May 5, 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 http://ets.hawaii.gov (see “Reports”).

Sincerely,

DOUGLAS MURDOCK
Chief Information Officer
State of Hawai‘i

Attachment (2)
Disability Compensation Division’s Modernization Project – Electronic Case Management System (eCMS)

MONTHLY ON-SITE IV&V REVIEW REPORT
March 27, 2020 | Version 1.0

REPORT FINALIZED
May 1, 2020
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<td>05/01/20</td>
<td>Monthly On-site IV&amp;V Review Report updated to add additional documents in Appendix C. No comments submitted in Appendix F.</td>
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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 risk and issue management, resource management, and Amazon Web Services (AWS) architecture.

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 March 27, 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.

“Wherever there is change, and wherever there is uncertainty, there is opportunity!”

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

As of March 27, 2020

Only includes contracts. IV&V unable to validate total budget.

As of 3/15/20. IV&V unable to verify %.

*** Possible impacts to go-live dates due to COVID-19.
The COVID-19 pandemic has created uncertainty with respect to the timely completion of the project and its cost. DLIR’s priorities right now are the health and safety of employees and how to best support the community. As such, DLIR diverted project resources to support and alleviate the Unemployment Insurance (UI) Division’s overwhelmed operations that continues to receive an unprecedented number of unemployment claims. While DataHouse continues to do what they can, project work on DLIR’s side has almost come to a stop due to unavailability of DLIR project resources. Understandably DLIR’s focus is currently on priorities outside of the eCMS Project, however, the scope of this assessment is to evaluate the performance and risks specific to the eCMS Project. The unavailability of DLIR project resources and planned project procurements put on hold due to COVID-19 has impacted the execution of many project activities and processes. This is reflected in the downward trend of the overall criticality rating for the project as well as the downward trends in the criticality ratings for all three IV&V Assessment Areas and seven of the IV&V Assessment Categories.

From a project-focused perspective, it is critical for DLIR and DataHouse to come together to carefully assess the situation, evaluate alternative courses of action and contingency plans, and agree on how to best proceed. However, IV&V understands that other DLIR priorities may limit the project’s ability to respond effectively and timely.
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 each of the three major IV&V Assessment Areas. Seven IV&V Assessment Categories declined from the prior report. The overall rating primarily reflects the impact of the COVID-19 pandemic on the availability of DLIR project resources which in turn impacted the performance and execution of many project activities and processes.

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### PROGRAM GOVERNANCE

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<td>The eCMS Project Executive Steering Committee (ESC) did not convene during the month of March as many members were busy preparing for and addressing COVID-19 related issues outside of the eCMS Project (2020.03.PM01). The primary purpose of the ESC is to provide guidance, strategy, and support to the eCMS Project which is especially important in times such as these.</td>
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#### Benefits Realization

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<td>Benefits Realization</td>
<td>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. DLIR still needs to begin collecting and monitoring success metrics data (2019.07.PG05).</td>
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### Findings and Recommendations

#### Project Organization and Management

Due to COVID-19 and the need to prioritize the Unemployment Insurance (UI) Division operations, the DCD Executive Sponsor, the DLIR Project Manager, and other DLIR project resources were unable to continue actively performing or participating in key project management activities. Additionally, DLIR cancelled weekly project status meetings with DataHouse. 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 contingency plans, 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).

#### Scope and Requirements Management

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 shifting priorities. Documentation of requirements (e.g., security, performance, hardware, acceptance criteria) is still incomplete (2019.07.PM10) and traceability needs improvement (2019.10.PM01).
### Cost, Schedule, and Resource Management

Already constrained project resources (2019.07.PM14) were even further reduced as many key DLIR resources and a few DataHouse resources were understandably pulled to help with the higher priority UI Division’s unprecedented volume of unemployment claims. 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 will be procured is unknown. As such, the full extent of the impact of COVID-19 to project costs and the project schedule is currently indeterminable (2020.03.PM01). 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.

