

#### OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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June 3, 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.

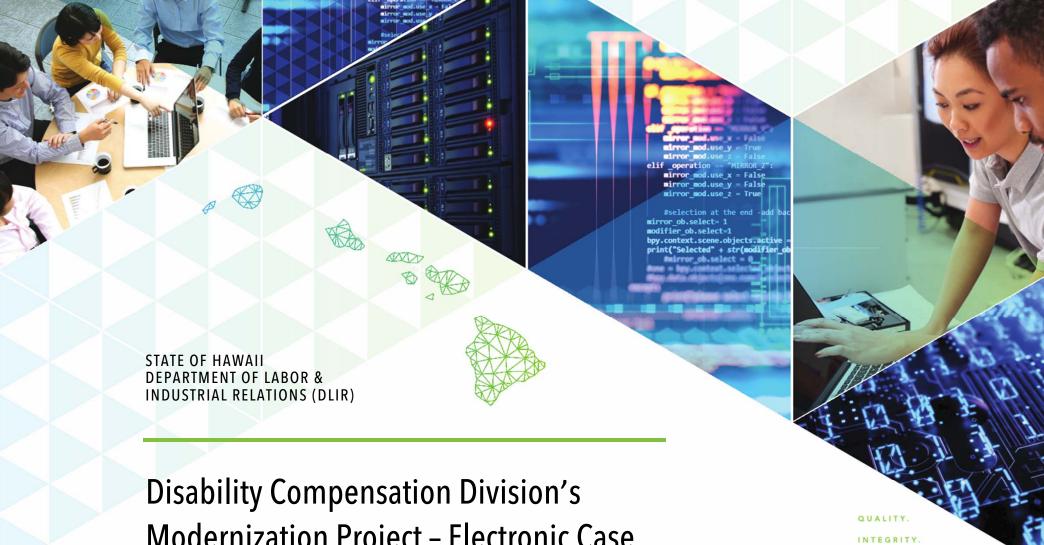
In accordance with HRS section 93-16, this report may be viewed electronically at <a href="http://ets.hawaii.gov">http://ets.hawaii.gov</a> (see "Reports").

Sincerely,

Douglas Murdock (Jun 3, 2020 11:24 HS)

DOUGLAS MURDOCK Chief Information Officer State of Hawai'i

Attachment (2)



**Modernization Project - Electronic Case** Management System (eCMS)

MONTHLY ON-SITE IV&V REVIEW REPORT

May 29, 2020

REPORT FINALIZED

April 24, 2020 | Version 1.0



INSIGHT

CERTIFIED PUBLIC ACCOUNTANTS









# Document History

DATE	DESCRIPTION	AUTHOR	VERSION
05/08/20	Monthly On-site IV&V Review Report Draft created	Julia Okinaka	0.0
05/29/20	Monthly On-site IV&V Review Report updated for grammatical edit on page 9. No comments submitted in Appendix F.	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 is currently in Phase 1 developing both the Content Management and Case Management solution components. The focus of our IV&V activities for this report included an evaluation of project organization and management and schedule management.

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 April 24, 2020. Additional explanation is included in the Findings and Recommendations by Assessment Area for new findings and in the 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.

**WORKING TOGETHER** 

"If you want to go fast, go alone. If you want to go far, go together."

- African proverb



# **PROJECT ASSESSMENT**

AS OF APRIL 24, 2020

## SUMMARY RATINGS

#### **OVERALL RATING**



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

**PROGRAM GOVERNANCE** 



**PROJECT MANAGEMENT** 



**TECHNOLOGY** 



**CRITICALITY RATINGS** 



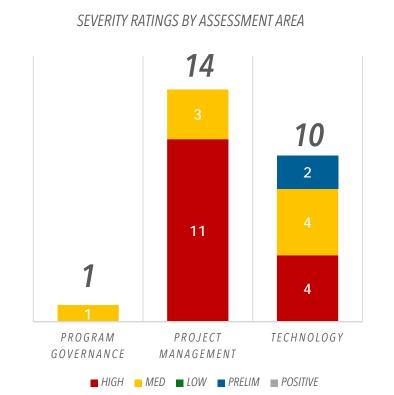




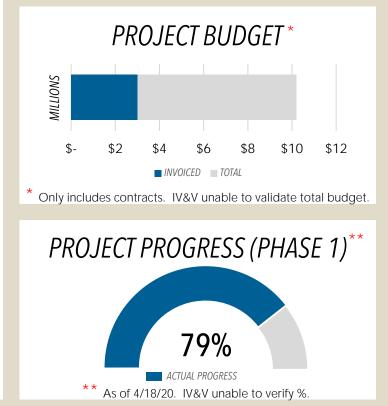




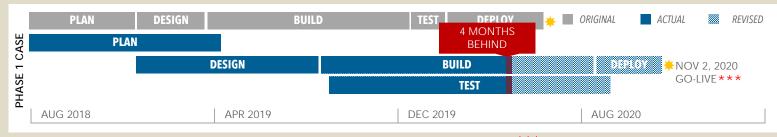
## 25 OPEN FINDINGS



## 45 OPEN RECOMMENDATIONS







# ASSESSMENT AREA & RATINGS SUMMARY

AS OF APRIL 24, 2020

FEB	MAR	APR	IV&V ASSESSMENT AREA	IV&V OBSERVATIONS
•		V	Overall	The COVID-19 pandemic continues to impact project execution and create uncertainty with respect to the project schedule and budget. The high volume of unemployment claims are understandably keeping DLIR's focus on priorities outside of the eCMS Project. Almost all of the DLIR project resources are either still assigned to the Unemployment Insurance (UI) Division or are busy with DCD's own mounting operational work. It is currently unknown when these resources would be able to return to the project. Although the DLIR organizational priority to support the community during its greatest time of need is clear and justified, the scope of this assessment is to evaluate the performance and risks specific to the eCMS Project. The eCMS Project is currently at risk due to the unavailability of DLIR project resources and the limited amount of Phase 1 work that DataHouse is able to do with only the few DLIR project resources that are available. DataHouse continues to do what they can but will reach a point within the next month when they will be unable to continue with the current project schedule without key DLIR project resources. DataHouse and DLIR held some preliminary discussions regarding potential options to keep the project moving forward. From a project-focused perspective, it is still critical for DLIR and DataHouse to come together to carefully assess the situation, evaluate alternative courses of action, and agree on how to best proceed. Limited progress was made on this since last month, however, IV&V understands that other DLIR priorities are affecting the project's ability to respond effectively and timely.
G	•	V	Program Governance	The eCMS Project Executive Steering Committee (ESC) did not convene again during the month of April as many members were still busy addressing COVID-19 related issues outside of the eCMS Project. DLIR plans to have a meeting in May 2020.
<b>(V)</b>	R	R	Project Management	The DLIR Project Manager is reassigned to support UI Division's operations and systems. As such, DLIR is still not actively performing or participating in many key project management activities such as risk evaluation and mitigation, resource management, project communications, cost management, and schedule management. Although DataHouse continues to work on the eCMS Project, effective project management requires participation and direction from both DataHouse and DLIR. DataHouse and DLIR need to work together to figure out and agree on how to best proceed considering DLIR project resource constraints. Some preliminary discussions were held and limited progress was made to formulate contingency and mitigation plans and adjust the project schedule and budget for COVID-19 impacts.
<b>(</b> )	•	•	Technology	The Content Management build continues to progress but is delayed for two change requests, two pending IBM issues, and the Amazon Web Services (AWS) environments. For Case Management, some of the sprint meetings resumed with a few DLIR project resources allowing work to begin for Epic 3 Sprint 3. The Scrum methodology employed by the DataHouse Case Management development team requires continuous DLIR collaboration and input. The Case Management development team will be able to complete Epic 3 with limited DLIR project resources. They will not be able to proceed to Epic 4 without the DLIR Subject Matter Experts (SMEs) that are currently unavailable. DLIR project resources are also needed to perform upcoming data conversion, user acceptance testing, and security management activities.

### 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. Two IV&V Assessment Categories declined from the prior report. The overall rating primarily reflects the impact of the COVID-19 pandemic on the availability and procurement of DLIR project resources, the limited amount of Phase 1 work that DataHouse is able to do with only the few DLIR project resources that are available, and the need for DLIR and DataHouse to come together to agree on how to best proceed.

## AT-A-GLANCE

ASSESS impact of COVID-19 to cost and schedule

**FORMALIZE** plans for COVID-19 impacts and reevaluate often

Work and respond **TOGETHER** 

**KEEP** communicating

G V V Governance Effectiveness  PEB MAR APR TECHNOLOGY  System Software, Hardware, and Integrations  G G G Design  PEB Data Conversion  R Quality Management and Testing						
Benefits Realization  R FEB MAR APR TECHNOLOGY  Y System Software, Hardware, and Integrations  R R  R Design  P Data Conversion  R R R R Configuration Management  NA N	FEB	MAR	APR	PROGRAM GOVERNANCE	FEB	MAR
FEB MAR APR TECHNOLOGY  Y Y System Software, Hardware, and Integrations  G G G Design  P Data Conversion  R R R Quality Management and Testing  Y Y Configuration Management	G	V	V	Governance Effectiveness	V	R
Y Y System Software, Hardware, and Integrations  R P P P P P P P P P P P P P P P P P P	Ŷ	<b>1</b>	Y	Benefits Realization	R	R
and Integrations  B G G Design  Para Conversion  Para Con	FEB	MAR	APR	TECHNOLOGY	R	R
Data Conversion  R R Quality Management and Testing  Y Configuration Management  NA N	Y	Y	Y		<b>1</b>	R
Quality Management and Testing  Y Y Configuration Management  NA N	G	G	G	Design	R	R
Testing  Y Configuration Management  NA N		V	V	Data Conversion	Y	
Configuration Management	R	R	R		G	G
R R Security				Configuration Management	NA	NA
	R	R	R	Security		

FEB	MAR	APR	PROJECT MANAGEMENT
V	R	R	Project Organization and Management
<b>®</b>	R	R	Scope and Requirements Management
R	R	R	Cost, Schedule, and Resource Management
<b>(1)</b>	R	R	Risk Management
R	R	R	Communications Management
Y		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



### PROGRAM GOVERNANCE

EED	FEB MAR APR	IV&V ASSESSMENT	IV&V OBSERVATION	F	INDING	S	
FED		CATEGORY	IVAV ODSERVATION	NEW		CLOSED	
<b>6</b>	<b>♥</b>	V	Governance Effectiveness	The eCMS Project Executive Steering Committee (ESC) did not convene again during the month of April as many members were still busy addressing COVID-19 related issues outside of the eCMS Project (2020.03.PM01), however, the DCD Executive Sponsor and DataHouse Project Sponsor discussed potential options to keep the project moving forward. The ESC needs to provide guidance, strategy, and support to the eCMS Project to help with evaluating and deciding on the best course forward considering greater DLIR departmental and State-wide priorities and goals. DLIR plans to have an ESC meeting in May 2020.	0	0	0
<b>①</b>	<b>1</b>		Benefits Realization	Progress on the success metrics stalled due to shifting priorities and changes in DLIR project resources. 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

FEB	MAR	APR	IV&V ASSESSMENT	IV&V OBSERVATION	ŀ	FINDINGS		
FEB	IVIAK	CATEGORY IV&V OBSE		IVAV OBSERVATION	NEW	OPEN	CLOSED	
V	R	R	Project Organization and Management	The DLIR Project Manager is temporarily reassigned to support UI Division's operations and systems. As such, DLIR is still not actively performing or participating in many key project management activities. Weekly project status meetings between DLIR and DataHouse are also still on hold, however, some meetings are tentatively scheduled for May 2020. Although DataHouse continues to work on the eCMS Project, effective project management and organization requires participation and direction from both DataHouse and DLIR. It is crucial for DLIR and DataHouse to come together to carefully assess the situation, evaluate alternative courses of action, and agree on how to best proceed (2020.03.PM01). Improvements are still needed for project organization and collaboration (2019.07.PM02), the deliverable review process (2019.07.PM03), and timely resolution of change requests (2019.09.PM01).	0	4	0	
R	R	R	Scope and Requirements Management	The DataHouse Case Management development team continues to refine user stories in Epic 3 Sprint 3. DLIR's review of their third-party vendor's requirements assessment results are still pending. Documentation of requirements (e.g., security, performance, hardware, AWS, acceptance criteria) is still incomplete (2019.07.PM10) and traceability needs improvement (2019.10.PM01).	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

FEB	MAR	APR IV&V ASSESSMENT		IV&V OBSERVATION	FINDINGS		S
- FED	IVIAR	- APK	CATEGORY	TV&V OBSERVATION	NEW	OPEN	CLOSED
R	R	R	Cost, Schedule, and Resource Management	Inadequate project resources (2019.07.PM14) continues to be an issue exacerbated by COVID-19 (2020.03.PM01). Almost all of the DLIR project resources are either still assigned to the Unemployment Insurance (UI) Division or are busy with DCD's own mounting operational work. Additionally, DLIR is reviewing recent expenditure restrictions and guidance from the State Governor that may impact project spending, including planned procurements of additional project resources. The timing of when DLIR project resources will be available again and additional resources can be procured is unknown. The impact of COVID-19 on the project budget and project schedule is inestimable until key decisions are made about how to proceed. Some tentative updates were made to project schedule dates but no changes were officially approved. Addressing previously identified deficiencies in schedule management (2019.07.PM13), resource management (2019.09.PM02), and cost management (2019.07.PM12) processes will help to minimize further delays and control project costs through the COVID-19 pandemic.	0	4	0
<b>*</b>	R	R	Risk Management	Discussions of risks were paused as weekly project status and monthly ESC meetings were cancelled since March (2020.03.PM01). DataHouse and DLIR continue to independently log risks and issues, however, DataHouse and DLIR need to work together to properly manage risks. Remediating the risk management process deficiencies (2019.07.PM09) will help to reduce individual threats and overall project risk exposure caused by COVID-19.	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

FEB	MAR APR		IV&V ASSESSMENT	IV&V OBSERVATION	F	INDING	S
FED	IVIAR	AFK	CATEGORY	GORY		OPEN	CLOSED
R	R	R	Communications Management	The unavailability of DLIR project resources and cancelling of project meetings due to COVID-19 (2020.03.PM01) continues to impact communications between DLIR and DataHouse (2019.07.PM06) and with stakeholders (2019.07.PM07).	0	2	0
Y	Y	V	Organizational Change Management (OCM)	OCM was occurring indirectly through DLIR SME participation in project meetings, however, almost all DLIR project resources are now unable to participate in project meetings (2020.03.PM01). A structured OCM approach is still needed (2019.07.PM08).	0	1	0
G	<b>G</b>	G	Business Process Reengineering (BPR)	BPR improvements continue to be delivered through each Case Management development sprint.	0	0	0
NA	NA	NA	Training and Knowledge Transfer	Significant training and knowledge transfer activities are not occurring at this stage of the project. The Content Management training previously targeted for April 2020 was postponed due to unavailability of DLIR project resources (2020.03.PM01).	0	0	0



#### **TECHNOLOGY**

System Software, Hardware, and Integrations

Design

Data Conversion

Quality Management and Testing

Configuration Management

Security



FEB	MAR	AR APR IV&V ASSESSMENT IV&V OBSERVATION	FINDINGS				
FEB	IVIAR	APR	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
Y	Y	Y	System Software, Hardware, and Integrations	The Content Management build continues to progress with the resolution of one of the pending IBM issues (Issue #7 DataHouse RAID Log September 2019) but is delayed for two change requests, two pending IBM issues (Issues #12 and 15 DataHouse RAID Log February 2020), and the Amazon Web Services (AWS) environments. Accuity is not reporting IV&V findings for the technical issues that DataHouse is already tracking in their RAID log, however, these technical issues are reflected in the criticality rating for this IV&V Assessment Category.  For Case Management, some of the sprint meetings resumed with a few DLIR project resources allowing work to begin for Epic 3 Sprint 3. The Scrum methodology employed by the DataHouse Case Management development team requires continuous DLIR collaboration and input. The Case Management development team will be able to complete Epic 3 with limited DLIR project resources. They will not be able to proceed to Epic 4 without the DLIR SMEs that are currently unavailable. It is unknown when these DLIR SMEs would be able to participate in sprint meetings (2020.03.PM01). DataHouse and DLIR are discussing potential options to keep the Case Management development moving forward.  The interface solution (2019.07.IT02) and the M&O roles and responsibilities (2019.09.IT02) still need further clarification.	0	2	0



