu	uality Management Plan	
2017-07-110-112 I chrom quanty management		
activities of previously approved of		
deliverancies were aireagy approved and many are pending approval, it is submitted deliverables.  submitted deliverables.  submitted deliverables.  submitted deliverables.  limportant for a quality management plan to be formalized and resources to D.U.R. The Case Management quality assurance tes		
important to a quality management plant to be contained and resources  Begin 1. Duts working on the DUR quality management activities.  Epic 1. Duts working on the DUR quality management activities.		
and the state of t		
11/22/19, 12/20/19, 01/24/20, 02/20/20, 03/27/20, an	nd 04/24/20: No	
updates to report. Accuity does not have access to th	e project team's testing	
resources and we are unable to provide an update on	. testing activities.	
	and and another	
05/22/20, 06/26/20, and 07/29/20: There is no indepr		
assurance for the eCMS Project as quality assurance to		1
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DLIR needs to c		
assurance for de school for de security as quality assurance to battalouse to the school for the	te and ensure quality	
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DUR needs to c	te and ensure quality	
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DUR needs to o management plan to outline how they plan to evaluat throughout the project.		
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DLIR needs to a management plan to outline how they plan to evaluate throughout the project.  08/21/20: In an effort to prevent further delays for Ph.	nase 1 development,	
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DLIR needs to c management plan to cutline how they plan to evaluat throughout the project.  08/21/20: In an effort to prevent further delays for Ph DataHouse plans to proceed with development even in the project.	nase 1 development, if DLIR lite UAT testing	
assurance for the eCMS Project as quality assurance to battalouse and for the project as quality assurance to the description of the project as quality assurance to the description of the project as quality assurance to the description of the project and throughout the project.  08/21/20: In an effort to prevent further delays for Phadalouse plans to project people and the project assurance to the description of the project of the description of the project of the description of the	nase 1 development, if DLIR lite UAT testing management plan or	
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DUR needs to company the project.  08/21/20: In an effort to prevent further delays for Ph DataHouse plans to proceed with development even is no rocampleded by the days for Ph DataHouse plans to proceed with development even is no rocampled by the days for Ph DataHouse plans to proceed with development even in some plans to plans to proceed with development even in some plans to plans to plans to proceed with the development even in some plans to	nase 1 development, if DUR lite UAT testing management plan or ouse will ensure quality	
assurance for the eCMS Project as quality assurance to DataHouse and EXMS Project as quality assurance to DataHouse and EXMS Project. But not on the very plan to evaluate throughout the project.  80/21/20: In a first of the prevent further delays for Ph DataHouse plans to proceed with development even is not completed by the due date. Without a quality of approach in place, it is unclear how DIM and DataHouse plans to proceed with development even is not completed by the due date. Without a quality of approach in place, it is unclear how DIM and DataHouse plans to proceed with development even is not completed by the due date. Without a quality of approach in place, it is unclear how DIM and DataHouse plans to proceed with development even is not completed by the due date. Without a quality of the date of the plant of the project is not completed by the due date. Without a quality of the plant of the project is not completed by the due date. Without a quality of the plant of the	nase 1 development, if DUR lite UAT testing management plan or ouse will ensure quality	
assurance for the eCMS Project as quality assurance to DataHouse and subcontractor teams. DUR needs to company the project.  08/21/20: In an effort to prevent further delays for Ph DataHouse plans to proceed with development even is no rocampleded by the days for Ph DataHouse plans to proceed with development even is no rocampled by the days for Ph DataHouse plans to proceed with development even in some plans to plans to proceed with development even in some plans to plans to plans to proceed with the development even in some plans to	nase 1 development, if DUR lite UAT testing management plan or ouse will ensure quality	
assurance for the eCMS Project as quality assurance to death and the economic of the economic	nase 1 development, if DUR lite UAT testing management plan or ouse will ensure quality	

ASSESSMENT CATEGORY	EINIDING ID	TVDE	ORIGINAL	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING	FINDING STATUS UPDATE	CLOSED DATE CLOSURE REASON
Configuration	2019.07.IT06	Risk	Moderate	Moderate	A lack of a configuration management		2019.07.IT06.R1	Develop a formal configuration		Open	09/20/19: Accuity has kept the severity rating as Level 2 (Moderate).	CLOSED DATE CLOSURE REASON
Management	2017.07.1100	T CLORE	woderate	Moderate		plans to prepare a configuration management plan by October 11, 2019.	2017.07.1100.111	management plan.	Configuration Management in Systems and Software Engineering and	Орон	Although Accuity obtained a better understanding of configuration	
					quality of the system if unauthorized or	Based on the current project plan, the eCMS Project was supposed to		3	includes the configuration management planning process, configuration		management through interviews of the Content Management and Case	
					untested changes are promoted	begin the Build stage of Phase 1. Although the recent DHS development			identification process, configuration change control process,		Management development teams, DataHouse is still in the process of	
					between environments.	will likely delay the start of the Build stage, not having a configuration			configuration status accounting process, configuration auditing process,		finalizing and documenting a configuration management approach.	