### Risk Management

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. Discussions of risks were paused as weekly project status and monthly ESC meetings were cancelled from early March (2020.03.PM01). DataHouse continues to log risks and issues, however, DataHouse and DLIR need to work together to assess the impacts of COVID-19. Remediating the risk management process deficiencies (2019.07.PM09) will help to reduce individual threats and overall project risk exposure caused by COVID-19.
## Project Management

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<td>The unavailability of DLIR project resources and cancelling of project meetings as a result of COVID-19 impacted communications between DataHouse and DLIR (2020.03.PM01). Additionally, plans to address the previously identified communication deficiencies (2019.07.PM06) by implementing new Content Management meetings in March were put on hold due to COVID-19. Improvements to stakeholder communications are also still needed (2019.07.PM07).</td>
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<td>No significant updates since the prior report. A structured OCM approach is still needed (2019.07.PM08). There is a lot of opportunity to leverage existing communication channels to execute OCM focused activities.</td>
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<td>Business Process Reengineering (BPR)</td>
<td>BPR improvements continue to be delivered through each Case Management development sprint.</td>
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<td>Significant training and knowledge transfer activities are not occurring at this stage of the project. The Content Management training dates are targeted for April 2020, however, the timing may now be impacted by COVID-19.</td>
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Finding #: 2020.03.PM01  Status: OPEN  Type: ISSUE  Severity: 1

**Title: COVID-19 IMPACTING PROJECT EXECUTION**

Finding: The COVID-19 pandemic is impacting project execution although the extent of the impact to project costs and the project schedule as well as the potential impacts to quality and project success are currently indeterminable.

Industry Standards and Best Practices: PMI PMBOK Chapter 11 explains that development, execution, and continuous monitoring of risk mitigation plans can help to reduce individual threats and overall project risk exposure.

Analysis: The COVID-19 pandemic has created uncertainty with respect to the timely completion of the project and its cost. Understandably, DLIR has diverted project resources to the UI Division to respond to the skyrocketing number of unemployment claims. This finding focuses on the impacts of COVID-19 specific to the eCMS Project.

The following is a summary of the related events and facts:

- All eCMS Project meetings were cancelled beginning March 17, 2020 following directives for non-essential state workers to stay home. Subsequent state-wide stay-at-home orders were put into effect through April 30, 2020.
- Currently only a few DLIR project resources, including the DCD Executive Sponsor and DLIR Project Manager, are still working in the office or remotely but time dedicated to project work has been drastically reduced due to competing priorities. DLIR ceased actively performing or 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 2019.07.PM02, 2019.07.PM06, 2019.07.PM09, 2019.07.PM12, 2019.07.PM13, and 2019.07.PM14 will also help to address this issue.

Recommendation: 2020.03.PM01.R1 – Explore possible ways to keep the project moving forward with available resources.
- Evaluate DLIR SMEs availability and bandwidth to work on the project.
- Consider reshuffling of user stories in current and upcoming sprints and how to best utilize available DLIR SMEs.

2020.03.PM01.R2 – Formulate a plan for how to respond to COVID-19 impacts to the project.
- DataHouse and DLIR, with input from the ESC, must come together to decide on how to best proceed.
- Carefully assess the situation and individually log all of the specific impacts to the project in the risk register, including direct and indirect impacts.
- Evaluate alternative courses of action and contingency plans for each specific impact identified.
- Consider adjusting the frequency of communications and reviews of response plans to support the pace of evolving circumstances.
### Findings and Recommendations

**JAN** | **FEB** | **MAR** | **IV&V ASSESSMENT CATEGORY** | **IV&V OBSERVATION** | **FINDINGS**
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| | | System Software, Hardware, and Integrations | DataHouse is doing their best to keep development moving forward, however, progress is limited without DLIR project resources. The Case Management development team kicked off Epic 3 Sprint 2 but the Scrum methodology employed by the team requires continuous DLIR collaboration and input. Key DLIR SMEs were almost entirely unavailable as a result of COVID-19 and all sprint meetings with DLIR were cancelled effective March 18, 2020. The Case Management development team is working with the information already obtained but will reach a point very soon at which DLIR participation will be necessary to avoid rework. It is currently unknown when DLIR project resources will be able to rejoin sprint meetings. The Content Management development team received the IBM enhancement request (Issue #7 DataHouse RAID Log September 2019) as scheduled. The setup of the Content Management Amazon Web Services (AWS) environments and installation of applications are delayed due to resolution of a pending issue (Issue #12 DataHouse RAID Log February 2020) and reassignment of a few DataHouse project resources to assist with higher priority and more urgent DLIR UI Division system support. Accuity is not reporting IV&V findings for the technical issues that DataHouse is already tracking, however, these technical issues are reflected in the criticality rating for this IV&V Assessment Category. The interface solution (2019.07.IT02) and the M&O roles and responsibilities (2019.09.IT02) still need further clarification. | | 0 | 2 | 0 |
### Findings and Recommendations

#### JAN FEB MAR IV&V ASSESSMENT CATEGORY

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<td>DataHouse provided a draft of the AWS design document (pending DLIR review and approval) of the high-level AWS architecture and services. DataHouse also plans to provide an AWS build document with more detailed design specifications and configurations. The Content Management and Case Management designs continue to be refined during the Build stage. Security design is covered in the Security IV&amp;V Assessment Category.</td>
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#### Technology

- **System Software, Hardware, and Integrations**
- **Design**
- **Data Conversion**
- **Quality Management and Testing**
- **Configuration Management**
- **Security**

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Content Management data conversion activities are still awaiting the DLIR AWS environments. DataHouse continued to perform Case Management data conversion activities, however, select tasks assigned to unavailable DLIR project resources need to be reassigned or reevaluated. DLIR’s plan to procure additional resources for data conversion activities is on hold due to COVID-19 (2020.03.PM01). DLIR still 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).