**TECHNOLOGY** 

System Software, Hardware, and Integrations

Design

Data Conversion

Quality Management and Testing

Configuration Management

Security

FFD	MAR	APR	IV&V ASSESSMENT	IVO V ORSERVATION	FINDINGS		
FEB	IVIAR	APR	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
6	G	G	Design	The Content Management and Case Management designs continue to be refined during the Build stage. Security design is covered in the Security IV&V Assessment Category.	0	0	0
Y	<b>₹</b>	V	Data Conversion	Content Management data conversion activities are still awaiting the DLIR AWS environments. DataHouse continued to perform Case Management data conversion activities exploring options to improve data quality and the data conversion process, however, changes to the data conversion approach should be appropriately approved (2019.09.PM01). DLIR's plan to procure additional resources for data conversion activities is still on hold due to COVID-19 (2020.03.PM01). DLIR also needs to formalize a plan and approach for scanning paper files and testing data conversion and DataHouse needs to clarify the data conversion tools, reports, and processes (2019.11.IT01).	0	2	0
R	R	R	Quality Management and Testing	DLIR's plan to procure additional resources to assist with testing activities is also still on hold due to COVID-19 (2020.03.PM01). DLIR continued to make progress drafting the DLIR test plan (2019.10.IT01) but the plan cannot be completed with limited resources. The Content Management test cases and user acceptance testing (UAT) that were scheduled for March and May 2020, respectively, also cannot be completed without adequate DLIR project resources. Additional clarification of DataHouse's test plan is still needed (2020.02.IT01). IV&V does not have visibility to provide a complete assessment of ongoing DataHouse testing activities or test documentation. The DataHouse and DLIR quality management plans have not yet been finalized (2019.07.IT05).	0	3	0



### TECHNOLOGY

System Software, Hardware, and Integrations

Design

Data Conversion

Quality Management and Testing

Configuration Management

Security

FEB	MAR	APR	IV&V ASSESSMENT	IV&V OBSERVATION	F	INDING	S
LED	Wirth 7th K		CATEGORY	IVAV ODSERVATION	NEW	OPEN	CLOSED
Y	Y	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	No significant updates since the prior report. Both the review of the draft security policies (2019.10.IT02) and the execution of the short-term AWS security assessment are still on hold due to unavailability of DLIR project resources (2020.03.PM01). Security is still a high criticality area as it will impact when the AWS environments will be approved by DLIR for use for pending data conversion, UAT, and training activities. The Security Management Plan that includes DataHouse's security documentation is pending and a timeline for completion is still unknown (2019.07.IT07).	0	2	0



## 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.

#### 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. Up arrows indicate improvements or progress made, down arrows indicate a decline or inadequate progress made in areas of increasing risk or approaching timeline, and no arrow indicates there was neither improving nor declining progress from the prior report.

#### **TERMS**

#### **RISK**

An event that has not happened yet.

#### **ISSUE**

An event that is already occurring or has already happened.

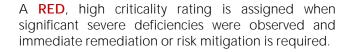




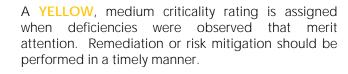


















A GREEN, low criticality rating is assigned when the activity is on track and minimal deficiencies were observed. Some oversight may be needed to ensure the risk stays low and the activity remains on track.



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

PRELIMINARY CONCERN

Potential risk

requiring further analysis.

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 Cyber Security Framework v1.1	NIST Framework for Improving Critical Infrastructure Cybersecurity



# Appendix C: Interviews, Meetings, and Documents

#### **INTERVIEWS**

DATE	INTERVIEWEE
	None

#### **MEETINGS**

DATE	MEETING DESCRIPTION
03/30/20	ETS Meeting
04/03/20	IV&V DCD Update Meeting
04/07/20	IV&V DCD Update Meeting
04/09/20	Case Management Format of IDs Session
04/09/20	Case Management Sprint 3.2 Retrospective Meeting
04/09/20	IV&V Update and Planning Meeting
04/13/20	ETS Meeting
04/14/20	Case Management Sprint 3.3 Planning and Refinement Session
04/15/20	IV&V Report Draft Walkthrough
04/16/20	Case Management Sprint 3.3 Planning and Refinement Session
04/21/20	Case Management Sprint 3.3 Planning and Refinement Session
04/22/20	IV&V DCD Update Meeting
04/23/20	Case Management Sprint 3.3 Planning and Refinement Session
04/23/20	IV&V DataHouse Update Meeting
04/24/20	IV&V DCD Update Meeting



## MEETINGS (CONTINUED)

DATE	MEETING DESCRIPTION
04/24/20	IV&V On-Site Summary Meeting

#### **DOCUMENTS**

TYPE	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 1.3 (Updated 08/30/19)
Project Management	DataHouse Project Status Report (Status Date 04/26/20 for reporting period 03/01 – 03/15/20, pending DLIR approval)
Project Management	DataHouse Project Status Report (Status Date 04/26/20 for reporting period 03/16 – 03/31/20, pending DLIR approval)
Project Management	DataHouse Project Status Report (Status Date 03/29/20 for reporting period 02/01 – 02/15/20, finalized 04/07/20)
Project Management	DataHouse Project Status Report (Status Date 03/29/20 for reporting period 02/16 – 02/29/20, finalized 04/07/20)
Project Management	Change Log (Updated 04/24/20)
Project Management	Change Request (CR004) Automate Open Close Appeal
Project Management	Change Request (CR005) Metadata and Default Behavior
Risk and Issues	RAID (Risk Action Issue Decision) Log (Updated 04/24/20 by DataHouse Project Manager)
Risk and Issues	RAID (Risk Action Issue Decision) Log (Updated 04/23/20 by DCD Risk Manager)
Schedule	eCMS Microsoft Project Plan as of 04/18/20 (MPP file)



### DOCUMENTS (CONTINUED)

ТҮРЕ	DOCUMENT
Testing	DLIR Test Plan Working Draft Version 1.0 (Updated 04/03/20)
Development	DataHouse Development Team Status Meeting Minutes for 04/01/20
Development	DataHouse Development Team Status Meeting Minutes for 04/08/20
Development	DataHouse Development Team Status Meeting Minutes for 04/15/20
Development	DataHouse Development Team Status Meeting Minutes for 04/22/20
Design	Data Storage Solution for AWS Environments (04/14/20)
State	State of Hawaii Fourth Supplementary Emergency Proclamation (03/31/20)
State	State of Hawaii Fifth Supplementary Emergency Proclamation (04/17/20)
State	State of Hawaii EM 20-01 Amendments to Executive Memorandum No. 19-02 Budget Execution Policies and Instructions (04/03/20)
State	State of Hawaii EM 20-01 Exhibit 1
State	State of Hawaii EM 20-02 Amendment to Executive Memorandum No. 19-02 Budget Execution Policies and Instructions - Additional Restrictions (04/13/20)
State	State of Hawaii EM 20-02 Exhibit 1







#### Appendix D: Prior Findings Log

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
Project	2020.03.PM01 Issue	High	High	The COVID-19 pandemic is impacting	The COVID-19 pandemic has created uncertainty with respect to the	2020.03.PM01.R1	Explore possible ways to keep the	Evaluate DLIR SMEs availability and bandwidth to work on the project.	Open	04/24/20: Some preliminary discussions were held and limited progress was		
Organization and					timely completion of the project and its cost. Understandably, DLIR has		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		
g					skyrocketing number of unemployment claims. This finding focuses on the					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.								
				are carrently indeterminable.	The following is a summary of the related events and facts:	2020.03.PM01.R2	Formulate a plan for how to	. DataHouse and DLIR, with input from the ESC, must come together to		Accuity will continue to evaluate COVID-19 response and plans.		
					•All eCMS Project meetings were cancelled beginning March 17, 2020		respond to COVID-19 impacts to	decide on how to best proceed.				
					following directives for non-essential state workers to stay home.		the project.	Carefully assess the situation and individually log all of the specific				
					Subsequent state-wide stay-at-home orders were put into effect through			impacts to the project in the risk register, including direct and indirect				
					April 30, 2020.			impacts.				
					Currently only a few DLIR project resources, including the DCD Executive			•Evaluate alternative courses of action and contingency plans for each				
					Sponsor and DLIR Project Manager, are still working in the office or			specific impact identified.				
					remotely but time dedicated to project work has been drastically reduced			*Consider adjusting the frequency of communications and reviews of				
					due to competing priorities. DLIR ceased actively performing or			response plans to support the pace of evolving circumstances.				
					participating in many key project management activities.							
					Key DLIR Subject Matter Experts (SME) are currently unavailable to the							
					eCMS Project. The DLIR SMEs are critical to the Case Management							
					system development process due to the valuable knowledge and input of							
					business operations they provide to the development teams to clarify and							
					refine requirements.							
					Many DLIR SMEs have been temporarily assigned to assist the UI							
					Division's overwhelmed operations and a timeline of when they would							
					return to DCD or eCMS Project work is unknown.							
					•Even when stay-at-home orders are lifted, the mounting DCD operational							
					work will limit DLIR SME capacity to participate in or perform project work.							
					•The Office of Enterprise Technology Services (ETS) and DLIR Electronic							
					Data Processing Systems Office (EDPSO) stakeholders playing an essential							
					role in project governance and project security management activities are							
					busy addressing other pressing department and state IT issues.							
					•DLIR's plans to procure necessary testing, data conversion, and cloud							
					support resources has been put on hold due to COVID-19.							
					Although a few DataHouse resources were reassigned to assist with							
					higher priority and more urgent UI Division system support, DataHouse							
					continues to move forward with development work. However,							
					DataHouse's progress is partially limited due to dependencies on DLIR's							
					completion of assigned tasks.							
					The drastic reduction in already constrained DLIR project resources has							
					almost entirely halted project work on the state side which will impact							
					project costs and schedule and potentially impact quality and project							
					success. Estimates of potential impacts to project costs and schedule have							
					not yet been determined and progress has not been made to develop							
					mitigation plans that would help to reduce or limit the impacts.							
					The severity rating and the following IV&V recommendations are based on							
					a project-focused perspective, with an understanding that higher DLIR							
					department level priorities may limit the project's ability to respond							
					effectively and timely. Although this finding is reported under the Project							
					Organization and Management IV&V Assessment Category, this finding							
					also impacts the criticality ratings for the Governance Effectiveness; Cost,							
					Schedule and Resource Management; Risk Management; Communications							
					Management; Data Conversion; Quality Management and Testing; and							
					Security categories. In addition to the specific recommendations made as							
					a part of this finding, the IV&V recommendations made at findings							
					2019.09.PM02, 2019.07.PM06, 2019.07.PM09, 2019.07.PM12,							
					2019.07.PM02, 2019.07.PM06, 2019.07.PM09, 2019.07.PM12, 2019.07.PM13, and 2019.07.PM14 will also help to address this issue.							
				1			1	1	1			

ASSESSMENT	FINDING ID TYPE	ORIGINAL	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	FINDING SUPPLEMENTAL RECOMMENDATION STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Quality Management and Testing	2020.02.IT01 Risk	SEVERITY High	High	The DataHouse Test Plan is incomplete and does not adequately inform DILR of the testing approach and scope which may impact the execution of testing activities.	DataHouse drafted the Test Plan Version 0.0, pending DLIR 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, 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 contract or verbally discussed with 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 tests, 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.R1	Clarify the test approach.  Develop adequate test management processes and procedures.	Perform a deliverable review (refer to finding 2019.07.PM03) to ensure DLR understands the test plan and scopeConsider making improvements to the test documentationConsider a process for monitoring and reporting test status and resultsConsider a process for authorization of test data.	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-19.  04/24/20. DLR's review and approval of the DataHouse Test Plan is still pending due to COVID-19.  Accuity will reassess when meetings are held regarding the DataHouse test plan and evaluate any improvements made to test processes.	CHOSED DATE	CCOSCHE REASON
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 DLR approval) and Case Management Conversion and Migration (version 1.1 pending DLR approval) describe the data conversion process and roles and responsibilities between DataHouse and DLR. DLR is responsible for performing UAT on the data and ultimately signing off on the final reconciliation reports but has not yet formalized plans for these tasks. The data conversion plans do not provide sufficient details and DLR does not have insight to the DataHouse data conversion learns' activities, tools, reports, risks and issues, and testing. As such, DLR is unable to properly prepare for their part in the process and will not be able to adjust their data conversion test plans for maximum efficiency. Additionally, DLR has not finalized plans for scanning 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.PM13.R2 regarding DataHouse including DLR 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 2019.11.IT01.R3	data conversion process.	•Explain how data conversion tools perform validation and reconciliation open 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, 0.9-PMO2 and 2019, 0.7-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, 0.9-PMO2 and 2019, 0.7-PM14).	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 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).  Accuity will evaluate data conversion plans as progress is made.		
Scope and Requirements Management	2019.10.PM01 Risk	High	High	The current RTM documentation and tool may hinder traceability, which may impact the ability to ensure the overall eCMS solution fulfills all requirements and provides context and expectations for design, development, and testing.	Added complexity to requirements traceability is due to the current requirements management process. Requirements documentation was developed separate from the DataHouse contract requirements and more detailed requirements were developed by the Content Management and Case Management development teams to use for development and Case Management development teams to use for development. As a result, there is duplication of requirements in the RTM which will likely impede traceability to requirements throughout the life of the project. DataHouse made incremental improvements to the RTM. The requirements documentation were traced to the use cases used by the Content Management development team or user stories used by the Case Management development team. DataHouse contract requirements were also added to the RTM but have not yet been traced to the requirements used for development. Requirements are not currently fraced to project objectives and success metrics to ensure requirements ad business value or to acceptance criteria to ensure requirements act has not contract requirements and the project objectives and success metrics to ensure requirements and business value for development. Requirements are not currently fraced to project objectives and success metrics to ensure requirements and business value for the acceptance criteria to ensure requirements and business value for the acceptance criteria to ensure requirements and business value.		Improve requirements traceability.	Trace contract requirements to requirements subsets used by the development teams to ensure completeness.  Consider identifying high-level requirements that duplicate more detailed requirements to reduce redundancy in traceability to design and testing.  Trace requirements to the project objectives success metrics (refer to finding 2019.07.PC05) to ensure each approved requirement adds business value.  Add acceptance criteria to the RTM to ensure stakeholder satisfaction.  Consider use of a requirements management tool with greater functionality.	11/22/19 and 12/20/19: The Case Management development team began adding acceptance criteria for user stories. No other significant improvements for traceability were made.  01/24/20: DUR and DataHouse discussed and clarified the process for traceability. Additionally, DataHouse confirmed that all Case Management user stories and Content Management use cases will be traced to testing documentation.  02/21/20: DUR plans to procure a resource to assist with evaluating requirements and the traceability of the RTM.  03/27/20 and 04/24/20: DUR procured a resource to help with their review of requirements documentation for completeness and traceability, however, DUR did not complete their review of the vendor's results due to COVID-19.  Accuity will evaluate the RTM as improvements are made.		