						management plan in place increases the concern that changes may not be			interface control process, and release management process.			
						properly tested, accepted and approved which may impact system			<ul> <li>DataHouse and DLIR should collaborate and agree on the configuration</li> </ul>		10/25/19: No updates to report.	
						performance or quality.			management plan purposes and processes that will best serve this			
									project.		11/22/19: DataHouse provided a summary of the configuration management	
											approach for the Case Management development team in addition to the	
											previously provided summary of the Content Management development	
											team's approach. The configuration management approach used by the	
											other development teams (e.g. integrations, AWS/network) is still not clear.  Additionally, a comprehensive DataHouse team configuration management	
											plan was not completed.	
											plan was not completed.	
											12/20/19: There was confusion about configuration items and required DLIR	
											approvals due to a lack of a comprehensive configuration management plan.	
											7,	
											01/24/20, 02/20/20, 03/27/20, 04/24/20, 05/22/20, 06/26/20, 07/29/20,	
											08/21/20, and 09/28/20: No updates to report.	
											Accuity will continue to evaluate the configuration management plan and	
											approach.	

ASSESSMENT	511011010	ORIGINAL	CURRENT	EURINA					FINDING		N 0050 D 175 01 001 DE 05 1001
Security	FINDING ID TYPE 2019.07.IT07 Risk	SEVERITY Moderate	SEVERTY High	FINDIC  Not having an approved security management plan in place may impact the security and privacy of the data.	The Security Management Plan (version 0.0) was prepared by DataHouse on June 3, 2019 but was not yet approved by DLIR. Based on the current project plan, the eCMS Project was supposed to begin the Build stage of Phase 1. Although the recent DHS development will likely delay the start of the Build stage, not having a security management plan in place may result in improperty defined security requirements and may preclude the adequacy of the system to support the data needs of the system. Security controls should be defined in the security management plan and implemented as part of an organization-wide process that manages information security and privacy risk.	2019.07.1T07.R2	Finalize the security management plan meets specific standards.  Finalize the security management plan.	SUPPLEMENTAL RECOMMENDATION  - Consider the industry standards and best practices above.  - DataHouse and DLIR should collaborate and agree upon the specific standards that will best serve this project.		GNODYPIS ACCUST BY ABS THE SEVERITY PATENT OF THE SECURITY MANAGEMENT OF THE SECURITY OF THE SE	CLOSURE REASON

ASSESSMENT CATEGORY	FINDING ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Project Organization and Management	2020.02.PM01		N/A		improvement resulting in smoother project execution and increased transparency.	The Scrum methodology employed by the DataHouse Case Management development team inherently promotes collaboration, open communication, transparency, and process improvement through built in daily stand-up and retrospective meetings. Over and above this, the Case Management development team members don't just go through the exercise of Scrum meetings but really embrace the spirit of the methodology. The Case Management development team members have: Worked closely with DUR subject matter experts (SMEs) to ensure user and business needs are thoroughly understood.  **Encouraged DUR SMEs to really explore opportunities for business process improvements.  **Openly communicated solution options including rationale for optimal design considerations, limitations, and benefits as well as ways the solution can help to achieve business process improvements for DUR.  **Listened to feedback from DUR and timely implemented improvements to project processes (e.g., user story approval process).  **Demonstrated genuine commitment to the success of the project.  This approach has helped DUR team members to build a high level of comfort with and understanding of the Case Management solution and has contributed to a smoother execution of the Case Management part of the project.		N/A for positive findings.	N/A for positive findings.	Closed	N/A		Closed as this is a positive finding.