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DLIR’s plan to procure additional resources to assist with testing activities is also on hold due to COVID-19 (2020.03.PM01). DLIR was able to begin drafting their test plan (2019.10.IT01) but is behind on drafting the Content Management test cases that was scheduled for completion in March 2020. Additional clarification of the DataHouse test plan is still needed (2020.02.IT01). DataHouse onboarded a new test resource, however, IV&V does not have visibility to provide an update or assessment of ongoing DataHouse testing activities or documentation. The DataHouse and DLIR quality management plans have not yet been finalized (2019.07.IT05).

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<td>No significant updates since the prior report. DLIR plans to draft a policy of what configuration items require DLIR approval and the designated DLIR approvers. 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).</td>
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<td>At the end of February, the EDPSO vendor drafted 32 security policies (2019.10.IT02) and DLIR stakeholders agreed on a short-term plan to assess AWS security in March 2020. Both the review of the draft security policies and the execution of the short-term AWS security assessment were put on hold as DLIR project resources became unavailable due to COVID-19 (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).</td>
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<tr>
<td>System Software, Hardware, and Integrations</td>
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<td>Design</td>
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<td>Data Conversion</td>
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<td>Quality Management and Testing</td>
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</table>
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.

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

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

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

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

TERMS

RISK
An event that has not happened yet.

ISSUE
An event that is already occurring or has already happened.
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.

TERMS

POSITIVE
Celebrates high performance or project successes.

PRELIMINARY CONCERN
Potential risk requiring further analysis.
## Appendix B: Industry Standards and Best Practices

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act</td>
</tr>
<tr>
<td>ADKAR®</td>
<td>Prosci ADKAR®: Awareness, Desire, Knowledge, Ability &amp; Reinforcement</td>
</tr>
<tr>
<td>BABOK® v3</td>
<td>Business Analyst Body of Knowledge</td>
</tr>
<tr>
<td>IEEE 828-2012</td>
<td>Institute of Electrical and Electronics Engineers (IEEE) Standard for Configuration Management in Systems and Software Engineering</td>
</tr>
<tr>
<td>DAMA-DMBOK2</td>
<td>DAMA International’s Guide to the Data Management Body of Knowledge</td>
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<tr>
<td>HIPAA</td>
<td>Health Insurance Portability and Accountability Act of 1996 (HIPAA)</td>
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<tr>
<td>MITA 3.0</td>
<td>Medicaid Information Technology Architecture</td>
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<tr>
<td>TOGAF 9.2</td>
<td>The TOGAF® Standard, Version 9.2</td>
</tr>
<tr>
<td>COBIT 2019 Framework</td>
<td>Framework for customizing and right-sizing enterprise governance of information and technology</td>
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<td>IEEE 1062-2015</td>
<td>IEEE Recommended Practice for Software Acquisition</td>
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<tr>
<td>PMBOK® – Sixth Edition</td>
<td>Project Management Institute (PMI) Project Management Body of Knowledge (PMBOK®)</td>
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<td>PROSCI</td>
<td>Leading organization providing research, methodology, and tools on change management practices</td>
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<td>IEEE 1012-2016</td>
<td>IEEE Standard for System, Software, and Hardware Verification and Validation</td>
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<td>DESCRIPTION</td>
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<td>SAML v2.0</td>
<td>Security Assertion Markup Language v2.0</td>
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<td>Capability Maturity Model Integration for Development</td>
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<td>STANDARD</td>
<td>DESCRIPTION</td>
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<td>SWEBOK V3</td>
<td>Guide to the Software Engineering Body of Knowledge</td>
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<td>FIPS 200</td>
<td>FIPS Publication 200, Minimum Security Requirements for Federal Information and Information Systems</td>
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<td>National Institute of Standards and Technology (NIST) Security and Privacy Controls for Federal Information Systems and Organizations</td>
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<td>NIST Framework for Improving Critical Infrastructure Cybersecurity</td>
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<td>IEEE Standard Classification for Software Anomalies</td>
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## Appendix C: Interviews, Meetings, and Documents