ASSESSMENT CATEGORY	FINDING ID TYPE	ORIGINAL CU SEVERITY SE	JRRENT VERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSURE REASON
Quality Management and Testing	2019.10.IT01 Risk	Moderate Hi		Lack of approved test plans may impact the execution and quality of test activities and documentation.	According to the Project Management Plan (version 1.3), the DataHouse test plan was scheduled for completion on September 3, 2019. Due to the need to focus resources on the AWS setup and network connections, DataHouse is now targeting to complete the test plan in November 2019. Dut planned to complete the DLIR test plan in October 2019. Due to resource constraints and the need to work on other DLIR IT initiatives, the DLIR test plan expected completion date was revised to November 2019 and the plan may be combined with the DataHouse test plan. 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 schedule DLIR test resources.		Finalize the test plan.		Open	11/22/19: DataHouse and DLIR test plans were not finalized as planned. DataHouse is performing some testing activities, however, Accuity does not have insight into testing activities to provide an update or assessment of testing.  12/20/19: The Case Management development team walked through the 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 DataHouse and DLIR test plans are still pending.  01/24/20: The DataHouse test plan is targeted for completion in February 2020. DLIR plans to procure additional resources to assist with the 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.  Accuity will evaluate DLIR's test plan when finalized.	
Security	2019.10.IT02 Risk	High Hi			DLIR currently does not have formal security policies to determine security 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 activities. The determination of security requirements is critical as data conversion activities are already delayed for the AWS setup and testing activities are to begin in November 2019. The development of formalized policies will also impact the application security management plan and design that DataHouse is responsible for fefer to finding 2019.07.1T07). Security policies and the resulting security requirements should be determined immediately to prevent further delay of the project.	2019.10.IT02.R2	Formalize security policies.  Formalize and implement security procedures.	standard security framework.  - Consider 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.  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. DUR scheduled a meeting for the end of February to discuss AWS security with ETS. DUR DCD and DUR 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, DUR's review was not completed due to COVID-19.  04/24/20: The review of the draft security policies is still on hold due to unavailability of DUR project resources.  Acculty will evaluate the security policies, requirements, and procedures as they are finalized.	
Project Organization and Management	2019.09.PM01 Issue	Moderate Hi	gh	The documented change management process was not followed as prescribed.		1	Document changes in Change Requests, with an impact assessment, and the Change Log in accordance with the Project Management Plan.  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 owners, change control board, steering committee). Implement additional columns in the Change Log to ensure updates are made to all impacted project plans, documents, or deliverables and changes are communicated to all impacted stakeholders.	Open	10/25/19. DataHouse began to summarize changes in the Change Log. DataHouse is in the process of formalizing Change Requests for the project schedule and AWS. DLIR is also evaluating AWS. Control Tower options which 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.PG20) and DataHouse initiated discussions on the requirements prioritization and change process (refer to finding 2019.07.PM05).  11/22/19: Entries were added to the Change Log but the Change Requests for the project schedule and AWS were still not drafted.  12/20/19 and 01/24/20: No updates to report.  02/21/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as the change requests identified in the September 2019 report are still outstanding and need to be finalized and agreed upon soon. Accuity reviewed the draft AWS change request and noted inconsistencies with what was verbally discussed and approved between DataHouse and DIR 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 DLR. 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 2019.11.1101) and reasons for changes should be documented and approved.  Accuity will review the Change Requests as they are finalized and evaluate improvements to the Change Requests as they are finalized and evaluate improvements to the Change Requests as they are finalized and evaluate improvements to the Change Requests as they are finali	

ASSESSMENT ORIGINAL CURRENT	FINIDING	ANALYSIS	DECOMMENDATION ID	RECOMMENDATION	SUDDIFAFAITAL DECOMMENDATION	FINDING	EINIDING STATUS LIDDATE	CLOSED DATE	CLOSTIDE DE VEON
ASSESSMENT COST, Schedule and Risk Prelim High Resource Management  Proposition of the prelim High Resource Management	FINDING  Undefined resource management processes and procedures may result in unidentified resource requirements, inadequate resources, or project resources that are not optimally utilized (Updated)	This was originally reported in the September 2019 IV&V Monthly Report as a preliminary concern but is upgraded to a risk in this report. The Project Management Plan (version 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 DLIR as the project gears up for more resource demanding activities including data conversion, testing, and sprint reviews. Additionally, DLIR project team resources are not fully dedicated to the project and still perform other job duties. Developing processes and procedures to track and quantify upcoming resource needs, identify available resources, procure or obtain commitments of resources, manage resource schedules, communicate with assigned resources and their supervisors, and train resources for assigned tasks will help to minimize project delays.  DLIR 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, DLIR needs to perform an analysis to determine how many resources can be acquired with budgeted funds and whether those acquired resources will be able to complete necessary data conversion activities by the targeted go-live.  DLIR has not yet completed a test plan (refer to finding 2019.10.1T01), 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.		BECOMMENDATION Develop procedures to estimate and refine DLIR resource requirements.  Develop processes to optimize utilization of DLIR project resources.	**DEPLEMENTAL RECOMMENDATION*  *Detail necessary steps and information needed to estimate and refine resources requirements.  **Consult DataHouse for input on upcoming activities that require DLIR 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 members' other job duties.  **Consider periodically reconfirming and renewing resource commitments to the project.  **Ensure team members understand their responsibilities (e.g., testing, sprint user story contact, project communications, OCM) and assignments.  **Ensure team members are properly trained and prepared to perform their assignments.  **Explore use of tools for resource calendars and tracking of team member assignment progress and completion.	indine STATUS Open	INDING STATUS UPDATE  10/25/19 and 11/22/19. Accuity 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.  Accuity will continue to evaluate resource management practices.	CLOSED DATE	CLOSURE REASON
System Software, Hardware and Integrations Prelim N/A N/A N/A N/A Data Conversion 2019.09.IT03 Prelim N/A N/A N/A	Unclear M&O roles and responsibilities.  Unsupported IBM Lotus Notes Domino Case Management.	support processes should be established prior to go-live of the Content Management and Case Management solutions. Currently, the roles and responsibilities within DLIR Electronic Data Processing Systems Office (EDPSO) team and any shared responsibilities with ETS and DataHouse are unclear. This will become more critical for DLIR as the project approaches the go-live dates. M&O resource requirements need to be quantified and resources either identified within the existing DLIR EDPSO team or additional resources acquired. This should be done with sufficient time for training and knowledge transfer so that M&O resources are in place at go-live. The Project Management Plan (version 1.3) shows the DataHouse Operations Documentation deliverable with a target completion date of December 26, 2019 for Content Management and October 6, 2020 for Case Management. DLIR EDPSO is in the process of assessing eCMS support resources. Accuity will continue to monitor this preliminary concern as plans for M&O are finalized.  The current case management system, IBM Lotus Notes Domlino, is no longer supported. The product was sold by IBM to HCL Technologies, an Indian IT company. DLIR's licenses for the product ended in June 2019 and DLIR's unable to renew the licenses as HCL Technologies is not a	N/A	N/A for prelim findings.  N/A for prelim findings.		Open Open	10/25/19, 11/22/19, 12/20/19, and 01/24/20. Acculty 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 darify interim M&O processes and the knowledge transfer plan to prepare DLIR for turnover.  03/27/20 and 04/24/20: No updates to report.  Acculty will continue to monitor this preliminary concern as the plan for M&O is developed.  10/25/19, 11/22/19, 12/20/19, 01/24/20, and 02/21/20: DLIR 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.		
		State Procurement Office (SPO) compliant vendor. This system will be replaced by the eCMS Case Management solution which is scheduled to go-live in November 2020. Any major issues with the current system may impact the data conversion process leading up to the go-live date and potentially the overall system development. DLIR has identified this as risk but has not yet assigned a risk owner or finalized the risk mitigation plans. Accuity will continue to monitor this preliminary concern until the risk mitigation plan is finalized.					03/27/20: No updates to report.  04/24/20: DLIR 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 DLIR's reliance on Lotus Notes is extended.  Accuity will continue to monitor this preliminary concern.		

ASSESSMENT ORIGINAL CATEGORY FINDING ID TYPE SEVERITY	SEVERITY FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE CLOSED DATE	CLOSURE REASON
Benefits Realization 2019.07.PG05 Risk High		and The eCMS Project does not have a project charter that would have helped to to formalize the project goals, target benefits, and success metrics at the start of the project. Based on informal recommendations made by Team Accuity during the initial IV&V on-site review, DUR 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.		Formalize measurable goals and success metrics in a project charter.  Collect baseline and project performance data.  Use performance data to monitor o evaluate project or contractor performance.	Consider financial, nonfinancial, tangible, and intangible metrics such a operational Key Performance Indicators (KPIs), customer or employee 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.	Open	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 CCVID-19.  04/24/20: Progress on the success metrics stalled due to shifting priorities and changes in DLIR project resources.  Accuity will continue to evaluate the collection and monitoring of success	
Project Organization and Management  2019.07.PM02 Risk High	High 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 tesign or development activities. The unclear contract terms regarding roles and responsibilities between DLIR and DataHouse (refer to finding 2019.07.PGJ), 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.PMO6).	2019.07.PM02.R2 2019.07.PM02.R2 2019.07.PM02.R3	Clarify roles and responsibilities between DLIR and DataHouse.  The DataHouse Project Manager should work onsite at DLIR through project completion to improve DLIR and DataHouse project team cohesion.  Include DLIR in project activities an communications to increase DLIR and DataHouse project team cohesion.		Open	metrics data.  99/20/19. Accuity 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 07 PG03, 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 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 DLIR in Case Management development but DLIR is not sufficiently included in DataHouse's data conversion, integrations, and testing activities in order to be able to adequately prepare for DLIR'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, open communication, and transparency between DLIR and DataHouse. Increased collaboration or at least understanding of other aspects of the project is still needed.  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 DLIR's understanding of and ability to properly prepare for upcoming tasks particularly for	

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
Project Organization and	2019.07.PM03 Issue	Moderate	High	The current deliverable review and acceptance process has contributed to	DataHouse prepares project deliverables and submits to DLIR for review.  As DLIR has had limited involvement in project activities or the	2019.07.PM03.R1	Establish deliverable acceptance criteria.	Consider including acceptance criteria in the quality management plan (refer to finding 2019.07.IT05), in a contract amendment (refer to finding		09/20/19: Accuity has kept the severity rating as Level 2 (Moderate).  Although Accuity observed DataHouse and DLIR meetings to review draft		l l
Management				project delays and resulted in the	preparation of deliverables (refer to finding 2019.07.PM02), DLIR does not		criteria.	2019.07.PG03), or in Deliverable Expectation Documents (DED).		deliverables and DLIR has expressed greater satisfaction in the deliverable		
iviariagement				acceptance of deliverables that do not	have an understanding of the purpose of the deliverables or the thought	2010 07 DM02 D2	Hold joint DLIR and DataHouse	2017.07.1 GOSJ, Griff Deliverable Expectation Documents (DED).		review and acceptance process, the process to evaluate deliverables against		
				meet industry standards.	process and factors that were considered in developing the deliverables.	2019.07.FW03.R2	deliverable review meetings to wall			established acceptance criteria has not yet been implemented. Additionally,		
					This has led to protracted review periods and acceptance of deliverables		through deliverables.			the impact of deliverables on project schedule, roles and responsibilities,		
					that do not meet industry standards (refer to finding 2019.07.PM10). A	2019.07.PM03.R3	Implement formal deliverable	•Include both the scope validation process for acceptance and the		design, migration, etc. is not consistently clear.		
					lack of a clear deliverable listing or acceptance criteria (refer to finding		review and approval processes.	quality control process for correctness (refer to finding 2019.07.IT.05).		40/05/40 44/00/40 40/00/40		
					2019.07.PG03), a lack of a quality management process and resource to verify deliverables (refer to finding 2019.07.IT05), and over tasked project			<ul> <li>Include an evaluation of deliverables against acceptance criteria and</li> </ul>		10/25/19, 11/22/19, 12/20/19, and 01/24/20: No updates to report.		
					managers (refer to finding 2019.07.PM14) also contribute to an ineffective			requirements documentation.		02/21/20: DataHouse scheduled a deliverable review meeting for the AWS		
					deliverable review and acceptance process. The delay in the approval of			DLIR should understand how each deliverable impacts the project		Environment Design document but a meeting of the DataHouse Test Plan was		
					deliverables has been cited by the eCMS Project team as one of the			schedule, roles and responsibilities, and ultimately the quality of the technical solution and success of the project.		not scheduled.		
					reasons the Phase 1 go-live dates were extended. Based on informal IV&V			tecrifical solution and success of the project.				
					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.		
										04/24/20: Accuity increased the severity rating from Level 2 (Moderate) to		
										Level 1 (High) and reopened the 2019.07.PM03.R2 recommendation. DLIR's		
										review and approval of DataHouse's AWS Environment Design document and		
										Test Plan are still pending. Delays in DLIR's review and approval of		
										DataHouse deliverables may cause delays in the completion of the overall		
										project, as was previously experienced. DLIR and DataHouse's evaluation of		
										options for COVID-19 responses should include consideration of DLIR project resources to perform timely deliverable reviews.		
										resources to perform timely deliverable reviews.		
										Accuity will continue to evaluate the effectiveness of the deliverable review		
										and acceptance process.		
Communication	2019.07.PM06 Issue	High	High	DataHouse's ineffective and untimely	Communication activities listed in the Project Management Plan (version	2019.07.PM06.R1	Implement daily touch point		Open	09/20/19: Accuity decreased the severity rating from Level 1 (High/Critical) to		
Management				communications with the DLIR Project Team contributed to DLIR's incomplete	1.0) did not occur as planned as the weekly project status meetings did not begin until April 2019 and the first progress report was not completed		meetings between DataHouse and DLIR Project Managers.			Level 2 (Moderate). The DataHouse and DLIR Project Managers have daily touch points through various methods (in-person meetings, Go To Meetings,		
					until February 2019. Despite the commencement of regular project		DLIK Froject ivialiagels.			email, phone, and text). Furthermore, as noted above at finding		
				potential risks, and upcoming project	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.		
					members had a piecemeal understanding of the technical solution (refer							
					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 activities was not provided timely. For example, DataHouse did not timely					participation in more Case Management development team meetings and 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).							
										11/22/19, 12/20/19, and 01/24/20: No updates to report.		
					The IV&V recommendations made at 2019.07.PM02.R2 and					02/21/20. Acquite ingressed the equality ratios from Loyal 2 (A.C. Santa)		
					2019.07.PM02.R3 regarding DataHouse working on-site and including DLIR in project activities will also address this finding. Below are					02/21/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as immediate improvements are needed particularly for		
					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.		
										00/07/00 Th		
										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.		
										3		
										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.		
										Accuity will continue to evaluate the effectiveness of these project		
										communication channels.		

ASSESSMENT	SULPLIA IN TURE	ORIGINAL	CURRENT	EU DU D		0500111511017101110	050000500005000	FIND	NG	01 0050 0 475	0.00.05.05.00.0
CATEGORY Communication Management	EINDING ID TYPE 2019.07.PM07 Risk	Moderate	Moderate Moderate	ENDING The lack of tailored project communications for all impacted stakeholders may reduce user adoption and stakeholder buy-in.	AMALYSIS  Communications management is a part of the Project Management Plan developed by DataHouse, however, the plan is not comprehensive and primarily reflects project meetings, status reporting, and issue reporting. The approved Project Management Plan (restor 1.2) was updated to include a communication matrix that outlines additional communication activities. While this is an improvement over the previous version, the latest draft plan still does not provide adequate details regarding communication activities as all stakeholders are grouped together for three broad communication methods and activities.  A formal communication requirements analysis was not conducted to determine the information needs of internal and external project stakeholders. There is not a process to ensure the timely distribution of project information and there is no dedicated role or adequate resources assigned to communications management (refer to finding 2019 of PM14). As such, communication activities have occurred haphazardly. The limited communication activities is somewhat mitigated as the DLIR Project Manager involves internal stakeholders in project-related meetings and working esssions. However, this informal approach does not include all internal stakeholders or any external stakeholders.	RECOMMENDATION ID 2019.07.PM07.R1	Further refine communication management plans.	STAT -Segment stakeholders into groups by communication needs such as by department unit (e.g., Hearings, Enforcement, or Records and Claims), by position (e.g., manager, supervisor), or internal and external (e.g., claimats, insurance agencies)Consider the list of communication methods listed in DataHouse's BAFODue to limited DLIR resources available for communication activities, the specific groups and communication activities should be prioritized to focus resources most efficientlyUpdate the project schedule for communication activities and assigned resources (refer to finding 2019.07.PM14).	O9/20/19: Accuity decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). DLIR plans to hold two sessions on October 1, 2019 to update the DLIR internal stakeholders (including neighbor island staff) on what has been happening for the last year on the eCMS Project including a brief emeb by DataHouse of how the new system will work and look. DLIR also plans to update the DLIR website to include project information that is accessible by internal and external stakeholders.  10/25/19: DLIR held two sessions for internal stakeholders to provide an 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 noted above at finding 2019.07.PMOS, the Scrum methodology should be communicated to all stakeholders who will be participating in sprint activities.  11/22/19: Accuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate) as plans to update the website and send out a letter to carriers regarding upcoming changes were not completed as expected. It is important for communications with impacted stakeholders to be executed timely.  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.		CLOSURE REASON
Organizational Change Management	2019.07.PM08 Risk	Moderate	Moderate	Missing key OCM steps or activities may 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 COM 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 DLIR Project Manager's 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 mittigates 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.	2019.07.PM08.R1	Develop and implement a structured OCM approach.	Collect baseline change awareness and readiness measurements through surveys or interviews. Create and mobilize a change coalition group of managers, supervisors, and key influencers. Incorporate and align OCM into communication, business process engineering (BPR), and training activities. Develop OCM activities to address identified awareness gaps or pockets of resistance. Implement 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 DUIR internal stakeholder meeting and DUIR 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: DUIR 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 DUIR SME participation in project meetings, however, almost all DUIR project resources are now unable to participate in project meetings. New OCM methods need to be explored for DUIR SMEs as well as all impacted stakeholders.		