System Software, Hardware and Integrations	2019.09.IT01	Positive	N/A	N/A	project development.	Many members of the DataHouse team have contributed to the following successes:  *Secured a replacement Content Management hosting infrastructure solution. This included presenting the replacement solution, facilitating responses from and meetings with AWS, answering the Office of Enterprise Technology Services (ETS) security questions, and updating design documents.  Mitigated or remediated many of the high severity risks and issues from the IV&V Initial Report. The team's efforts to address many risks and issues are summarized in Appendix D. Additionally, DataHouse's willingness to open project team meetings to both DLIR and IV&V and time taken to address DLIR, IV&V, and ETS concerns have greatly contributed to the progress made since the Initial Report.  *Demonstrated commitment to DLIR and project success. This includes the Content Management development team's flexibility in performing project work to accommodate the delays in the WC forms and the Case Management development team's a have demonstrated their commitment to doing what's best for the project and have even proposed ways to further improve the solution leveraging their extensive technical knowledge and experience.  The DataHouse team's actions have helped to minimize impacts and further delays to the project schedule. They have also built positive momentum in moving the project forward.		N/A for positive findings.	N/A for positive findings.	Closed	N/A	10/25/2019	Closed as this is a positive finding.
Governance Effectiveness	2019.07.PG01	Positive	N/A	N/A	role in guiding, monitoring, and championing the eCMS Project.	The DCD Executive Sponsor's close involvement in the project has provided strong leadership that has, to an extent, compensated for the lack of formal governance (refer to finding 2019.07.PG02) and other project deficiencies noted throughout this report. However, as important as good sponsorship is, this factor alone can not be relied upon to guarantee project success.	N/A	N/A for positive findings.	N/A for positive findings.	Closed	N/A		Closed as this is a positive finding.
Governance Effectiveness	2019.07.PG02		Moderate		committee and change control board may limit the effectiveness of project governance.	The DataHouse proposal and Project Management Plan (version 1.2) make references to a steering committee, however, a formal committee was not chartered. Currently, the DCD Executive Sponsor is assigned the authority in the Project Management Plan to approve all project changes.		Assemble and formalize an executive steering committee.	- The size and selection of committee members should balance the representation of key stakeholders with the need for efficient decision making Formalize the committee mission, responsibilities, and the types and the thresholds of decisions that need committee approval in a steering committee charter Consider the need or ease of creating a change control board with a subset of the committee for certain types of decisions.	Closed	09/20/19. Acculy decreased the severity rating from Level 2 (Moderale) to Level 3 (Low). The eCMS Executive Steering Committee (ESC) was assembled and held lis first meeting on September 13, 2019. Members were informed of the committee's purpose, roles, and member tasks, however, the types and thresholds of decisions that need committee approval or attention was not formalized. The next meeting is scheduled for October 11, 2019.  10/25/19: The October 11, 2019 ESC meeting was effectively run by the DCD Project Sponsor to discuss key risks and issues and to align the eCMS Project direction with DLIR and ETS strategic objectives. The thresholds for decisions that require committee attention were also established.		formalized.