### INTERVIEWS

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<td>03/18/20</td>
<td>Interview with Royden Koito (DCD Business Manager)</td>
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### MEETINGS

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<td>Case Management Sprint 3.2 Planning Meeting</td>
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<td>02/27/20</td>
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<tr>
<td>02/27/20</td>
<td>Case Management Daily Scrum Meeting</td>
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<tr>
<td>02/27/20</td>
<td>AWS Environment and Security Meeting</td>
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<td>02/28/20</td>
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<td>02/28/20</td>
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<td>03/04/20</td>
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<td>03/12/20</td>
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<td>03/12/20</td>
<td>IV&amp;V Report Draft Walkthrough</td>
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<td>IV&amp;V DCD Update Meeting</td>
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<td>ETS Meeting</td>
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### DOCUMENTS

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<tr>
<td>Request for Proposal</td>
<td>State of Hawaii DLIR DCD RFP No. RFP-17-002-DCD (Release Date 04/12/18)</td>
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<td>DataHouse Proposal</td>
<td>DataHouse ECMS Best and Final Offer (BAFO) Proposal (Dated 06/20/18)</td>
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<td>Request for Proposal</td>
<td>State of Hawaii DLIR DCD IV&amp;V RFP No. RFP-18-001-DCD (Release Date 12/28/18)</td>
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<td>Contract between State of Hawaii and DataHouse Consulting Inc. (Effective 08/27/18)</td>
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<td>DataHouse Project Management Plan 1.3 (Updated 08/30/19)</td>
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<td>DataHouse Project Status Report (Status Date 03/29/20 for reporting period 02/16 – 02/29/20, pending DLIR approval)</td>
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<td>Benefits</td>
<td>Success Goals and Metrics Baseline Target Plan (Updated as of 03/17/20)</td>
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<td>Benefits</td>
<td>Survey Working Papers (Updated as of 03/18/20)</td>
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<td>DLIR Test Plan Working Draft Version 1.0 (Updated 03/27/20)</td>
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<td>Security</td>
<td>DLIR Security Policies Version 1.0 (32 policies, pending DLIR approval)</td>
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<td>RAID (Risk Action Issue Decision) Log (Updated 03/27/20 by DataHouse Project Manager)</td>
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<td>eCMS Microsoft Project Plan as of 03/15/20 (MPP file)</td>
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<td>eCMS ESC Meeting Minutes (Revised 01/13/20)</td>
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<td>Governance</td>
<td>eCMS ESC Meeting Minutes (02/14/20)</td>
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<td>Format of WC-1 Electronic File</td>
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<td>Development</td>
<td>Epic 2 Sprint 3.1 Release Notes and Details</td>
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<td>Amazon Web Services (AWS) Environment Solution Design Version 0.0 (Date Created and Updated 02/24/20, pending DLIR approval)</td>
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Appendix D: Prior Findings Log
### Appendix D: Prior Findings Log

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<th>STATUS UPDATE</th>
<th>CLOSED DATE</th>
<th>CLOSURE REASON</th>
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<td>Clarify the test approach.</td>
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<td>2019.07.PM02.R1</td>
<td>Evaluate the test management processes and procedures.</td>
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<td>Develop adequate test data conversion plans.</td>
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<td>2019.11.IT01.R1</td>
<td>Improve DLIR understanding of the data conversion process.</td>
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<td>2019.11.IT01.R2</td>
<td>Formalize DLIR data conversion test plans.</td>
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<td>2019.10.PM01.R1</td>
<td>Improve the RTM documentation and traceability.</td>
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</table>

**Addendum:**

1. **Added complexity to requirements traceability is due to the current requirements management process.**
   - Requirements documentation was developed separately from the DataHouse contract and requirements were developed by the Contract Management and Requirements Management teams, resulting in duplicate requirements. To reduce redundancy,DLIR is developing a process to manage requirements and traceability as part of the project implementation process. DLIR plans to review and include new requirements into the traceability process.

2. **2019.07.PM14.**
   - Finalize the DataHouse Test Plan. (Pending DLIR review and approval) The final test plan will include plans for execution of testing activities.
   - The test plan does not include plans for authorizing test data or authorizing other test planning activities. DLIR needs to review and finalize the test plan.
   - The test plan does not include plans for maintaining test documentation.

3. **2019.10.PM01.**
   - The current RTM documentation and traceability may need further improvements, which may impact the ability to ensure the completeness of requirements and the success of traceability management. DLIR plans to complete an RTM review and address any identified issues.