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 Management	Risk Management 2019.07.PM09 Issue High High	High		A risk regarding the delay in the completion of the MOU agreement with DHS (refer to finding 2019.07.PM04 and 20109.07.IT01) was never identified and the risk identified in the Content Management Conversion and Migration (version 0.0) document (refer to finding 2019.07.IT.04) was not included in the risks and issues log, indicating an ineffective risk and issue management process. Based on information IV&V recommendation	2019.07.PM09.R1	Formalize the Risk and Issue Management process.	<ul> <li>A formalized process should clearly define responsibilities and steps in identification, resolution and action items tracking, and escalation procedures.</li> <li>The project team must encourage open, transparent discussion about risks and issues.</li> </ul>	Open	09/20/19: Acculty decreased the severity rating from Level 1 (High/Critical) to Level 2 (Moderate). A DLIR Risk Manager was assigned in August 2019 and 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 monthly Executive Steering Committee (ESC) meetings. The risk management process needs to be further refined to combine the DataHouse and DLIR logs into one source, assign risk owners, and develop mitigation or remediation plans for each risk or issue.			
Scope and	2019.07.PM10   Issue	High	Moderate	The Content Management and Case	imade during the assessment period, both Dulls and DataHouse have communicated a plan to start identifying and logging risks jointly onto DataHouse's log and reviewing them together weekly. As identification and mitigation of risks and issues are critical to project success, a formal process should be implemented before moving forward in the project.	2019.07.PM09.R2	project risks and issues.	Include DataHouse and DUR and, on occasion, the executive steering committee (refer to finding 2019.07.PGO2). Ferform a detailed review of new items, status of open items, risk/issue owners, and mitigation plans.  Finance of the committee of t		10/25/19. Risks were discussed at the weekly status meetings and monthly ESC meetings. The DLIR Project Manager and DLIR Risk Manager also meet weekly to review and discuss the risk log. The risk management process improvements noted as of 9/20/19 are still open.  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: Accutily 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 project risk exposure.  04/24/20: Discussions of risks at weekly project status and monthly ESC meetings are still on hold. Some of the meetings are tentatively scheduled to resume in May 2020.  Accutity will continue to monitor the risk management process.		
Scope and Requirements Management	2019.07.PM10 Issue	High	Moderate	Management requirements focumentation is incomplete.	The requirements for both Content Management and Case Management have already been approved, however, the requirements are incomplete (e.g. do not incorporate all contract requirements and all three project phases) and the descriptions in the Requirements Traceability Matrix (RTM) lack sufficient detail. The current RTM also does not link operational and project objectives to design artifacts. Furthermore, the RTM does not include non-functional requirements, including compliance with Hawaii Revised Statues, Hawaii Administrative Rules and security requirements.  Requirements management is a part of the Project Management Plan developed by DataHouse, however, the plan is not comprehensive. The Project Management Plan (version 1.2) was updated to include additional details regarding requirements management. While this is an improvement over the previous version, the latest draft plan still does not provide adequate details regarding the requirements principation process, the traceability structure, and how requirements will be reported.  As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation are complete and meet industry standards and best practices. Requirements documentation should be revised and requirements management processes should be improved prior to moving forward in the project.		Case management requirements documentation and RTM.	realistic and time bound) guidelines.  -Ensure requirements documentation include all requirements listed in the DataHouse contract, all requirements identified during the stakeholder sessions, and for all three phases of the eCMS Project.  -Ensure requirements include functional, performance, process, non-functional, security, and interface requirements.	Open	09/20/19. Acculty decreased the severity rating from Level 1 (High/Critical) to Level 2 (Moderate). The RTM has been updated to include more detailed and specific requirements and user stories from the Case Management and Content Management development teams. DataHouse is in the process of enhancing ther RTM to crosswalk and merge all requirements into one master document including all contract requirements. With the staggered development of the Content Management and Case Management solutions and the iterative nature of Scrum methodology, additional requirements will continue to be identified throughout Case Management development which could have implications to Content Management. As noted above at finding 2019 0.7 PMD5, the process for approving and prioritizing requirements still needs to be set. Formalizing the process for managing requirements remains key.  10/25/19: DataHouse provided training to the DLIR Product Owners that included how requirements are managed in the development sprints (refer to 2019 0.7.PMD5) and clarified responsibility for security requirements (refer to 2019 0.7.PMD5). Contract requirements were added to the RTM, however, those requirements were not traced to the requirements streams for completeness.		
						2019-07-PM10-R2	processes.	*-Insure that there is a clear understanding between DataHouse and DUIR regarding who is responsible for identifying and tracking different types of requirements.     *-Develop a process for prioritizing and reporting requirements.     *-Develop a process for tracing requirements to specific system design elements.		contract, integration, or security requirements to report.  01/24/20: The DataHouse Case Management development team clarified the process for approving new or revised user stories.  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.  03/21/20: 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.  04/24/20: 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.  Accuity will continue to evaluate the requirements documentation and processes.		

ASSESSMENT ORIGINAL CURRENT	EINDING	ANALYCIC	DECOMMENDATION ID	DECOMMENDATION	CUDDI FARENTAL DECOMMENDATION	FINDING	FINDING STATUS UPDATE	CLOSED DATE	CLOSUDE DE ASON
ASSESSMENT CATEGORY Cost, Schedule and Resource Management  COST, Schedule and Resource Management  ASSESSMENT FINDING ID TYPE ORIGINAL SEVERITY SEVERITY High High	FINDING Informal cost management practices n lead to unexpected costs or overpayments of contracts.	required hardware and software for the alternative solution as well as long term operational costs need to be properly evaluated and managed (refer to finding 2019.07.ITO1). Additionally, total project costs and funding sources are not formally reported.  The DataHouse contract states that payments are contingent upon receipt 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 DataHouses invoices through April 2019 (May and June 2019 invoice payments are still pending). Although the project schedule, deliverable timelines, 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.PG03), incomplete understanding of all the schedule delays (refer to finding 2019.07.PM13), and undefined	2019.07.PM12.R2 2019.07.PM12.R3	RECOMMENDATION  Prepare a comprehensive project budget and a schedule of long-term operational costs (e.g., licenses, 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.	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS Open	9/20/19: 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.		CLOSURE REASON
Cost, Schedule and 2019.07.PM13 Risk High High Resource Management	inadequate schedule management practices may lead to project delays, missed project activities, urrealistic schedule forecasts, or unidentified causes for delays.	and the Schedule deceays letter of unifold (Park 1), and undernited criteria for revising the payment schedule, Team Acculty is unable to determine if DataHouse payments are appropriately managed.  The Phase 1 go-live dates were delayed a few times since the start of the project with the Content Management go-live delayed five months and the Case Management go-live delayed three months. Reasons for the delay provided by the eCMS Project team included additional time for requirements gathering, some Phase 2 work that was moved up to Phase 1, staff vacations during the holidays, time for the DLIR Project Manager to write the RFP for the IV&V contract, and delayed procurement of the scanners. Although there are reasonable explanations for some of the 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 or PMORs, 2019 or PM	2019.07.PM13.R2	Document and approve revisions to project schedule deliverables, milestones, and go-live dates in accordance with the Project Management Plan.  Refine the project schedule with details of tasks, durations, phases, and assigned resources.  Prepare regular schedule reports and schedule variance analyses for management and the executive steering committee.		Open	Accuity will continue to monitor project costs including new AWS costs (from finding 2019.07.1701) and cost management practices.  99/20/19: Accuity 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 DUR 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, Accuity 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 2019.07.1707). Any DILI tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DUR (refer to finding 2019.07.1707). But It tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DUR (refer to finding 2019.07.1707). Any DILI tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DUR (refer to finding 2019.07.1707). So public tasks dates are still pending DUR approval.  11/22/19 and 12/20/19: No updates to report. The Content Management go-live date has not yet been adjusted.  01/24/20: The Content Management go-live date was approved by DLIR, however, specific task dates are still pending DUR approval.  02/2		

ASSESSMENT CATEGORY	FINDING ID TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	FINDING SUPPLEMENTAL RECOMMENDATION STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Cost, Schedule a Resource Management	nd 2019.07.PM14 Issue	Moderate	High	Inadequate assigned project resources may lead to project delays, reduced project performance, or turnover of project resources.	Team Acculty was unable to evaluate resource workloads based on the project schedule information (refer to finding 2019 or PMI3), however, based on observations of the eCMS Project team, the DataHouse and DUR Project Manager is the only full-time DUR employee assigned to the eCMS Project and understandably does not have time to perform all of the tasks to properly manage the project or represent DUR during project activities. DUR should increase participation in design and development activities (refer to finding 2019 07.PM02) but would not be able to with the current assigned resources.  Resource management is included in the Project Management Plan and states that 'resources will be provided based on project needs. This will be reviewed with DCD on a quarterly basis." The Project Status Reports prepared by DataHouse do not note any resource needs under the Staffing (Needs, Anticipated Changes) section. However, Team Acculty noted that the DataHouse Quality Assurance Lead has not been assigned (refer to finding 2019 07.1T05). DataHouse is also considering adding a project coordinator resource to assist with meeting minutes and getting deliverables out.		Reevaluate project resource needs and acquire additional resources.  Prepare regular resource reports for management and the executive steering committee.	-Perform project schedule updates for the alternative solution (refer to finding 2019 of 7.PM13)Ensure resource levels and skill sets align to assigned tasks.  -Consider including resource needs for unassigned tasks or rolesConsider including DLIR resources needed and estimated hours for upcoming project activities (e.g., design sessions, user demonstrations, or user testing).	109/20/19. Acculty has kept the severity rating as Level 2 (Moderate). Although two of the eCMS DIR project team members have been assigned additional responsibilities to lighten the load of the DLR 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. DLR resources were partially assigned to work on other DLR IT initiatives which delayed completion of test plans and limited progress on addressing prior IV&V findings.  11/22/19: Acculty increased the severity rating from Level 2 (Moderate) to Level 1 (High) 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 to a technical resource to help alleviate the DataHouse Project Manager for DCD. DLIR is in the process of drafting procurement documents for additional resources for testing, data conversion, AWS, and requirements.  03/27/20: Many key DLIR resources and a few DataHouse resources were pulled to help with the higher priority UI Division's operations. Additionally DLIRs plans to procure mecessary project resources for upcoming project activities were put on hold due to COVID-19. The timing of when DLIR project menus the swallable again and additional resources procured is unknown.  04/24/20: Almost all of the DLIR project resources are still unavailable, including the DLIR Project Manager, and plans to procure additional resources are still on hold. DLIR and D		
System Software Hardware and Integrations	2019.07.IT02 Risk	High	Moderate Moderate	An unclear interface solution may impact the design process and require additional effort to correct.	The Content Management Design (version 1.0) document was approved by DUR on May 6, 2019. Case Management is currently in the design phase and design documents have not been provided. Although the Content Management design document was completed and Case Management design is in progress, the exact interface solution has not been defined. The interfaces between Content and Case Management are integral to the success of the project and should be fully defined in design documents in accordance with industry standards.  Due to the recent DHS development, the interface options will need to also be researched and analyzed depending on the alternative solution selected. However, even prior to this development, DLR did not have a clear understanding of the interface solution as well as the complete technical solution. DLR still had questions about the interface solution regarding the technology, connectivity, batch vs. real-time, security, cost and maintenance of the proposed interface solution between Selesforce and FileNet. The interface solution should be clearly analyzed, documented, mapped to project requirements, and communicated to DUR.  The Quality Management Plan (version 0.1) was drafted by DataHouse on	2019.07.IT02.R2 2019.07.IT02.R3	Document the interface solution and analysis.  Update the project schedule to define resources assigned to each othe interface-related activities.  Verify the proposed interface solution will work.	Documentation should provide a clear understanding on the interface solution including the following:  *How Salesforce will query the selected Content Management solution  *How files are uploaded to selected Content Management solution from Salesforce  *How metadata is uploaded into Salesforce  *Who is responsible for setup, configuration, and maintenance and the steps required for implementation  *What are the costs associated for development and long-term maintenance	09/20/19: Accuity decreased the severity rating from Level 1 (High) to Level 2 (Moderate). DataHouse included a narrative about the interface components in the Case Management Design Document. Furthermore, DataHouse organized two demos of 1) the Salesforce application using an interface/API to get to a web service, and 2) another web service using an iFrame and IBM ICN to get to FileNet.  10/25/19: DataHouse refined the interface design details in the Case Management Design Document (version 1.1).  11/22/19, 12/20/19, 01/24/20, 02/21/20, 03/27/20, and 04/24/20: DataHouse refined details in the integrations specification schedule. Accuity does not have full insight into integration development activities and we are unable to provide a complete update on integration development progress.  Accuity will continue to evaluate the interface solution as additional details are finalized and as development progress using the actual solution components is made.  09/20/19: Accuity has kept the severity rating as Level 2 (Moderate). The		
Management an Testing				management plan and assigned quality assurance resources may impact the quality of project deliverables.		2019.07.IT05.R2	plan.  Perform quality management activities on previously approved or submitted deliverables.	management processes and metrics that will best serve this project.  Include quality standards or reference to specific criteria (refer to finding 2019 0.7 PM03).  **Update the project schedule to assign quality assurance resources (refer to finding 2019.07.PM14).	DataHouse Project Manager communicated that DataHouse's quality management responsibilities are specific to deliverables and testing. As such, Acculty will work with DLIR to understand what additional quality management activities and metrics need to supplement the DataHouse quality management plan.  10/25/19: DataHouse clarified that the DataHouse Quality Management Plan deliverable does not need DLIR approval as it is not a contract deliverable and is just to communicate the DataHouse approach to quality management to DLIR. The Case Management quality assurance testing was performed for Epic 1. DLIR is working on the DLIR quality management approach.  11/22/19, 12/20/19, 01/24/20, 02/20/20, 03/27/20, and 04/24/20: No updates to report. Acculty does not have access to the project team's testing resources and we are unable to provide an update on testing activities.  Acculty will continue to evaluate the quality management plan and activities.		