Governance Effectiveness	2019.07.PG03	Risk	Moderate	N/A	may limit objective evaluation of contractor performance and contract fulfillment.	The procurement of the System Integrator (SI) for the eCMS Project was performed by DLIR EDPSO and reviewed by ETS. The RFP and DataHouse contract does not clearly outline expected deliverables, evaluation criteria for accepting deliverables, and clear delineation of roles and responsibilities. There has already been confusion or misunderstandings due to unclear contract terms in the areas of form design, risk and issue tracking fefer to finding 2019.07.PM09), requirements tracking fefer to finding 2019.07.PM003. DataHouse has already prepared certieria has led to approval of deliverables that do not meet industry standards (refer to finding 2019.07.PM03). DataHouse has already prepared certain management plans and project documents and has been amenable to providing certain additional deliverables even though they were not clearly required to by the RFP or contract. Clear contract terms set expectations for deliverables and will assist DLIR to ensure that contractors fulfill obligations to the standard of quality that is required.		Evaluate the need for a contract modification to clarify contract terms.	- Consider including key project documents as deliverables such as a requirements management plan and requirements traceability matrix (RTM) (refer to finding 2019.07.PM10), risk and issue log (refer to finding 2019.07.PM09), and testing documentation.  - Consider including acceptance criteria based on industry standards. Fo example, the acceptance criteria could be compliance with Institute of Electrical and Electronics Engineers (IEEE) 29148-2018 for a requirement traceability matrix or compliance with IEEE 829 for test documentation.  - Consider including measurable success metrics (refer to finding 2019.07.PG05).  - Consider the need to outline roles and responsibilities between DLIR and DataHouse (refer to finding 2019.07.PM02).	r	09/20/19- DLIR has decided to address this finding through updates of project plans. DataHouse has shown an openness to develop and continuously improve project deliverables including project plans. Roles and responsibilities have been more openly discussed and plan to be incorporate within project plans. Furthermore, success and quality metrics are being drafted which will also be an additional method for evaluating contractor performance and fulfillment.		Closed as DLIR will address through project plan updates. The need for clarification of roles and responsibilities as well as acceptance criteria and success metrics will continue to be monitored under the 2019.07.PG04 Success Metrics, 2019.07.PM02 Project Organization, 2019.07.PM03 Deliverable Review, and 2019.07.IT05 Quality Management findings.

ASSESSMENT			OPIGINAL	CHIPDENIT						EINIDING			
CATEGORY	FINDING ID	ID TYPE	SEVERITY	SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Governance Effectiveness	2019.07.PC	G04 Risk	Low	N/A		Large IT projects are not a regular occurrence for many State departments. Often times project resources are assigned from within the departments that have valuable organizational and operational knowledge but do not have the necessary project management experience. Having guidelines and checklists and access to project documents from past State projects would greatly benefit even experienced project teams. ETS, as the State of Hawaiis IT oversight office, is in the best position to gather project assets and put forth guidelines.		Initiate conversations with ETS to discuss DLIR IT and project support needs and responsibilities.	Discuss what resources, guidance, and shared project assets would be most helpful to DLIR. Discuss what project assets DLIR can provide to contribute to the development of a centralized project management library. Consider involving the project steering committee to align and clarify ETS vs. steering committee governing roles.	Closed	09/20/19: ETS began sharing best practices and lessons learned with DLIR including taking the DLIR Project Manager to sprint meetings for another State project. ETS is a member of the newly formed eCMS Executive Steering Committee (ESC) and will use that vehicle to share lessons learned with DLIR. Additionally, DLIR is forming a DLIR IT Steering Committee to provide oversight to all DLIR IT projects. The DCD Executive Sponsor is a member of that DLIR committee and plans to share eCMS lessons learned and project templates with other DLIR IT projects.	9/20/2019	Closed as discussions occurred with ETS and the risk is adequately mitigated with the planned course of action.