4. **2019.07.PM15.**
   - DLIR needs to perform a deliverable review (refer to finding 2019.07.PM03) to ensure DLIR understands the test plan and scope. DLIR also needs to consider making improvements to the test documentation.

5. **2019.07.PM16.**
   - Consider a process for authorization of test data.
   - DLIR needs to develop a process for ensuring test data is authorized and can be used for testing activities.

6. **2019.11.IT01.**
   - DLIR needs to ensure that data conversion plans are updated regularly. DLIR needs to ensure that data conversion plans are updated regularly. DLIR also needs to ensure that data conversion plans are updated regularly. DLIR also needs to ensure that data conversion plans are updated regularly.

7. **2019.09.PM02.**
   - Develop data conversion test plans. DLIR needs to develop data conversion test plans.

8. **2019.07.PM17.**
   - Estimate scanning time requirements and begin to schedule or acquire necessary resources (refer to findings 2019.09.PM02 and 2019.07.PM12).

9. **2019.07.PM18.**
   - Consider use of a requirements management tool with greater functionality.
   - DLIR needs to consider using a requirements management tool with greater functionality.

10. **2019.07.PM19.**
    - Trace requirements to the project objectives success metrics (refer to finding 2019.07.PG05) to ensure each requirement supports a specific project goal.
    - Consider use of a requirements management tool with greater functionality.

11. **2019.07.PM20.**
    - Evaluate the impact on operations and project success of different data conversion scanning approach options. DLIR needs to evaluate the impact on operations and project success of different data conversion scanning approach options.

12. **2019.07.PM21.**
    - Estimate data conversion test resource needs and ensure adequate resources are identified, trained, and scheduled (refer to findings 2019.09.PM02 and 2019.07.PM12).

13. **2019.07.PM22.**
    - Consider making improvements to the test documentation.
    - DLIR needs to consider making improvements to the test documentation.

14. **2019.07.PM23.**
    - Ensure that data conversion scanning plans are updated regularly. DLIR needs to ensure that data conversion scanning plans are updated regularly.

15. **2019.07.PM24.**
    - Trace requirements to the project objectives success metrics (refer to finding 2019.07.PG05) to ensure each requirement supports a specific project goal.
    - Consider use of a requirements management tool with greater functionality.

16. **2019.07.PM25.**
    - Evaluate the impact on operations and project success of different data conversion scanning approach options. DLIR needs to evaluate the impact on operations and project success of different data conversion scanning approach options.

17. **2019.07.PM26.**
    - Estimate scanning time requirements and begin to schedule or acquire necessary resources (refer to findings 2019.09.PM02 and 2019.07.PM12).

18. **2019.07.PM27.**
    - Consider use of a requirements management tool with greater functionality.
    - DLIR needs to consider using a requirements management tool with greater functionality.
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 connectivity, DataHouse test activities were impacted in September. As a result, the DataHouse test plan expected completion date was revised to November 2019 and the plan may be constrained with the DataHouse test plan.

As DataHouse test activities are scheduled to begin in November 2019, Accuity does not have insight into testing activities to provide an update or assessment of testing.

**FINDING**

<table>
<thead>
<tr>
<th>ID</th>
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<th>SEVERITY</th>
<th>ANALYSIS</th>
<th>RECOMMENDATION</th>
<th>ID</th>
<th>RECOMMENDATION</th>
<th>SUPPLEMENTAL RECOMMENDATION</th>
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<td>2019.10.IT01</td>
<td>Risk Moderate - Lack of approved test plans may impact test plan completion</td>
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<td></td>
<td>DataHouse began to summarize changes in the Change Log.</td>
<td></td>
<td>Document changes in Change Requests with an impact assessment, and that Change Log change requests be in accordance with the Project Management Plan.</td>
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<td>2019.09.PM01.R4</td>
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</table>

**RECOMMENDATION**

1. Revise test plan, however, an estimated time of completion is uncertain given limited DLIR project resources.
2. DLIR needs to establish their own test strategy and identify, train, and schedule DLIR test resources.
3. DLIR project resources do not have formal security policies for operational security requirements despite security requirements for both AWS and implemented security controls. Accuity will evaluate DLIR’s test plan when finalized.

**RECOMMENDATION**

1. Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) for the security and privacy of the data and may lead to project delays.
2. DLIR project resources do not have formal security policies for operational security requirements for both AWS and implemented security controls. Accuity will evaluate DLIR’s test plan when finalized.