ASSESSMENT CATEGORY	FINDING ID	TYPE	ORIGINAL SEVERITY	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Configuration Management	2019.07.1T06	Risk	Moderate	Moderate	A lack of a configuration management plan may impact the performance and quality of the system if unauthorized or untested changes are promoted between environments.	A configuration management plan has not yet been drafted. DataHouse plans to prepare a configuration management plan by October 11, 2019. 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 configuration management plan in place increases the concern that changes may not be properly tested, accepted and approved which may impact system performance or quality.	2019.07.IT06.R1	Develop a formal configuration management plan.	•Ensure the plan is in accordance with IEEE 828-2012 – Standard for Configuration Management in Systems and Software Engineering and includes the configuration management planning process, configuration indentification process, configuration anagement planning process, configuration status accounting process, configuration auditing process, interface control process, and release management process.  •DataHouse and DUR should collaborate and agree on the configuration management plan purposes and processes that will best serve this project.	Open	09/20/19. Accuity has kept the severity rating as Level 2 (Moderate). Although Accuity obtained a better understanding of configuration management through interviews of the Content Management and Case Management development teams, DataHouse is still in the process of finalizing and documenting a configuration management approach.  10/25/19: No updates to report.  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 team's approach. The configurations, AWS/network) is still not clear. Additionally, a comprehensive DataHouse team configuration management plan was not completed.  12/20/19: There was confusion about configuration items and required DUR approvals due to a lack of a comprehensive configuration management plan.  01/24/20, 02/20/20, 03/27/20, and 04/24/20: No updates to report.  Accuity will continue to evaluate the configuration management plan and		
Security	2019.07.1107	Risk	Moderate	High	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 improperly 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.		Ensure the security management plan meets specific standards.  Finalize the security management plan.	Consider the industry standards and best practices above. DataHouse and DUR should collaborate and agree upon the specific standards that will best serve this project.  The project is a serve that the project is a serve that will be the project in the project is a serve that will be the project in the project in the project is a serve that will be the project in the project in the project in the project is a serve that will be the project in the pr	Open	approach.  109/20/19: Accuity has kept the severity rating as Level 2 (Moderate). The security management plan has not yet been finalized and also needs to be updated to include AWS security plans (from finding 2019 07.1701).  DataHouse plans to complete the security management plan updates in October 2019.  10/25/19: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) due to the need for a plan or controls to be in place and the impact that a delay in implementing the plan or controls would have on project activities including data conversion, training, and testing. DataHouse clarified that the submitted Security Management Plan only covers the DataHouse project team. DataHouse project team calaritouse also clarified that they are only responsible for application security which they intend to document in an Application Security Management Plan and that DUR is responsible for network security, security requirements, and security controls. DUR does not currently have formal security policies but plans to develop policies in early 2020. DUR also plans to work with ETS to identify minimum security requirements to allow the eCMS Project to progress as the formal policies are developed. Necessary security controls should be decided on and implemented prior to data migration and task dependencies related to security should be identified in the project schedule (refer to finding 2019 or PM13). DUR should also consider security controls for system data held by DataHouse.  11/22/19: ETS provided some guidance regarding AWS control tower and cloud security framework considerations. DUR is working with EDPSO and ETS to identify security requirements and evaluate security design options. 12/20/19: DUR is first identifying security requirements. DUR plans to meet at the end of February to develop a plan to address security. 03/27/20: DUR continued efforts to identify security requirements. DUR plans to meet at the end of February to develop a plan to address security assessment was put on hold du	1	

ASSESSMENT	FINIDING ID	TVDE	ORIGINAL	CURRENT	FINIDING	ANALYCIC	DECOMMENDATION ID	DECOMMENDATION	CURRENTAL RECOMMENDATION	FINDING	FINITING CTATUS LINDATE	CLOSED DATE	CLOCUPE DEACON
CATECORY Project Organization and Management	FINDING ID 2020.02 PM01	Positive Positive	SEVERITY N/A	SEVERITY N/A		AMALYSIS 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 DLIR subject matter experts (SMEs) to ensure user and business needs are thoroughly understood. •Encouraged DLIR 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 DLIR. •Listened to feedback from DLIR 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 DLIR 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		RECOMMENDATION  N/A for positive findings.	SUPPLEMENTAL RECOMMENDATION  N/A for positive findings.	Closed	FINDING STATUS UPDATE N/A	CLOSED DATE 3/27/2020	Closed as this is a positive finding.
System Software, Hardware and Integrations	2019.09.IT01	Positive	N/A	N/A	The DataHouse team's swift and adaptive response to issues and risks minimized impact and further delays to project development.	the project.  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 IVSV 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 IVSV and this to address DLIR, IVSV, 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 openness to work towards a master RTM to facilitate traceability. Team members 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		N/A	N/A		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	9/20/2019	Closed as this is a positive finding.
Governance Effectiveness	2019.07.PG02	Risk	Moderate	N/A	The lack of a formal executive steering 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 diction 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	199/20/19. Acculty decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). The eCMS Executive Steering Committee (ESC) was assembled and held its 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 Spornsor to discuss key risks and issues and to align the eCMS Project direction with DLR and ETS strategic objectives. The thresholds for decisions that require committee attention were also established.		Closed as the eCMS ESC was formalized.
Governance Effectiveness	2019.07.PG03	Risk	Moderate		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 (refer to finding 2019.07.PMO9), requirements tracking (refer to finding 2019.07.PMO9). Additionally, the lack of specific acceptance criteria has led to approval of deliverables that do not meet industry standards (refer to finding 2019.07.PMO3). 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 0.7.PM10), risk and issue log (refer to finding 2019 0.7.PM09), and testing documentationConsider including acceptance criteria based on industry standards. For 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 292 for test documentationConsider including measurable success metrics (refer to finding 2019 0.7.PG05)Consider the need to outline roles and responsibilities between DLIR and DataHouse (refer to finding 2019.07.PM02).		09/20/19: DUIR 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 incorporated 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.ITOS Quality Management findings.

ASSESSMENT CATEGORY	FINDING ID TYPE	ORIGINAL SEVERITY	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	E CLOSURE REASON
Governance Effectiveness	2019.07.PG04 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 Hawaii's IT oversight office, is in the best position to gather project assets and put forth guidelines.		Initiate conversations with ETS to discuss DILR IT and project support needs and responsibilities.	- Discuss what resources, guidance, and shared project assets would be most helpful to DUR Discuss what project assets DUR 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 DUR including taking the DUR 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 DUR. Additionally, DUR is forming a DUR IT Steering Committee to provide oversight to all DUR IT projects. The DCD Executive Sponsor is a member of that DUR committee and plans to share eCMS lessons learned and project templates with other DUR IT projects.		Closed as discussions occurred with ETS and the risk is adequately mitigated with the planned course of action.
Benefits Realization	on 2019.07.PG06 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 filling, 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 filling will not begin until Phase 3, this risk is not as imminent. However, as the evaluation of potential impacts, collection of reedback 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 tepresentatives 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 filings.  DLIR plans to draft statutory changes to mandate electronic filing 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 filing.	9/20/2019	Closed as DUR has a plan to align statutes with eCMS Project objectives.
Project Organization and Management	2019.07.PM01 Positive	N/A	N/A	The DLIR Project Manager is a dedicated 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	2019.07.PM04 Issue	High	N/A	BAFO without obtaining a written letter of intent between DataHouse and DHS. Furthermore, the eCMS Project	The DataHouse BAFO proposed a technical solution that planned to 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.)	2019.07.PM04.R1 2019.07.PM04.R2	Finalize the MOU to leverage DHS' enterprise licenses for FileNet and Datacap.  DLIR should lead all discussions and negotiations of vendor contracts or		Closed	09/20/19: The MOU with DHS for Datacap and FileNet licenses is close to being finalized. DLIR received a draft from DHS on September 1, 2019 and it was sent to the Altorney General's office on September 17, 2019. Accuity has observed that DLIR has led the contract discussions and negotiations with AWS.		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
				her experience with DHS.	viable due to the recent DHS development, an alternative solution must be determined (refer to finding 2019.07.1101) and previously accepted or drafted deliverables may need to be updated. Although the eCMS Project will not be able to utilize DHS's IBM FileNet environment, the project still plans to leverage DHS's enterprise licenses for FileNet and Datacap. Before moving forward in the project, DLIR should finalize all necessary agreements to ensure that the alternative solution is viable and prevent further delays.	2019.07.PM04.R3	agency agreements. Identify and complete all critical tasks prior to moving forward with an alternative solution.					monitored under the 2019.07.PM13 Schedule Management finding.
Project Organization and Management	2019.07.PM05 Risk	Moderate	N/A	A lack of clarity on DataHouse's development methodology may not allow or adequately prepare stakeholders to participate readily.	referred to as "Water-Scrum-Fall". This is a combination of the waterfall 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 DLIR project team and	2019.07.PM05.R1	Scrum phases.  Communicate the approach for	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 thrula 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 DUIR Product Owners to provide an overview of the Scrum methodology and the Product Owner role and responsibilities.		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.
					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.		executing Scrum phases to all team members and impacted stakeholders.					

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
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 Accuity 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 on to clearly identify how this deliverable will be supported, evaluated, or accepted by DLIR (refer to finding 2019 07.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 2019.07.PG05.R1, 2019.07.PG05.R2, and 2019.07.PG06.R3 regarding clear and measurable goals and success metrics will also address this finding. Below is an additional recommendation to further improve BPR activities.		Identify and track BPR opportunitie in a log.	This log should be used to plan BPR and design activities and to develop content for communications and training.	Closed	09/20/19. Acculty 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	2019.07.1T01	Issue	High	N/A	The original solution proposed by DataHouse in their BAFO to leverage the existing DIBF 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. As DHS will no longer be providing access to take on the monitoring and maintenance of the IBM FileNet infrastructure. As DataHouse recommended in the BAFO the on-premise 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. DLR 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 DLR to reassess the lotal solution considering all updated technological opportunities available today. DLR should ensure that DataHouse and DLR to reassess the total solution considering all updated technological opportunities available today. DLR should ensure that DataHouse and DLR to reassess the total solution considering all updated second considerations and second proportunities available today. DLR should ensure that DataHouse and DLR to reassess the total solution for considering and updated second proportunities available today. DLR should ensure that DataHouse and DLR to reassess the total solution considering all updated second proportunities available today. DLR should ensure that DataHouse and the delivered before making any decisions. It is important that thorough analysis and adequate due diligence before making any decisions. It is important that thorough analysis and adequate to avoid further project delays and to ensure that the delivered system will meet operational and stakeholder requirements.	2019 07 ITO1 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-conten 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  Ongoing maintenance and operations (patching, updates)  Performance of security assessments  Change and configuration management		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 Accuity and concluded that IBM FileNet was the best solution for this project, however, no formal analysis was prepared. DUR approved AWS as the replacement hosting infrastructure solution effectively remediating the inability to leverage the DHS FileNet environment issue.  Accuity had also recommended that a comprehensive technical analysis be prepared on the replacement solution, however, DUR 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 DUR. 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 07.1T07, AWS M&O roles and responsibilities under the new preliminary concern 2019.10.1T02, 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.IT01).	Closed	09/20/19: Accuity 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 2017.07.PM10 requirements finding.
Data Conversion	2019.07.IT04	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 DUR. The document was drafted based on requirements documentation that is incomplete (perfect forlinding 2019.07.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).	Closed	09/20/19: Accuity 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: Accuity 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



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				
4				
5				
6				
7				
8				
9				
10				

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## Appendix D: Prior Findings Log

ASSESSMENT CARGORY FINDING ID TYPE ORIGINAL CURRENT SEVERITY SEVER
Project Organization and Management Under the impact to project execution although the extent of the impact port of the impact port of the impact of to quality and project execution although the extent of the impact port of the impact of to quality and project execution although the extent of the impact port of the impact of to quality and project execution although the extent of the impact port of the impact of to quality and project execution although the extent of the impact port of the impact of to quality and project execution although the extent of the impact project involving forward with available project. Consider resolution and the project involving forward with available pro
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ASSESSMENT GATEGORY Quality Management and Testing	FINDING ID 2020.02.IT01	TYPE	ORIGINAL SEVERITY High	CURRENT SEVENTY High	The DataHouse Test Plan is incomplete and does not adequately inform DLIR of the testing approach and scope which may impact the execution of testing activities.	DataHouse drafted the Test Plan Version 0.0, pending DLIR 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, volume, AWS environments).  'The testing approach differs from DataHouse's Best and Final Offer (BAFO) (e.g., regression testing, test-driven development (TDD)).  'The testing approach differs from DataHouse's Best and Final Offer (BAFO) (e.g., regression testing, test-driven development (TDD)).  '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 tests, test) plan Section 8 tasks, included in the project schedule are incomplete (e.g., security tests, test) party defect 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		RECOMMENDATION  Clarify the test approach.  Develop adequate test management processes and procedures.	SUPPLEMENTAL RECOMMENDATION  *Perform a deliverable review (refer to finding 2019.07.PM03) to ensure DLIR understands the test plan and scope.  *Consider making improvements to the test documentation.  *Consider a process for monitoring and reporting test status and results.  *Consider a process for authorization of test data.	FINDING STATUS Open	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-19.  04/24/20: DLIR's review and approval of the DataHouse Test Plan is still pending due to COVID-19.  Accuity will reassess when meetings are held regarding the DataHouse test plan and evaluate any improvements made to test processes.	CLOSED DATE	CLOSURE REASON
Data Conversion	2019.11.IT01	Risk	Moderate	Moderate	Unclear data conversion plans and processes may reduce DLIR's ability to prepare for proper data conversion.	The Content Management processes could impact the execution of testing activities.  The Content Management Conversion and Migration (version 1.2 pending DLIR approval) describe the data conversion and Migration (version 1.1 pending DLIR approval) describe the data conversion process and roles and responsibilities between DataHouse and DLIR. DLIR is responsible for performing UAT on the data and ultimately signing off on the final reconciliation reports but has not yet formalized plans for these tasks. The data conversion plans do not provide sufficient details and DLIR does not have insight to the DataHouse data conversion teams' activities, tools, reports, risks and issues, and testing. As such, DLIR is unable to properly prepare for their part in the process and will not be able to adjust their data conversion test plans for maximum efficiency. Additionally, DLIR has not finalized plans for scanning current paper flies 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.PM13.R2 regarding DataHouse including DLIR in project activities and adding detailed tasks to the project schedule will also address this finding. Below was additional recommendations to further improve data conversion plans and activities.	2019.11.IT01.R1  2019.11.IT01.R2  2019.11.IT01.R3	data conversion process.  Formalize DLIR data conversion test plans.	-Explain how data conversion tools perform validation and reconciliation steps and share available reports and logsExplain the process for how the data conversion plans will be updated for changes in system requirementsProvide 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 issuesEstimate 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 optionsEstimate scanning time requirements and begin to schedule or acquire necessary resources (refer to findings 2019.09.PM02 and 2019.07.PM14).	Open	12/20/19: The Content Management data conversion plan v1.3 was updated to include a sample report from the data conversion tool. D.LIR 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 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).  Accuity will evaluate data conversion plans as progress is made.		
Scope and Requirements Management	2019.10.PM01	Risk	High	High		Added complexity to requirements traceability is due to the current requirements management process. Requirements documentation was developed separate from the DataHouse contract requirements and more detailed requirements were developed by the Content Management and Case Management development teams to use for development. As a result, there is duplication of requirements in the RTM which will likely impede traceability to requirements throughout the life of the project. DataHouse made incremental improvements to the RTM. The requirements documentation were traced to the use cases used by the Content Management development team or user stories used by the Case Management development team or user stories used by the Case Management development team or user stories used by the case was development. The content of the requirements were also added to the RTM but have not yet been traced to the requirements used for development. Requirements are not currently traced to project objectives and success metrics to ensure requirements add business value or to acceptance criteria to ensure stakeholder satisfaction. Additionally, the RTM is maintained in Microsoft Excel which limits version-control, efficient collaboration and review, and integration with testing.	2019.10.PM01.R1	Improve requirements traceability.	-Trace contract requirements to requirements subsets used by the development learns to ensure completeness.  -Consider identifying high-level requirements that duplicate more detailed requirements to reduce redundancy in traceability to design and testing.  -Trace requirements to the project objectives success metrics (refer to finding 2019,07-PG05) to ensure each approved requirement adds business value.  -Add acceptance criteria to the RTM to ensure stakeholder satisfaction.  -Consider use of a requirements management tool with greater functionality.	Open	11/22/19 and 12/20/19: The Case Management development team began adding acceptance criteria for user stories. No other significant improvements for traceability were made.  01/24/20: DLIR and DataHouse discussed and clarified the process for traceability. Additionally, DataHouse confirmed that all Case Management user stories and Content Management use cases will be traced to testing documentation.  02/21/20: DLIR plans to procure a resource to assist with evaluating requirements and the traceability of the RTM.  03/27/20 and 04/24/20: 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.  Accuity will evaluate the RTM as improvements are made.		