Benefits Realization	on 2019.07.PC	PGG6 Risk	Low	N/A	Failure to align statutes with the eCMS Project modernization objectives may reduce the operational improvements that are achieved.	The eCMS Project's primary modernization objective is to move to a paperless and automated business process. The new system is being designed to allow for electronic filing, routing, and tracking of forms. However, current disability compensation statutes have not been revised to require that these forms are filed electronically by law. As such, manual paper forms may continue to be submitted by external users such as claimants, employers, and insurance companies. As the development of a portal for public filing will not begin until Phase, 3, this risk is not as imminent. However, as the evaluation of potential impacts, collection of feedback from stakeholders, and the legislative process to amend statutes is a long process, the initial planning should begin as early as possible so as not to postpone or reduce the realization of the benefits from the new system.		Develop a plan and timeline to amend the statutes to align to project and organizational objectives.		Closed	09/20/19: In 2016, DLIR convened a Working Group (WG) consisting of representatives from various DCD-related stakeholder groups. The WG provides an avenue for DLIR to understand stakeholders' concerns and a forum for the stakeholders to understand the DLIR's business process improvements including the need for statutorily mandated electronic claim fillings.  DLIR plans to draft statutory changes to mandate electronic filling in FY2022 (effective July 1, 2023). This timeframe was decided on as it allows DLIR to proactively involve stakeholders in testing production and provide stakeholders the appropriate time to ready their systems for electronic filling.	9/20/2019	Closed as DLIR has a plan to align statutes with eCMS Project objectives.
Project Organization and Management		PM01 Positive	N/A	N/A	The DLIR Project Manager is a dedicatec project lead who works collaboratively with internal stakeholders.	The DLIR Project Manager is hardworking and has continually demonstrated dedication to the project and an eagerness to learn. Additionally, the DLIR Project Manager has some of the necessary leadership qualities that make her a good project manager. Her positive nature and collaborative approach develops trust with and satisfies concerns of many internal stakeholders. This has mitigated some of the communication and OCM risks (refer to findings 2019 07 PM07 and 2019 07 PM08). However, the DLIR Project Manager is the only full-time DLIR employee assigned to the eCMS Project and there is not a sufficient amount of project resources (refer to finding 2019.07.PM14) to properly manage the project.	N/A	N/A for positive findings.	N/A for positive findings.	Closed	N/A	9/20/2019	Closed as this is a positive finding.
Project Organization and Management		PM04 Issue	High	N/A	BAFO without obtaining a written letter of intent between DataHouse and DHS. Furthermore, the eCMS Project advanced for 10 months without a forma MOU between DLIR and DHS and reliance on the DataHouse Project	leverage DHS's IBM FileNet environment, however, there was no written agreement between DataHouse and DHS that supported DHS intent to support shared services. Once the eCMS Project was underway, the MOU discussions with DHS were primarily led by the DataHouse Project Sponsor. The eCMS Project advanced for 10 months without finalizing the MOU between DHS and DUR. As the proposed solution is no longer	2019.07.PM04.R1 2019.07.PM04.R2 2019.07.PM04.R3	Finalize the MOU to leverage DHS's enterprise licenses for FileNet and Datacap.  DUR should lead all discussions and negotiations of vendor contracts or agency agreements.  Identify and complete all critical tasks prior to moving forward with an alternative solution.		Closed	09/20/19: The MOU with DHS for Datacap and FileNet licenses is close to being finalized. DLR received a draft from DHS on September 1, 2019 and it was sent to the Attorney General's office on September 17, 2019. Accuity has observed that DLIR has led the contract discussions and negotiations with AWS.	9/20/2019	Closed as the MOU with DHS is in process to be finalized and DLIR is leading contractor negotiations. The recommendation to identify all critical tasks will continue to be monitored under the 2019 0.7 PM13 Schedule Management finding.