**RECOMMENDATION**

1. Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) for the security and privacy of the data and may lead to project delays.
2. DLIR needs to understand DataHouse's test strategy and test needs.
3. Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) for the security and privacy of the data and may lead to project delays.
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<th>FINDING</th>
<th>STATUS</th>
<th>RECOMMENDATION</th>
<th>RECOMMENDATION</th>
<th>SUPPLEMENTAL RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019.09.PM02.R1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop procedures to estimate and refine DLIR resource requirements.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Detail necessary steps and information needed to estimate and refine resources requirements.</td>
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</tr>
<tr>
<td>Consult DataHouse for input on upcoming activities that require DLIR resources and clarify resource requirements with the M&amp;O team.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Establish target due dates to develop resources estimates for major project activities (e.g., data conversion, testing).</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019.09.PM02.R2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop processes to optimize utilization of DLIR project resources.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Consider working with managers of project resources to reassign team members’ other job duties.</td>
<td></td>
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<tr>
<td>Consider periodically reconfirming and renewing resource commitments to the project.</td>
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<tr>
<td>Ensure team members understand their responsibilities (e.g., testing, sprint user story contact, project communications, DOH) and assignments.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explore use of tools for resource calendars and tracking of team member assignment progress and completion.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019.09.IT02 Prelim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Unclear</td>
<td>M&amp;O roles and responsibilities. The M&amp;O roles and responsibilities should be clarified and associated support processes should be established prior to go-live of the Content Management and Case Management solutions.</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>M&amp;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&amp;O resources are in place at go-live. The Project Management Plan (version 1.3) includes a schedule for M&amp;O resource requirements and resource capabilities.</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>Preliminary concern as plans for M&amp;O are finalized.</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>No updates to report. Accuity will continue to monitor this preliminary concern as the plan for M&amp;O is developed.</td>
</tr>
<tr>
<td>2019.09.IT03 Prelim</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsupported IBM Lotus Notes Domino Case Management. The current case management system, IBM Lotus Notes Domino, is no longer supported. The product was sold by IBM to HCL Technologies, an Indian IT company. DLIR’s licenses for the product will end in June. DLIR has not completed a business case to support the IBM Lotus Notes Domino Case Management system. The Project Management Plan (version 1.3) includes a schedule for the transition to HCL Technologies’ case management system (formerly known as Veeva).</td>
<td></td>
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</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>No updates to report. Accuity will continue to monitor this preliminary concern until the risk mitigation plan is finalized.</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>No updates to report. Accuity will continue to monitor this preliminary concern as the plan for HCL’s support is finalized.</td>
</tr>
<tr>
<td>2019.09.PM14.R1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk</td>
<td>Preliminary</td>
<td>Moderate</td>
<td>Undefined</td>
<td>Resource management processes and procedures may result in unidentified resource requirements, inadequate resources, or project resources that are not optimally utilized. (Updated)</td>
</tr>
<tr>
<td>This was originally reported in the September 2019 IV&amp;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, but not the specific resource requirements for various project tasks and activities. This risk will be managed. This will become more critical if the DLIR project team goes for more resource demands and tates including data conversion, testing, and sprint reviews. Additionally, DLIR project team members are not dedicated to the project and still perform other job duties. Developing processes and procedures to track and quantify assigning resource needs, identify capability, measure, process or define management of resources, resource management schedule, communicate with assigned resources and their supervisors, and task resources for specific project tasks and activities will be critical for managing this risk.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td>No updates to report. Accuity will evaluate how the new tool is functioning and how details for the plans to procure resources are developed.</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019.09.PM02.R1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</tbody>
</table>
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 in collaboration with the DataHouse Project Manager and DCD Executive Sponsor. The DCD Business Manager will work with the DataHouse Project Manager to develop key Performance Indicators (KPIs), customer and employee satisfaction, user adoption, return on investment, or cycle time. The DCD Business Manager will also evaluate management objectives as well as alignment to DCD goals.

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 conversations, methods for collecting data such as surveys, observations, open forums, or actual performance testing are needed to evaluate project or contractor performance. Consider methods for collecting data such as surveys, observation, open forums, or actual performance testing. Consider sources of data such as legacy systems, operations, and internal and external stakeholders.

Accuity will continue to evaluate the clarity of roles and responsibilities as project plans are refined and observe the effectiveness of project organization.

The Scrum methodology employed for the Case Management development promotes collaboration, open communication, and transparency. Understanding of other aspects of the project is still needed.

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 with limited visibility and collaboration in other areas of the project which has impacted DLIR’s understanding of and ability to effectively participate or collaborate. Accuity will continue to evaluate the clarity of roles and responsibilities as project plans are refined and observe the effectiveness of project organization.