ASSESSMENT CATEGORY	EINDING ID TV	ORIO SE SEV	GINAL CU	URRENT	EINDING	ANALYRIC	RECOMMENDATION ID	RECOMMENDATION	FINDIN SUPPLEMENTAL RECOMMENDATION STATE	G CLOSED DATE CLOSURE REASON
Quality Management and Testing	2019.10.IT01 Ris	k Mod	derate Hi	-	Lack of approved test plans may impact the execution and quality of test activities and documentation.	According to the Project Management Plan (version 1.3), the DataHouse test plan was scheduled for completion on September 3, 2019. Due to the need to focus resources on the AWS setup and network connections, 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 resource constraints and the need to work on other DLIR IT initiatives, the DLIR test plan expected completion date was revised to November 2019 and the plan may be combined with the DataHouse test plan.  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 understand DataHouse's lest strategy as well as identify, train, and schedule DLIR test resources.	2019.10.IT01.R1	Finalize the test plan.	*Identify applicable test standards and requirements.  *Delineate roles and responsibilities between DataHouse and DLIR (refer to finding 2019.07.PM02).  *Estimate test resource needs and ensure adequate resources are identified, trained, and scheduled (refer to findings 2019.09.PM02 and 2019.07.PM14).	11/22/19: DataHouse and DLIR test plans were not finalized as planned. DataHouse is performing some testing activities, however, Accuity does not have insight into testing activities to provide an update or assessment of testing.  12/20/19: The Case Management development team walked through the 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 DataHouse and DLIR test plans are still pending.  01/24/20: The DataHouse test plan is targeted for completion in February 2020.  DLIR plans to procure additional resources to assist with the 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.  Acculty will evaluate DLIR's test plan when finalized.
Security	2019.10.IT02 Ris	k High	h Hi		procedures may impact the security and	DLIR currently does not have formal security policies to determine security requirements for the eCMIS Project and does not have security procedures in place to adequately protect eCMIS 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 activities. The determination of security requirements is critical as data conversion activities are already delayed for the AWS setup and testing activities are to begin in November 2019. The development of formatized policies will also impact the application security management plan and design that DataHouse is responsible for (refer to finding 2019.07.107). Security policies and the resulting security requirements should be determined immediately to prevent further delay of the project.	2019.10.IT02.R2	Formalize security policies.  Formalize and implement security procedures.	-Work with ETS to align DLIR 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-in-transit)  -Clarify roles and responsibilities for security controls between DLIR and ETSIdentify specific resources to perform security proceduresConsider prioritizing security procedures that are necessary for the operation of the AWS environments.	11/22/19: DLIR 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.  02/21/20: The EDPSO vendor drafted an access management policy and is targeting the end of February 20/20 to complete drafts of other security policies.  DLIR scheduled a meeting for the end of February to Ecusus AWS security with ETS. DLIR DCD and DLIR 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 20/20, however, DLIR's review was not completed due to COVID-19.  04/24/20: The review of the draft security policies is still on hold due to unavailability of DLIR project resources.  Acculty will evaluate the security policies, requirements, and procedures as they are finalized.
Project Organization and Management	2019.09.PM01 Iss	ue Mod	derate Hi	igh	The documented change management process was not followed as prescribed.	The Project Management Plan (version 1.3) documents the change management process that includes Change Requests, impact assessments, and a Change Log. The change to AWS (refer to finding 2019.07.IT01 in Appendix D) and the revision of the Content Management go-live date were approved by DLIR but not documented in Change Requests or a Change Log. Additionally, the change management process does not have built in mechanisms to ensure that impacted documents are updated for the change and changes are appropriately communicated to impacted stakeholders.	2019.09.PM01.R1	Document changes in Change Requests, with an impact assessment, and the Change Log in accordance with the Project Management Plan.	Open	10/25/19: DataHouse began to summarize changes in the Change Log.  DataHouse is in the process of formalizing Change Requests for the project schedule and AWS. DLIR is also evaluating AWS Control Tower options which 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 PG02) and DataHouse initiated discussions on the requirements prioritization and change process (refer to finding 2019.07.PM05).  11/22/19: Entries were added to the Change Log but the Change Requests for the project schedule and AWS were still not drafted.

ASSESSI CATEGO	FINDING ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
							2019.09.PM01.R2	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 owners, change control board, steering committee).  *Implement additional columns in the Change Log to ensure updates are made to all impacted project plans, documents, or deliverables and changes are communicated to all impacted stakeholders.		12/20/19 and 01/24/20: No updates to report.  02/21/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as the change requests identified in the September 2019 report are still outstanding and need to be finalized and agreed upon soon. Accuity 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. Cases Management data conversion 2019.11.1TiO1) and reasons for changes should be documented and approved.  Accuity will review the Change Requests as they are finalized and evaluate improvements to the Change Log.		

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
	d 2019.09.PM02 Risk	Prelim	High	Undefined resource management	This was originally reported in the September 2019 IV&V Monthly Report as	2019.09.PM02.R1		Detail necessary steps and information needed to estimate and refine	Open	10/25/19 and 11/22/19: Accuity will continue to monitor this preliminary concern		
Resource Management				processes and procedures may result in unidentified resource requirements,	a preliminary concern but is upgraded to a risk in this report. The Project Management Plan (version 1.3) includes a human resource management		refine DLIR resource requirements.	resources requirements.  *Consult DataHouse for input on upcoming activities that require DLIR		as the testing, data conversion, and sprint reviews with stakeholders activities are underway.	•	
wanagement				inadequate resources, or project	section that outlines the high-level roles and responsibilities of various team			resources and clarify expectations of resources.		underway.		
				resources that are not optimally utilized.	members but does not define a process for how resources will be managed.			Assign responsibility for and establish target due dates to develop		12/20/19: This was changed to a risk in the December 2019 IV&V Monthly		
				(Updated)	This will become more critical for DLIR as the project gears up for more			resources estimates for major project activities (e.g., data conversion,		Report.		
					resource demanding activities including data conversion, testing, and sprint reviews. Additionally, DLIR project team resources are not fully dedicated to			testing).		01/24/20: DLIR implemented a new tool to manage resource assignments and		
					and a construction of a self-of-construction to be about a self-of-construction and a self-of-construction of the					deadlines to better utilize and manage existing project resources. DLIR also		
					procedures to track and quantify upcoming resource needs, identify available	2019.09.PM02.R2	Develop processes to optimize	Consider working with managers of project resources to reassign team		plans to procure additional resources to support data conversion and testing		
					resources, procure or obtain commitments of resources, manage resource		utilization of DLIR project resources.	members' other job duties.  *Consider periodically reconfirming and renewing resource commitments to		activities.		
					schedules, communicate with assigned resources and their supervisors, and			the project.	'	00/04/00   00/07/00   No		
					train resources for assigned tasks will help to minimize project delays.			•Ensure team members understand their responsibilities (e.g., testing, sprin	t	02/21/20 and 03/27/20: No updates to report.		
					DLIR developed a rough estimate of hours to perform scanning and data			user story contact, project communications, OCM) and assignments.		04/24/20: Accuity increased the severity rating from Level 2 (Moderate) to Level		
					entry of Case Management paper files but more precise estimates based on			•Ensure team members are properly trained and prepared to perform their assignments.		1 (High) as the need to better estimate resource requirements and optimize		
					a trial run of sample cases and a decision on what cases must be converted			Explore use of tools for resource calendars and tracking of team member		utilization of limited DLIR project resources will be critical for making realistic and		
					by go-live is needed (refer also to finding 2019.11.IT01). Additionally, DLIR needs to perform an analysis to determine how many resources can be			assignment progress and completion.		feasible adjustments to the project schedule to account for COVID-19 impacts.		
					acquired with budgeted funds and whether those acquired resources will be					Accuity will continue to evaluate resource management practices.		
					able to complete necessary data conversion activities by the targeted go-live.							
					DUB to a second and a second at a second a							
					DLIR has not yet completed a test plan (refer to finding 2019.10.IT01), estimated resource requirements for testing, or formalized a plan for							
					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.							
					to futurer improve data conversion plans and activities.							
System Software,	2019.09.IT02 Prelim	N/A	N/A	Unclear M&O roles and responsibilities.	The M&O roles and responsibilities should be clarified and associated	N/A	N/A for prelim findings.	N/A for prelim findings.	Open	10/25/19, 11/22/19, 12/20/19, and 01/24/20: Accuity will continue to monitor		
Hardware and	2019.09.1102	IN/A	IN/A	Officieal Moco foles and responsibilities.	support processes should be established prior to go-live of the Content	IN/A	N/A for pressir findings.	IVA for prelim infulligs.	Open	this preliminary concern as the plan for M&O is developed.		
Integrations					Management and Case Management solutions. Currently, the roles and							
					responsibilities within DLIR Electronic Data Processing Systems Office					02/21/20: DataHouse clarified that the Content Management and Case		
					(EDPSO) team and any shared responsibilities with ETS and DataHouse are unclear. This will become more critical for DLIR as the project approaches					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		
					the go-live dates. M&O resource requirements need to be quantified and					knowledge transfer plan to prepare DLIR for turnover.		
					resources either identified within the existing DLIR EDPSO team or additional							
					resources acquired. This should be done with sufficient time for training and					03/27/20 and 04/24/20: No updates to report.		
					knowledge transfer so that M&O resources are in place at go-live. The					A		
					Project Management Plan (version 1.3) shows the DataHouse Operations Documentation deliverable with a target completion date of December 26,					Accuity will continue to monitor this preliminary concern as the plan for M&O is developed.		
					2019 for Content Management and October 6, 2020 for Case Management.							
					DLIR EDPSO is in the process of assessing eCMS support resources.							
					Accuity will continue to monitor this preliminary concern as plans for M&O are	•						
					finalized.							
Data Conversion	2019.09.IT03 Prelim	N/A	N/A	Unsupported IBM Lotus Notes Domino	The current case management system, IBM Lotus Notes Domino, is no	N/A	N/A for prelim findings.	N/A for prelim findings.	Open	10/25/19, 11/22/19, 12/20/19, 01/24/20, and 02/21/20: DLIR is working with the	9	
				Case Management.	longer supported. The product was sold by IBM to HCL Technologies, an				1	State of Hawaii State Procurement Office (SPO) and the vendor to get the		
					Indian IT company. DLIR's licenses for the product ended in June 2019 and					maintenance service required.		
					DLIR is unable to renew the licenses as HCL Technologies is not a State Procurement Office (SPO) compliant vendor. This system will be replaced by	,				03/27/20: No updates to report.		
					the eCMS Case Management solution which is scheduled to go-live in	1				onernes. The appealos to report.		
					November 2020. Any major issues with the current system may impact the					04/24/20: DLIR and DataHouse's evaluation of options for COVID-19 response:	s	
					data conversion process leading up to the go-live date and potentially the					should include consideration of Lotus Notes maintenance support if the Phase 1		
					overall system development. DLIR has identified this as a risk but has not yet					go-live date and DLIR's reliance on Lotus Notes is extended.		
					assigned a risk owner or finalized the risk mitigation plans. Accuity will continue to monitor this preliminary concern until the risk mitigation plan is					Accuity will continue to monitor this preliminary concern.		
					finalized.					producty was contained to monitor this presentating concern.		
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ASSESSMENT	EINDING ID - EVOE	ORIGINAL	CURRENT	FINDING	ANALYOID	DECOMMENDATION IS	PECOMMENDATION	CURRI EMENTAL RECOMMENDATION	FINDING	FINDING CTATUS LIDDATE	01 0050 0455	CLOSUPE PEACON
CATEGORY	FINDING ID	SEVERITY High	SEVERTY Moderate		The eCMS Project does not have a project charter that would have helped to formalize the project goals, target benefits, and success metrics at the start of the project. Based on informal recommendations made by Team Acculy during the nittal 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.		Formalize measurable goals and success metrics in a project charter.  Collect baseline and project performance data.  Use performance data to monitor or evaluate project or contractor performance.	SUPPLEMENTAL RECOMMENDATION  -Consider financial, nonfinancial, tangible, and intangible metrics such as operational Key Performance Indicators (KPIs), customer or employee 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 DLIR 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.	Open Open	EINDING STATUS UPDATE  09/20/19: Accuity 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: Progress on the success metrics stalled due to shifting priorities and changes in DLIR project resources.  Accuity will continue to evaluate the collection and monitoring of success metrics data.	CLOSED DATE	CLOSURE REASON
Project Organization and Management	2019.07.PM02 Risk	High	High	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 contract 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 siliced workstreams. This has also led to ineffective communications within the project team (refer to finding 2019.07.PM06).	2019.07.PM02.R1  2019.07.PM02.R2	Clarify roles and responsibilities between DLIR and DataHouse.  The DataHouse Project Manager should work onsite at DLIR through project completion to improve DLIR and DataHouse project team cohesion.	-Consider revising project management plans to identify the person responsible and list specific responsibilities for each project management areaConsider the need to include an outline of DLIR and DataHouse roles and responsibilities in a contract modification (refer to finding 2019.07.PG03).	Open	09/20/19: Accuity 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 2019.07.PC03, 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 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 DLIR in Case Management development but DLIR is not sufficiently included in DataHouse's data conversion, integrations, and testing activities in order to be able to adequately prepare for DLIR's part in the process or be able to identify any risks or issues from a business/user perspective.  1/20/19: The Scrum methodology employed for the Case Management development promotes colaboration, open communication, and transparency between DLIR and DataHouse. Increased collaboration or at least understanding of other aspects of the project is still needed.		

ASSESSME CATEGORY	4G ID T	YPE S	RIGINAL EVERITY	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
								Include DLIR in project activities and communications to increase DLIR and DataHouse project team cohesion.			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 DLIR's understanding of and ability to properly prepare for upcoming tasks particularly for Content Management. DLIR 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, DLIR project resources were unavailable to work on the project and DLIR cancelled all project meetings effective March 18, 2020. DataHouse continues to do what they can, however, project execution is impacted without DLIR participation or collaboration.  04/24/20: As the DLIR Project Manager was temporarily reassigned, weekly project status meetings are still on hold. Some of the Case Management sprint meetings resumed with a few DLIR project resources. A few project status meetings are tentatively scheduled for May 2020.  Accuity will continue to evaluate the clarity of roles and responsibilities and observe the effectiveness of project organization.		