Project Organization and Management		MO5 Risk	Moderate	N/A	A lack of clarify on DataHouse's development methodology may not allow or adequately prepare stakeholders to participate readily.	nataHouse is using a modified Agile development methodology that is referred to as "Water-Scrum-Fail". This is a combination of the waterfail and Agile methods that defines the full set of requirements at the beginning but uses Agile user stories and sprints while building the software. Based on the current project plan, the eCMS Project was supposed to begin the Build stage of Phase 1 and transition to the Scrum methodology. Although the recent DHS development will likely delay the kickoff of this stage, there are a number of concerns regarding the transition to the Scrum methodology:  - DataHouse has not yet fully determined the number, length, and details of the sprints.  - The project schedule also does not yet reflect the agile sprints cycles or identify resources who are expected to participate.  - There have not been communications with the DLR project team and stakeholders regarding the Scrum methodology or the roles and responsibilities they have during this stage of the project.  - Many of the DataHouse project team members work remotely and are unable to work on-site.	2019.07.PM05.R1	Scrum phases.	Consider industry best practices for Agile methodologies such as retrospectives, daily standups, burndown charts, and frequent user demonstrations and feedback.  *Establish the backlog preparation and refinement process.  *Establish intual conferencing tools and communication protocols for geographically distributed team members.  *Set the number and length of the sprints.  *Update the project schedule for sprint activities and assign resources (refer to finding 2019.07.PM14).  *Include clear and detailed procedures and roles and responsibilities for Scrum tasks (refer to finding 2019.07.PM02).  *DUR should be included in project team activities (refer to finding 2019.07.PM02).		09/20/19. Acculty has kept the severity rating as Level 2 (Moderate). Although DataHouse has incorporated the Case Management sprint schedule into the overall project schedule and provided a high-level overview of the requirements/user stories to be covered by each sprint, roles and responsibilities still need to be clearly defined and communicated. The Case Management development team follows a classic Scrum model and plans to clarify roles and responsibilities of Product Owners and users, how new requirements will be approved and prioritized, and acceptance criteria during the next user review and Epic 2. The Content Management development team follows a semi-agile process and drafted an overview document of the team's change management practices.  10/25/19: The Case Management development team held a training for the DLIR Product Owners to provide an overview of the Scrum methodology and the Product Owner role and responsibilities.	10/25/2019	Closed as the Scrum methodology has been formalized and was communicated to the DLIR eCMS Product Owners. The recommendation to communicate the methodology to all impacted stakeholders will continue to be monitored under the 2019.07.PM07 Stakeholder Communications finding.

ASSESSMENT CATEGORY	FINDING ID	TYPE	ORIGINAL SEVERITY	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	FII SUPPLEMENTAL RECOMMENDATION ST	INDING TATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Business Process Reengineering	2019.07.PM1*	1 Risk	Moderate	N/A	Not identifying and addressing BPR opportunities prior to system design and development may require additional effort to correct.	There is no formal plan for BPR activities. DataHouse's approach to BPR was to start with the current state process maps, walkthrough the process with stakeholders, and make updates to the processes maps. As a result of this process, DataHouse provided future state process maps. However, Team Acculty was unable to clearly understand how processes were prioritized for change, root causes were addressed, or processes were improved (e.g., elimination of rework loops).  Business process improvement is a key deliverable identified in the RFP and in DataHouse's contract. The DataHouse contract states that the key deliverable will be manifested through; faster throughput of data into the system; faster response times to requests by users, less errors reported in the system; greater flexibility to make system changes; and online access and input by internal and external users. However, the RFP and contract do not clearly identify how this deliverable will be supported, evaluated, or accepted by DUR (refer to finding 2019 0.7 PG03). There should be clear documentation on how the new solution plans on measuring and achieving key business process improvement performance goals.  The IV&V recommendations made at 2019 0.7 PG05.R1, 2019.07 PG05.R2, and 2019.07.PG05.R3 regarding clear and measurable goals and success metrics will also address this finding. Below is an additional recommendation to further improve BPR activities.	2019.07.PM11.R1	Identify and track BPR opportunities in a log.	This log should be used to plan BPR and design activities and to develop Circontent for communications and training.	losed	09/20/19: Accuity has kept the severity rating as Level 2 (Moderate) as a process or tool for tracking BPR changes for future communications and training has not been created.  10/25/19 and 11/22/19: BPR opportunities continue to be discussed during sprint sessions, however, identified opportunities are not formally tracked.  12/20/19: The Case Management user story tracker tool identifies which user stories resulted in BPR.	12/20/2019	Closed as user stories resulting in significant BPR can be identified for communications and training.