Accuity 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 December 2019.

DLIR began to formalize project success metrics. DLIR still needs to communicate these measures of success and begin collecting data.

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.

DLIR formalized project success metrics. DLIR plans to post to the DCD website. DLIR still needs to communicate these measures of success and begin collecting data.

DLIR cancelled all project meetings effective March 18, 2020. DataHouse continues to do what they can with limited visibility and collaboration in other areas of the project which has impacted DLIR’s understanding of and ability to effectively participate or collaborate. Accuity will continue to evaluate the clarity of roles and responsibilities as project plans are refined and observe the effectiveness of project organization.

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**Communication Management**

2019.07.PM06 Issue High High DataHouse's ineffective and untimely communications with the DLIR Project Team contributed to DLIR's incomplete understanding of the technical solution, potential risks, and upcoming project activities.

Communication activities listed in the Project Management Plan (version 1.0) did not occur as planned as the weekly project status meetings did not begin until April 2019 and the first progress update was not completed until February 2019. During the commencement of regular project communications, miscommunication and misunderstanding between the DataHouse and DLIR project teams was common. DLIR project team members had a poor understanding of the technical solution (refer to finding 2019.07.PM05). Some confusion arose regarding the scope of project activities, which was not accurately communicated. For example, there was a lack of clarity regarding the scope of work, roles and responsibilities, and content management. DLIR project team members also had a lack of understanding of the technical solution and the upcoming project activities.

The IV&V recommendations made at 2019.07.PM02.R2 and 2019.07.PM02.R3 regarding DataHouse working on-site and including DLIR in project activities will also address this finding. Below are additional recommendations to further improve project team communications.

2019.07.PM06.R1 Implement daily touch point meetings between DataHouse and DLIR Project Managers.

**Recommendation Status**

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 touch points through various methods (in-person, phone, and email) to review project status. DLIR has been included in more DataHouse meetings including sprint planning, reviews, and retrospectives.

10/25/19, 11/22/19, 12/20/19, and 01/24/20: No updates to report.

2/21/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as immediate improvements are needed particularly for Content Management to increase the effectiveness of project communications. DLIR project team members have been scheduled to participate in IV&V meetings in March to discuss and review DataHouse’s Test Plan, however, this meeting was cancelled due to COVID-19. Accuity will continue to evaluate the effectiveness of these project communications channels.
**Organizational Change Management**

**2019.07.PM08**

**Category:** Risk

**Severity Change:** Moderate to Low

**Finding:** Missing key OCM steps or activities may not identify pockets of resistance or adequately enable individual change.

**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 to OCM duties.

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. Positioning activities within an OCM focus will help to better prioritize, properly, and support individuals throughout the project and to ensure that the solution is ultimately adopted and embraced by all stakeholders.

**Recommendation:**

- 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.
- Prepare a change management business process improvement (BPI) and learning activities.
- Change OCM activities to address identified awareness gaps or facilitate acceptance.
- Implement reinforcement mechanisms to support change and increase adoption.

**Supplemental Recommendations:**

- Establish change awareness and readiness measurement mechanisms.
- Through surveys or interviews, create and mobilize a change coalition group of managers, supervisors, and key influencers.
- Prepare a change management business process improvement (BPI) and learning activities.
- Change OCM activities to address identified awareness gaps or facilitate acceptance.
- Implement reinforcement mechanisms to support change and increase adoption.

**Implementation Status:**

- Developing and implementing a structured OCM approach.
- Collected baseline change awareness and readiness measurement through surveys or interviews.
- Created and mobilized a change coalition group of managers, supervisors, and key influencers.
- Prepared a change management business process improvement (BPI) and learning activities.
- Changed OCM activities to address identified awareness gaps or facilitate acceptance.
- Implemented reinforcement mechanisms to support change and increase adoption.

**Updates:**

- 09/20/19: 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 webinars) on the carrier newsletters. As noted above at finding 2019.07.PM05, the Scrum methodology should be communicated to all stakeholders who will be participating in sprint activities.
- 10/25/19: DLIR met with the ETS OCM resource to discuss OCM ideas. The ETS OCM resource provided a script template for the planned project video communications as well as sample flyers.
- 01/24/20: No updates to report. Accuity will continue to evaluate project communication plans and activities.

**2019.07.PM07**

**Category:** Risk

**Severity Change:** Moderate to Moderate

**Finding:** The lack of tailored project communications for all impacted stakeholders may reduce user adoption and stakeholder buy-in.

**Datahouse's BAFO lists various communication methods and 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 no plan to ensure that the ongoing distribution of OCM activities is measured and feedback is collected and implemented.