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
Project	2019.07.PM03 Issue	Moderate	High	The current deliverable review and	DataHouse prepares project deliverables and submits to DLIR for review. As	2019.07.PM03.R1	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). Although
Organization and				acceptance process has contributed to project delays and resulted in the	DLIR has had limited involvement in project activities or the preparation of		criteria.	(refer to finding 2019.07.IT05), in a contract amendment (refer to finding 2019.07.PG03), or in Deliverable Expectation Documents (DED).		Accuity observed DataHouse and DLIR meetings to review draft deliverables and
Management				acceptance of deliverables that do not	deliverables (refer to finding 2019.07.PM02), DLIR does not have an understanding of the purpose of the deliverables or the thought process and			2019.07.PG03), or in Deliverable Expectation Documents (DED).		DLIR has expressed greater satisfaction in the deliverable review and acceptance process, the process to evaluate deliverables against established
				meet industry standards.	factors that were considered in developing the deliverables. This has led to	2019.07.PM03.R2	Hold joint DLIR and DataHouse			acceptance criteria has not yet been implemented. Additionally, the impact of
				,	protracted review periods and acceptance of deliverables that do not meet		deliverable review meetings to walk			deliverables on project schedule, roles and responsibilities, design, migration,
					industry standards (refer to finding 2019.07.PM10). A lack of a clear		through deliverables.			etc. is not consistently clear.
					deliverable listing or acceptance criteria (refer to finding 2019.07.PG03), a lack of a quality management process and resource to verify deliverables	2019.07.PM03.R3	Implement formal deliverable review	Include both the scope validation process for acceptance and the quality		10/25/19, 11/22/19, 12/20/19, and 01/24/20: No updates to report.
					(refer to finding 2019.07.IT05), and over tasked project managers (refer to		and approval processes.	control process for correctness (refer to finding 2019.07.IT.05).		10/20/13, 11/22/13, 12/20/13, and 01/24/20. No appares to report
					finding 2019.07.PM14) also contribute to an ineffective deliverable review			<ul> <li>Include an evaluation of deliverables against acceptance criteria and requirements documentation.</li> </ul>		02/21/20: DataHouse scheduled a deliverable review meeting for the AWS
					and acceptance process. The delay in the approval of deliverables has been	ı		DLIR should understand how each deliverable impacts the project		Environment Design document but a meeting of the DataHouse Test Plan was
					cited by the eCMS Project team as one of the reasons the Phase 1 go-live dates were extended. Based on informal IV&V recommendations.			schedule, roles and responsibilities, and ultimately the quality of the		not scheduled.
					DataHouse and DLIR started to implement joint deliverable review meetings			technical solution and success of the project.		03/27/20: A meeting was scheduled for early March to discuss and review
					beginning June 2019.					DataHouse's Test Plan, however, this meeting was cancelled due to COVID-19.
										04/24/20: Accuity increased the severity rating from Level 2 (Moderate) to Level
										1 (High) and reopened the 2019.07.PM03.R2 recommendation. DLIR's review and approval of DataHouse's AWS Environment Design document and Test
										Plan are still pending. Delays in DLIR's review and approval of DataHouse
										deliverables may cause delays in the completion of the overall project, as was
										previously experienced. DLIR and DataHouse's evaluation of options for COVID-
										19 responses should include consideration of DLIR project resources to perform
										timely deliverable reviews.
										Accuity will continue to evaluate the effectiveness of the deliverable review and
										acceptance process.
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)		Implement daily touch point meetings between DataHouse and DLIR		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
wanagement				Team contributed to DLIR's incomplete	did not occur as planned as the weekly project status meetings did not begin until April 2019 and the first progress report was not completed until	'	Project Managers.			touch points through various methods (in-person meetings, Go To Meetings,
				understanding of the technical solution,	February 2019. Despite the commencement of regular project		Project Managers.			email, phone, and text). Furthermore, as noted above at finding 2019.07.PM02,
				potential risks, and upcoming project	communications, misunderstandings and miscommunications between the					DLIR has been included in more DataHouse meetings including sprint planning,
				activities.	DataHouse and DLIR project teams continued to occur. DLIR project team					reviews, and retrospectives.
					members had a piecemeal understanding of the technical solution (refer 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 filtered
					There has also been a lack of communications regarding the upcoming build stage activities (refer to finding 2019.07.PM05).	1				for DLIR resources only and sorting by start dates).
					stage activities (refer to finding 2019.07.PM05).					11/22/19, 12/20/19, and 01/24/20: No updates to report.
					The IV&V recommendations made at 2019.07.PM02.R2 and					
					2019.07.PM02.R3 regarding DataHouse working on-site and including DLIR	1				02/21/20: Accuity increased the severity rating from Level 2 (Moderate) to Level
					in project activities will also address this finding. Below are additional					1 (High) as immediate improvements are needed particularly for Content
					recommendations to further improve project team communications.					Management to increase the effectiveness of 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.
									1	
1									1	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.
1									1	04/24/20: Weekly project status meetings and plans for new meetings between
1									1	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
Ì									1	resources.
									1	Accuity will continue to evaluate the effectiveness of these project communication channels.
										Communication originals.
									1	
										<u> </u>

ASSESSMENT		ORIGINAL	CURRENT					FINDING	
CATEGORY Communication Management	EINDING ID TYPE 2019.07.PM07 Risk	SEVERITY Moderate	SEVERITY Moderate	The lack of tailored project communications for all impacted stakeholders may reduce user adoption and stakeholder buy-in.	Communications management is a part of the Project Management Plan developed by DataHouse, however, the plan is not comprehensive and primarily reflects project meetings, status reporting, and issue reporting. The approved Project Management Plan (version 1.2) was updated to include a communication matrix that outlines additional communication activities. While this is an improvement over the previous version, the latest draft plan still does not provide adequate details regarding communication activities as all stakeholders are grouped together for three broad communication methods and activities.  A formal communication requirements analysis was not conducted to determine the information needs of internal and external project stakeholders. There is not a process to ensure the timely distribution of project information and there is no dedicated role or adequate resources assigned to communication activities have occurred haphazardly. The limited communication activities is nosemwhat mitigated as the DLIR Project Manager involves internal stakeholders in project-related meetings and working sessions. However, this informal approach does not include all internal stakeholders or any external stakeholders.		RECOMMENDATION Further refine communication management plans.	Segment stakeholders into groups by communication needs such as by department unit (e.g., Hearings, Enforcement, or Records and Claims), by position (e.g., manager, supervisor), or internal and external (e.g., claimants, insurance agencies).  **Consider the list of communication methods listed in DataHouse's BAFO.  **Due to limited DLIR resources available for communication activities, the specific groups and communication activities should be prioritized to focus resources most efficiently.  **Update the project schedule for communication activities and assigned resources (refer to finding 2019.07.PM14).	O9/20/19: Acculty decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). DLIR plans to hold two sessions on October 1, 2019 to update the DLIR internal stakeholders (including neighbor island staff) on what has been happening for the last year on the eCMS Project including a brief demo by DataHouse of how the new system will work and look. DLIR also plans to update the DLIR website to include project information that is accessible by internal and external stakeholders.  10/25/19: DLIR hedls two sessions for internal stakeholders to provide an update on the project progress and timeline. DLIR worked on plans to update the on the project progress and timeline. DLIR worked on plans to update the website and draft the carrier newsletter to include project updates. As noted above at finding 2019 0.7; PM05, the Scrum methodology should be communicated to all stakeholders who will be participating in sprint activities.  11/22/19: Accuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate) as plans to update the website and send out a letter to carriers regarding upcoming changes were not completed as expected. It is important for communications with impacted stakeholders to be executed timely.  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 aCMS 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: 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 c
Organizational Change Management	2019.07.PM08 Risk	Moderate	Moderate	Missing key OCM steps or activities may not identify pockets of resistance or adequately enable individual change.	There is no formal CCM 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 DLIR Project Manager's 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: Acculty 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 asmiple 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, however, 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.  Accuity will continue to evaluate the OCM approach and monitor the change readiness of project stakeholders.

ASSESSMENT		ORIGINAL	CURRENT					FINDING		
CATEGORY	FINDING ID 2019.07.PM09 Issue	ORIGINAL SEVERITY High	CURRENT SEVERITY High	Risks and issues have not been clearly identified, tracked, or reported resulting in the lack of understanding of potential impacts across project team members and there are no mitigation plans to adequately address them.	project to date with no history of any risks being closed. DLIR project 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 DHS (refer to finding 2019.07.PMO4 and 20109.07.ITO1) was never identified and the kisk identified in the Content Management Conversion and Migration (version 0.0) document (refer to finding 2019.07.IT.04) was not included in the risks and issues log, indicating an ineffective risk and issue management process. Based on information IV&V recommendations made during the assessment period, both DLIR and DataHouse have communicated a plan to start identifying and logging risks jointly not DataHouse's log and reviewing them	RECOMMENDATION  Formalize the Risk and Issue Management process.  Conduct regular meetings to discuss project risks and issues.	*Include DataHouse and DLIR and, on occasion, the executive steering committee (refer to finding 2019.07.PC02).  *Include DataHouse and DLIR and, on occasion, the executive steering committee (refer to finding 2019.07.PC02).  *Perform a detailed review of new items, status of open items, risk/issue owners, and mitigation plans.	FINDING STATUS Open	PINDING STATUS UPDATE  09/20/19: Acculty decreased the severity rating from Level 1 (High/Critical) to Level 2 (Moderate). A DLIR Risk Manager was assigned in August 2019 and 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 monthly Executive Steering Committee (ESC) meetings. The risk management process needs to be further refined to combine the DataHouse and DLIR logs into one source, assign risk owners, and develop mitigation or remediation plans for each risk or issue.  10/25/19: Risks were discussed at the weekly status meetings and monthly ESC meetings. The DLIR Project Manager and DLIR Risk Manager also meet weekly to review and discuss the risk log. The risk management process improvements noted as of 9/20/19 are still open.  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: Acculty 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 project risk exposure.  04/24/20: Discussions of risks at weekly project status and monthly ESC meetings were astill on hold. Some of the meetings are tentatively scheduled to resume in May 2020.	CLOSURE REASON
Scope and Requirements Management	2019.07.PM10 Issue	High	Moderate	The Content Management and Case Management requirements documentation is incomplete.	The requirements for both Content Management and Case Management have already been approved, however, the requirements are incomplete (e.g. do not incorporate all contract requirements and all three project phases) and the descriptions in the Requirements Traceability Mark (RTM) lack sufficient detail. The current RTM also does not link operational and project objectives to design artifacts. Furthermore, the RTM does not include non-functional requirements, including compliance with Hawaii Revised Statues, Hawaii Administrative Rules and security requirements.  Requirements management is a part of the Project Management Plan developed by DataHouse, however, the plan is not comprehensive. The Project Management Plan (version 1.2) was updated to include additional details regarding requirements management. While this is an improvement over the previous version, the latest draft plan still does not provide adequate details regarding the requirements prioritization process, the traceability structure, and how requirements will be reported.  As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation are complete and meet industry standards and best practices. Requirements documentation should be revised and requirements management processes should be improved prior to moving forward in the project.	Revise Content Management and Case management requirements documentation and RTM.	-Ensure requirements follow SMART (specific, measurable, actionable, realistic and time bound) guidelines.  -Ensure requirements documentation include all requirements listed in the DataHouse contract, all requirements identified during the stakeholder sessions, and for all three phases of the eCMS Project.  -Ensure requirements include functional, performance, process, nonfunctional, security, and interface requirements.	Open	09/20/19: Accuity decreased the severity rating from Level 1 (High/Critical) to Level 2 (Moderate). The RTM has been updated to include more detailed and specific requirements and user stories from the Case Management and Content Management development teams. DataHouse is in the process of enhancing their RTM to crosswalk and merge all requirements into one master document including all contract requirements. With the staggered development of the Content Management and Case Management solutions and the literative nature of Scrum methodology, additional requirements will continue to be identified throughout Case Management development which could have implications to Content Management. As noted above at finding 2019.07.PM05, the process for approving and prioritizing requirements still needs to be set. Formalizing the process for managing requirements remains key.  10/25/19: DataHouse provided training to the DLIR Product Owners that included how requirements are managed in the development sprints (refer to 2019.07.PM05) and clarified responsibility for security requirements (refer to 2019.07.PTO). Contract requirements are added to the RTM, however, those requirements were not traced to the requirements subsets used by the development teams for completeness.  11/22/19 and 12/20/19: Case Management requirements are refined through user stories during each sprint. No other significant updates regarding contract, integration, or security requirements to report.	

ASSESSM CATEGOR	INDING ID	TYPE	ORIGINAL SEVERITY	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
							2019.07.PM10.R2	processes.	Ensure that there is a clear understanding between DataHouse and DLIR regarding who is responsible for identifying and tracking different types of requirements.  -Develop a process for prioritizing and reporting requirements.  -Develop a process for tracing requirements to specific system design 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.  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.  04/24/20: 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.  Accuity will continue to evaluate the requirements documentation and processes.		

ASSESSMENT ORIGINAL	CURRENT						FINDING			CLOSURE REASON
CATEGORY PHONG ID TYPE SEVENTY Cost, Schedule and Resource Management  Risk High	SEVERITY High		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	2019.07.PM12.R2	Prepare a comprehensive project budget and a schedule of long-term operational costs (e.g., licenses, 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.	SUPPLEMENTAL RECOMMENDATION	Open Open	SINDING STATUS UPDATE	CLOSED DATE	E CLOSURE REASON
Cost, Schedule and Resource Management 2019.07.PM13 Risk High	High	Inadequate schedule management practices may lead to project delays, missed project activities, unrealistic schedule forecasts, or unidentified causes for delays.	The Phase 1 go-live dates were delayed a few times since the start of the project with the Content Management go-live delayed five months and the Case Management go-live delayed three months. Reasons for the delay provided by the CMS Project team included additional time for requirements gathering, some Phase 2 work that was moved up to Phase 1, staff vacations during the holidays, time for the DLIR Project Manager to write the RFP for the IV&V contract, and delayed procurement of the scanners. Although there are reasonable explanations for some of the 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, COM, BPR, and quality assurance (refer to findings 2019.07.PMOS, 2019.07.	2019.07.PM13.R2	Document and approve revisions to project schedule deliverables, milestones, and go-live dates in accordance with the Project Management Plan.  Refine the project schedule with details of tasks, durations, phases, and assigned resources.  Prepare regular schedule reports and schedule variance analyses for management and the executive steering committee.		Open	09/20/19: Accuity 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 kientified 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, Accuity is unable to assess the over-allocation 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 or. 1107). Any DLIR tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DLIR (refer to finding 2019 or. 1707). Any DLIR tasks that are necessary for DataHouse tasks should be included in the project schedule and regularly communicated to DLIR (refer to finding 2019 or. 7107). Any DLIR tasks that are necessary for DataHouse tasks should be included in the project schedule management plan (refer to finding communicated in the project schedule management plan (refer to finding communicated in the project schedule management issues noted as of 9/20/19 continue to limit the project sability to improve project performance and increase adherence to revised timelines.  11/22/19 and 12/20/19: No updates to report. The Content Management go-live date has not yet been adjusted.  11/22/19: DataHouse added more detailed data conversion tasks to the project sched		