System Software, Hardware and Integrations	2019.07.IT01	Issue	High	N/A	The original solution proposed by DataHouse in their BAFO to leverage the existing DHS FileNet hosting infrastructure is no longer a feasible solution.	There are a number of items in the DataHouse BAFO that are no longer feasible based on the inability to leverage the existing DHS FileNet environment. Under the original solution, DHS would monitor and maintain the enterprise IBM FileNet environment. As DHS will no longer be providing access to their IBM FileNet environment, DLIR will need to identify resources to take on the monitoring and maintenance of the IBM FileNet infrastructure. As DataHouse recommended in the BAFO the onpremise installation for the IBM ECM solution due to the capture volume and higher performance of document file transfers over the LAN and internal State network, DLIR should be provided with a technical analysis of various solution options that includes a comparison of the alternatives on performance.  Although this issue relates to the proposed hosting infrastructure solution for Content Management, this is an opportunity for both DataHouse and DLIR to reassess the total solution considering all updated technological opportunities available today. DLIR should ensure that DataHouse performs sufficient analysis regarding possible alternative solution options. DLR should also take the time to perform adequate due diligence before making any decisions. It is important that thorough analysis and adequate due diligence is performed before moving forward in the project in order to avoid further project delays and to ensure that the delivered system will meet operational and stakeholder requirements.	2019.07.IT01.R2	Evaluate other total solution alternatives for an alternative solution.  Prepare a comprehensive technical analysis of the alternative solution.	Consider solutions that could include other technical applications that could utilize a different choice of methodology using different tools, provide a cheaper solution for the longer-term, and faster implementation.  Consider the following website which lists 20 competitive alternatives to IBM FileNet For consideration: www.g2.com/products/ibm-filenet-content manager/competitors/alternatives. Additional research could result in more extensive choices going forward.  *Include the impact of the alternative solution to project cost, schedule, resources, security, maintenance and operations, system software, hardware integration requirements, performance requirements, and required infrastructure to ensure a complete and successful working solution.  *Clearly define what needs to be completed, who is responsible, steps for completion, and timing.  Considerations for impact on project cost includes costs related to the following:  *Processing, storage and connectivity Operating system and database management licensing *Interfacing technologies *Maintenance and operations Data center, collocation facilities and availability requirements *If it is decided that FileNet is the most cost effective and efficient solution, renewal and ongoing costs of FileNet enterprise licensing *Considerations for impact on project schedule, time estimates, and resources include:  *Acquisition, installation, and configuration of software and infrastructure *Congoing maintenance and operations (patching, updates) *Performance of security assessments *Change and configuration management	iosed	09/20/19: In July 2019, DataHouse presented AWS as a potential alternative solution. The proposed AWS solution was compared to another cloud solution, Microsoft Azure, in respects to cost and performance. DataHouse reviewed the listing of content management solutions provided by Acculty and concluded that IBM FileNet was the best solution for this project, however, no formal analysis was prepared. DLR approved AWS as the replacement hosting infrastructure solution effectively remediating the inability to leverage the DHS FileNet environment issue.  Acculty had also recommended that a comprehensive technical analysis be prepared on the replacement solution, however, DLR decided not to formally document the analysis as they are comfortable with the selection based on reading of AWS whitepapers, the information provided by DataHouse, and discussions with ETS and EDPSO.	9/20/2019	Closed as a replacement solution was approved by DLIR. As a comprehensive analysis was not prepared and there is still a need for additional clarification regarding certain aspects of the replacement solution, Acculty will continue to monitor plans for AWS security under finding 2019.07.IT07, AWS M&O roles and responsibilities under the new preliminary concern 2019.10.IT02, and AWS costs under finding 2019.07.PM12.