CAT	SSMENT	FINDING ID TYPE	ORIGINAL SEVERITY	CURRENT	FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING	FINDING STATUS UPDATE CLOSED DATE CLOSURE REASON
Res	Schedule and urce urce gement	2019.07.PM14 Issue	Moderate	High	Inadequate assigned project resources may lead to project delays, reduced project performance, or turnover of project resources.	Team Acculty was unable to evaluate resource workloads based on the project schedule information (refer to finding 2019.07.PMI3), however, based on observations of the eCMS Project team, the DataHouse and DLIR Project Managers appear to be over-tasked. The DLIR Project Manager is the only full-time DLIR employee assigned to the eCMS Project and understandably does not have time to perform all of the tasks to properly manage the project or represent DLIR during project activities. DLIR should increase participation in design and development activities (refer to finding 2019.07.PMI02) but would not be able to with the current assigned resources.  Resource management is included in the Project Management Plan and states that "resources will be provided based on project needs. This will be reviewed with DCD on a quarterly basis." The Project Status Reports prepared by DataHouse do not not any resource needs under the Staffing (Needs, Anticipated Changes) section. However, Team Acculty noted that the DataHouse Quality Assurance Lead has not been assigned (refer to finding 2019.07.1705). DataHouse is also considering adding a project		Reevaluate project resource needs and acquire additional resources.	-Perform project schedule updates for the alternative solution (refer to finding 2019,07.T01) and missing tasks (refer to finding 2019,07.PM13)Ensure resource levels and skill sets align to assigned tasks.	Open	09/20/19: 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: Acculty increased the severity rating from Level 2 (Moderate) to Level 1 (High) 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.
						coordinator resource to assist with meeting minutes and getting deliverables out.	2019.07.PM14.R2	Prepare regular resource reports for management and the executive steering committee.	-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).		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 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: Many key DLIR resources and a few DataHouse resources were pulled to help with the higher priority UI Division's operations. Additionally, DLIR's plans to procure necessary project resources for upcoming project activities were put on hold due to COVID-19. The timing of when DLIR project
											resources will be available again and additional resources procured is unknown.  04/24/20: Almost all of the DLIR project resources are still unavailable, including the DLIR Project Manager, and plans to procure additional resources are still on hold. DLIR and DataHouse's evaluation of options for COVID-19 responses should include careful consideration of project resources.  Accuity will continue to assess the adequacy of project resources.
Hard Integ	ware and a market a	2019.07.IT02 Risk	High	Moderate	An unclear interface solution may impact the design process and require additiona effort to correct.	DLIR on May 6, 2019. Case Management is currently in the design phase and design documents have not been provided. Although the Content Management design document was completed and Case Management design is in progress, the exact interface solution has not been defined. The interfaces between Content and Case Management are integral to the success of the project and should be fully defined in design documents in accordance with industry standards.  Due to the recent DHS development, the interface options will need to also be researched and analyzed depending on the alternative solution selected. However, even prior to this development, DLIR did not have a clear understanding of the interface solution as well as the complete technical solution. DLIR still had questions about the interface solution regarding the technology, connectivity, batch vs. real-time, security, cost and maintenance of the proposed interface solution between Salesforce and FlieNet. The interface solution should be clearly analyzed, documented, mapped to project requirements, and communicated to DLIR.	2019.07.IT02.R2 2019.07.IT02.R3	Update the project schedule to define resources assigned to each of the interface-related activities.  Verify the proposed interface solution will work.		Open	09/20/19: Acculty decreased the severity rating from Level 1 (High) to Level 2 (Moderate). DataHouse included a narrative about the interface components in the Case Management Design Document. Furthermore, DataHouse organized two demos of 1) the Salesforce application using an interfaceIAPI to get to a web service, and 2) another web service using an iFrame and IBM ICN to get to FileNet.  10/25/19: DataHouse refined the interface design details in the Case Management Design Document (version 1.1).  11/22/19, 12/20/19, 01/24/20, 02/21/20, 03/27/20, and 04/24/20: DataHouse refined details in the integrations specification schedule. Acculty does not have full nisight into integration development activities and we are unable to provide a complete update on integration development progress.  Acculty will continue to evaluate the interface solution as additional details are finalized and as development progress using the actual solution components is made.
Qua Man Test	gement and	2019.07.IT05 Risk	Moderate	Moderate	Not having an approved quality management plan and assigned quality assurance resources may impact the quality of project deliverables.	The Quality Management Plan (version 0.1) was drafted by DataHouse on June 32, 2019 but was not yet approved by DLIR. The draft plan did not include quality metrics, quality standards, or quality objectives of the project and does not describe how quality control results will be documented or reported. Additionally, the Quality Assurance Lead identified in DataHouse's BAFO is not assigned to the project learn at this time.  As it is almost eleven months into the eCMS Project and several deliverables were already approved and many are pending approval, it is important for a quality management plan to be formalized and resources assigned to perform quality management activities.	2040 07 1705 P2	Finalize the quality management plan.  Perform quality management activities on previously approved or submitted deliverables.	- DataHouse and DLIR should collaborate and agree on the quality management processes and metrics that will best serve this project -Include quality standards or reference to specific criteria (refer to finding 2019.07.PM03) Update the project schedule to assign quality assurance resources (refer to finding 2019.07.PM14).	Open	109/20/19: Acculty has kept the severity rating as Level 2 (Moderate). The DataHouse Project Manager communicated that DataHouse's quality management responsibilities are specific to deliverables and testing. As such, Acculty will work with DLIR to understand what additional quality management activities and metrics need to supplement the DataHouse quality management plan.  10/25/19: DataHouse clarified that the DataHouse Quality Management Plan deliverable does not need DLIR approval as it is not a contract deliverable and is just to communicate the DataHouse approach to quality management to DLIR. The Case Management quality assurance testing was performed for Epic 1. DLIR is working on the DLIR quality management approach.  11/22/19, 12/20/19, 01/24/20, 02/20/20, 03/27/20, and 04/24/20: No updates to report. Acculty does not have access to the project team's testing resources and we are unable to provide an update on testing activities.  Acculty will continue to evaluate the quality management plan and activities.

ASSESSMENT			ORIGINAL	CURRENT					FINDING			
CATEGORY Configuration Management	2019.07.IT06	Risk	Moderate Moderate	Moderate Moderate	A lack of a configuration management plan may impact the performance and quality of the system if unauthorized or untested changes are promoted between environments.	plans to prepare a configuration management plan by October 11, 2019. Based on the current project plan, the eCMS Project was supposed to begin	RECOMMENDATION  Develop a formal configuration management plan.	SUPPLEMENTAL RECOMMENDATION  -Ensure the plan is in accordance with IEEE 828-2012 – Standard for Configuration Management in Systems and Software Engineering and includes the configuration management planning process, configuration dientification process, configuration adulting process, interface control process, interface control process, and release management process.  -DataHouse and DLIR should collaborate and agree on the configuration management plan purposes and processes that will best serve this project.	Open Open	PRODICE STATUS UPDATE  109/20/19: Acculty has kept the severity rating as Level 2 (Moderate). Although Acculty obtained a better understanding of configuration management through interviews of the Content Management and Case Management development teams, DataHouse is still in the process of finalizing and documenting a configuration management approach.  10/25/19: No updates to report.  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/hetwork) is still not clear. Additionally, a comprehensive DataHouse team configuration management 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.  01/24/20, 02/20/20, 03/27/20, and 04/24/20: No updates to report.  Accuity will continue to evaluate the configuration management plan and approach.	CLOSED DATE	CLOSURE REASON
Security	2019.07.1707	Risk	Moderate	High	Not having an approved security management plan in place may impact th security and privacy of the data.	e on June 3, 2019 but was not yet approved by DLIR. Based on the current project plan, the cMS 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 improperly 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.	Ensure the security management plan meets specific standards.  Finalize the security management plan.	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.	Open	09/20/19: Accuity has kept the severity rating as Level 2 (Moderate). The security management plan has not yet been finalized and also needs to be updated to include AWS security plans (from finding 2019.07.I701). DataHouse plans to complete the security management plan updates in October 2019.  10/25/19: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) due to the need for a plan or controls to be in place and the impact that a delay in implementing the plan or controls would have on project activities including data conversion, training, and testing. DataHouse clarified that the submitted Security Management Plan only covers the DataHouse project team. DataHouse also clarified that they are only responsible for application security which they intend to document in an Application Security Management Plan and that DLIR is responsible for network security, security requirements, and security controls. DLIR does not currently have formal security policies but plans to develop policies in early 2020. DLIR also plans to work with ETS to identify minimum security requirements to allow the eCMS Project to progress as the formal policies in early 2020. DLIR also plans to work with ETS to identify minimum security requirements to allow the eCMS Project to progress as the formal policies are developed. Necessary security controls should be decided on and implemented prior to data migration and task dependencies related to security should be identified in the project schedule (refer to finding 2019.07.PM13). DLIR should also consider security controls for system data held by DataHouse.  11/220/19. ETS provided some guidance regarding AWS control tower and cloud security framework considerations. DLIR is working with EDPSO and ETS to identify security requirements and evaluate security design options.  12/20/19. DLIR is first identifying security requirements (refer to finding 2019.10.11702). No updates to report on the security management plan.  01/24/20: DataHouse clarified that security wi		

ASSESSMENT			ORIGINAL	CURRENT			DECOMMENDATION IN			FINDING	ENDRUG OF EUR URBARE		01 001/22 2210011
CATEGORY Project Organization and Management	2020.02.PM01	Positive	SEVERTY	SEVENTY	development team works very collaboratively with DLIR and demonstrates commitment to continuous 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 DLIR subject matter experts (SMEs) to ensure user and business needs are thoroughly understood. "Encouraged DLIR SMEs to resuly 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 DLIR.  "Listened to feedback from DLIR and timely implemented improvements to project processes (e.g., user stoy approval process)."  "Demonstrated genuine commitment to the success of the project.  This approach has helped DLIR 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	FINDING STATUS UPDATE NJA	CLOSED DATE 3/27/2020	Closed as this is a positive finding.
System Software, Hardware and Integrations	2019.09.IT01	Positive	NA	N/A	response to issues and risks minimized impact and further delays to project development.		N/A	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	engaged and plays an active and visible 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 for positive findings.	N/A for positive findings.	Closed	N/A	9/20/2019	Closed as this is a positive finding.
Governance Effectiveness	2019.07.PG02	Risk	Moderate	N/A	committee and change control board may limit the effectiveness of project	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: Acculty decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). The eCMS Executive Steering Committee (ESC) was assembled and held its 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 DLR and ETS strategic objectives. The thresholds for decisions that require committee attention were also established.	10/25/2019	Closed as the eCMS ESC was formalized.

ASSESSMENT CATEGORY	FINDING ID	TYPE	ORIGINAL CURR	ENT FINDING	ANALYSIS	RECOMMENDATION ID	RECOMMENDATION	SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
Governance Effectiveness	2019.07.PG03	Risk	Moderate N/A	The unclear DataHouse contract terms may limit objective evaluation of contract performance and contract fulfillment.	The procurement of the System Integrator (SI) for the eCMS Project was riperformed 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 (refer to finding 2019.07.PMO9), requirements tracking (refer to finding 2019.07.PMO1), and communications (refer to finding 2019.07.PMO1). Additionally, the lack of specific acceptance criteria has led to approval of deliverables that do not meet industry standards (refer to finding 2019.07.PMO3). 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 es expectations for deliverables and will assist DLIR to ensure that contractors fulfill obligations to the standard of quality that is required.	2019.07.PG03.R1	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 for finding 2019.07.PM01), risk and sixue log (refer to finding 2019.07.PM09), and testing documentationConsider including acceptance criteria based on industry standards. For example, the acceptance criteria could be compliance with Institute of Electrical and Electronics Engineers (IEEE) 29148-2018 for a requirements traceability matrix or compliance with IEEE 829 for test documentationConsider 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).		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 incorporated 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.PGO4 Success Metrics, 2019.07.PMO2 Project Organization, 2019.07.PMO3 Deliverable Review, and 2019.07.ITO5 Quality Management findings.
Governance Effectiveness	2019.07.PG04	Risk	Low N/A	The lack of guidelines, checklists, and shared project assets may reduce projec performance and efficiency.	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 Hawai's 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	2019.07.PG06	Risk	Low N/A	Failure to align statutes with the eCMS Project modernization objectives may reduce the operational improvements tha are achieved.	The eCMS Project's primary modernization objective is to move to a paperiess 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 feetback 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	109/20/19: 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 filings.  DLIR plans to draft statutory changes to mandate electronic filing 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 filing.	9/20/2019	Closed as DLIR has a plan to align statutes with eCMS Project objectives.
Project Organization and Management	2019.07.PM01	Positive	N/A N/A	The DLIR Project Manager is a dedicated project lead who works collaboratively will internal stakeholders.	The DLIR Project Manager is hardworking and has continually demonstrated hadedication 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.PMO7 and 2019.07.PMO8). However, the DLIR Project Manager is the only full-time DLIR employee assigned to the cMS Project and there is not a sufficient amount of project resources (refer to finding 2019.07.PM14) to properly manage the project.		N/A for positive findings.	N/A for positive findings.	Closed	NIA	9/20/2019	Closed as this is a positive finding.
Project Organization and Management	2019.07.PM04	Issue	High N/A	BAFO without obtaining a written letter of intent between DataHouse and DHS.	between DHS and DLIR. As the proposed solution is no longer viable due to	2019.07.PM04.R2 2019.07.PM04.R3	Finalize the MOU to leverage DHS's enterprise licenses for FileNet and Datacap.  DLIR 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. DLIR received a draft from DHS on September 1, 2019 and it was sent to the Attorney General's office on September 17, 2019. Accoult has observed that DLIR has led the contract discussions and negotiations with AWS.		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 conflure to be monitored under the 2019.07.PM13 Schedule Management finding.
Project Organization and Management	2019.07.PM05	Risk	Moderate N/A	A lack of clarity on DataHouse's development methodology may not allow or adequately prepare stakeholders to participate readily.	DataHouse is using a modified Agile development methodology that is referred to as "Water-Scrum-Fall". This is a combination of the waterfall and Agile methods that defines the full set of requirements at the beginning but uses Agile user stories and spirits 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 DLIR project team and stakeholders regarding the Scrum methodology or the roies and responsibilities they have during this stage of the project.		Formalize an approach for executing Scrum phases.	-Consider industry best practices for Agile methodologies such as retrospectives, daily standups, burndown charts, and frequent user demonstrations and feedbackEstablish the backlog preparation and refinement processEstablish virtual conferencing tools and communication protocols for geographically distributed team membersSet the number and length of the sprintsUpdate 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)DLIR should be included in project team activities (refer to finding 2019.07.PM02).	Closed	09/20/19: Accuity has kept the severity rating as Level 2 (Moderate). Although DataHoluse 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.		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 I	ID TY	PE	ORIGINAL SEVERITY	CURRENT SEVERITY	FINDING	ANALYSIS	RECOMMENDATION ID		SUPPLEMENTAL RECOMMENDATION	FINDING STATUS	FINDING STATUS UPDATE	CLOSED DATE	CLOSURE REASON
							<ul> <li>-Many of the DataHouse project team members work remotely and are unable to work on-site.</li> </ul>	2019.07.PM05.R2	Communicate the approach for executing Scrum phases to all team members and impacted stakeholders.					

ASSESSMENT	EINDING ID	TVDE	ORIGINAL	CURRENT	EINDING	ANAL VSIS	PECOMMENDATION ID	PECOMMENDATION	SUDDI EMENTAL DECOMMENDATION	FINDING	EINIDING STATUS LIDDATE	CLOSED DATE	CLOSUPE PEASON
Business Process Reengineering	2019.07.PM11	Risk	Moderate	N/A		There is no formal plan for BPR activities. DataHouse's approach to BPR was to start with the current state process maps, walkfrrough the process with stakeholders, and make updates to the processes maps. As a result of this process. DataHouse provided future state process 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; greater response times to request by users, less error seported 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 DLIR (refer to finding 2019.07.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 2019.07.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.		identify and track BPR opportunities in a log.	This log should be used to plan BPR and design activities and to develop content for communications and training.	Closed	09/20/19: Accutly 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	2019.07.1701	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.	teasible 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. DLI Riv III need to identify resources to take on the monitoring and maintenance of the IBM FileNet infrastructure. As Datafrouse recommended in the BAFO the on-premise 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 school do provided with a technical analysis of various solution options that	2019.07.IT01.R2	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-tern, and faster implementation.  Consider the following websile which lists 20 competitive alternatives to IBM FleiNet for consideration: www. g2.com/products/ibm-flienet-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 FleNet is the most cost effective and efficient solution, renewal and ongoing costs of FleNet enterprise licensing  Considerations for impact on project schedule, time estimates, and resources include:  Acquisition, installation, and configuration of software and infrastructure  Ongoing maintenance and operations (patching, updates)  *Change and configuration management	Closed	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 Accuity and concluded that IBM FieNet was the best solution for this project, however, no formal analysis was prepared. DLIR approved AWS as the replacement hosting infrastructure solution effectively remediating the inability to leverage the DHS FieNet environment issue.  Accuity had also recommended that a comprehensive technical analysis be prepared on the replacement solution, however, DLIR 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.		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 2019.07.1707, AWS M&O roles and responsibilities under the new preliminary concern 2019.10.1102, 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.		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.IT01).	Closed	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 2017.07.PM10 requirements finding.

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Data Conversion	2019.07.IT04	Risk	Moderate		plan that is based on incomplete, inaccurate, and outdated requirements may impact the data migration design process and require additional effort to correct.	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 Data House 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 07.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. The 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.			Consider updates for revised requirements documents (refer to finding 2019.07.PM10).		09/20/19: Acculty 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 09/05/19 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: Acculty 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.		Closed as changes in system requirements do not appear to significantly impact the Content Management data conversion plan.