Design	2019.07.IT03	Issue	High	N/A	The Content Management design documents were based on incomplete, inaccurate, and outdated requirements.	Case Management is currently in the design phase and design documents have not been provided. The Content Management Design (version 1.0) approved by DLIR on May 6, 2019. The recent DHS development will require design documents to be updated after an alternative Content Management hosting infrastructure solution is selected. However, even prior to this development, the Content Management design documents were drafted based on requirements documentation that is incomplete (refer to finding 2019.07.PM10). The requirements document deficiencies should be remediated immediately and the design documents updated accordingly.	2019.07.IT03.R1	Update the Content Management design documents.	Consider updates for revised requirements documents (refer to finding 2019.07.PM10) and for the alternative Content Management hosting infrastructure solution (refer to finding 2019.07.1101).	losed	09/20/19. Acculty decreased the severity rating from Level 1 (High) to Level 2 (Moderate). DataHouse updated the Content Management Design Document to include additional, more detailed requirements. As noted above at finding 2019.07.PM10, DataHouse is in the process of updating the requirements documentation to include all requirements from the DataHouse contract.  10/20/19: The Content Management Design Document (version 1.2) was updated to refine or add requirements.	10/25/2019	Closed as the Content Management design documents are regularly updated as changes to requirements are made. The completeness of the design with respect to contract requirements will continue to be monitored under the 2019.07.PM10 requirements finding.
Data Conversion	2019.07.1T04	Risk	Moderate	N/A	plan that is based on incomplete, inaccurate, and outdated requirements may impact the data migration design	Case Management is currently in the design phase and data conversion documents have not be drafted. The Content Management Conversion and Migration (version 0.0) document was drafted by DataHouse on June 13, 2019 but was not yet approved by DLIR. The document was drafted based on requirements documentation that is incomplete (refer to finding 2019 0.7 PM10). Furthermore, the Content Management Conversion and Migration (version 0.0) document included a risk that changes to the requirements after a certain point in the project may cause additional effort to re-factor the migration design process.  As data conversion is the process of converting data from one source to suit the system requirements of another, it is important that the data conversion plan is based on accurate system requirements. The requirements document deficiencies (refer to finding 2019.07.PM10) should be remediated immediately and the data conversion plan updated accordingly.		Update the Content Management data conversion plan.	Consider updates for revised requirements documents (refer to finding 2019.07.PM10).	losed	09/20/19. Acculity has kept the severity rating as Level 2 (Moderate). The Content Management Conversion and Migration Plan (version 1.1) was updated on 09/05/19 before the Content Management Design Document (version 1.1) was updated on 09/15/19 to include additional design requirements. Changes to requirements should be evaluated for the impacts on the conversion and migration plans and the detailed taxonomy mapping. 10/25/19. DataHouse evaluated the new requirements and determined that there is no impact to the high level Content Management conversion requirements included in the Conversion and Migration Plan. 11/22/19. Acculity reviewed the taxonomy mapping with the primary stakeholder and confirmed that changes in system requirements will not have a significant impact on the Content Management data conversion plan as the legacy system has limited data fields that are currently used.	11/22/2019	Closed as changes in system requirements do not appear to significantly impact the Content Management data conversion plan.

## Appendix E: Prior IV&V Reports

AS OF DATE	DESCRIPTION
06/30/19	Initial On-Site IV&V Review Report
09/20/19	Monthly On-Site IV&V Review Report
10/25/19	Monthly On-Site IV&V Review Report
11/22/19	Monthly On-Site IV&V Review Report
12/20/19	Monthly On-Site IV&V Review Report
01/24/20	Monthly On-Site IV&V Review Report
02/20/20	Monthly On-Site IV&V Review Report
03/27/20	Monthly On-Site IV&V Review Report
04/24/20	Monthly On-Site IV&V Review Report
05/22/20	Monthly On-Site IV&V Review Report
06/26/20	Monthly On-Site IV&V Review Report
07/29/20	Monthly On-Site IV&V Review Report
08/21/20	Monthly On-Site IV&V Review Report



Appendix F: Comment Log on Draft Report



## Appendix F: Comment Log on Draft Report

## DLIR DCD eCMS Project: IV&V Document Comment Log





ID#	Page #	Comment	Commenter's Organization	Accuity Resolution
1		No DLIR comments.		
2				
3				
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10				

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