**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.
- Collect baseline communication awareness measurements through surveys or interviews.
- Conduct a comprehensive analysis of communications methods and activities.
- Implement reinforcement mechanisms to support change and increase adoption.

**Implementation Status:**

- Developing and implementing a structured OCM approach.

**Updates:**

- 09/20/19: 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 webinars) on the carrier newsletters. As noted above at finding 2019.07.PM05, the Scrum methodology should be communicated to all stakeholders who will be participating in sprint activities.
- 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 update the website and draft the carrier newsletter for inclusion in their communications.
- 11/22/19: 02/21/20: DLIR met with the ETS OCM resource to discuss OCM ideas. The ETS OCM resource provided a script template for the planned project video communications as well as sample flyers.
- 03/27/20: No updates to report. Accuity will continue to evaluate project communication plans and activities.

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Access to all documents and communications for all stakeholders may reduce user adoption and stakeholder buy-in.

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**Executive Summary**

Access to all documents and communications for all stakeholders may reduce user adoption and stakeholder buy-in.
## Project Management Requirements Management

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Issue</th>
<th>Project</th>
<th>Impact</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019.07.PM05</td>
<td>R1</td>
<td>Revise Content Management and Case Management</td>
<td>Documentation is incomplete</td>
<td>Incomplete</td>
<td>The requirements for both Content Management and Case Management documentation have already been identified. However, the requirements and traceability lack sufficient detail. The current DMS does not allow operational and program requirements to be aligned. Furthermore, the DMS does not allow for tracking and identifying requirements. This project requires managing content and ensuring content and operational requirements are met by the DMS. Therefore, the C&amp;O project management plan needs to be updated to include specific requirements and use various teams within the C&amp;O project management. DataHouse is developing the requirements for content and Case Management, however, the plan is not comprehensive. The Project Management Plan (version 1.2) was updated to include additional details regarding requirements management. Additionally, a Training Plan is in progress before the next sprint, the latest draft plan still does not provide adequate details concerning the requirements management processes, the tooling structure, and how requirements will be identified, tracked, and prioritized. Recommendations for improved requirements management processes include: 1) identifying and tracking different types of requirements (e.g., content requirements, Case Management requirements, etc.); 2) ensuring that requirements management processes are complete and meet industry standards; and 3) developing and implementing a requirements management process. Requirements documentation should be updated and requirements management processes should be implemented prior to moving forward in the project.</td>
</tr>
<tr>
<td>2019.07.PM05</td>
<td>R2</td>
<td>Improve requirements management processes</td>
<td>Document requires processes for identifying, tracking, and managing requirements. Requests for process for tracking requirements, including specific system design elements, have been made. Accuity will continue to evaluate the requirements documentation and processes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019.07.PM06</td>
<td>R1</td>
<td>Implement a formalized process for identifying, tracking, and managing requirements.</td>
<td>Document requires processes for identifying, tracking, and managing requirements. Requests for process for tracking requirements, including specific system design elements, have been made. Accuity will continue to evaluate the requirements documentation and processes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019.07.PM06</td>
<td>R2</td>
<td>Develop a process for prioritizing and managing requirements.</td>
<td>Document requires processes for identifying, tracking, and managing requirements. Requests for process for tracking requirements, including specific system design elements, have been made. Accuity will continue to evaluate the requirements documentation and processes.</td>
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</tr>
</tbody>
</table>

## Risk Management

### Open Risks

<table>
<thead>
<tr>
<th>Risks</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk 09/20/19: Accuity 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 track risks. This project requires a formal process to identify and track risks. Accuity needs to ensure that a formal process is in place before moving forward in the project.</td>
<td>Open</td>
<td>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.</td>
</tr>
<tr>
<td>Risk 11/22/19, 12/20/19, and 01/24/20: No updates to report.</td>
<td>Closed</td>
<td>No updates to report.</td>
</tr>
<tr>
<td>Risk 02/21/20: DLIR began to develop mitigation plans for all high IV&amp;V risks and issues. DLIR plans to meet with DataHouse in March 2020 to continue developing mitigation plans.</td>
<td>Open</td>
<td>No updates to report.</td>
</tr>
<tr>
<td>Risk 03/27/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High/Critical) and reopened the 2019.07.PM09.R2 recommendation. Discussions of risks were paused as weekly meetings were cancelled due to COVID-19. The findings were prioritized to low in March 2020 to continue developing mitigation plans.</td>
<td>Open</td>
<td>The findings were prioritized to low in March 2020 to continue developing mitigation plans.</td>
</tr>
<tr>
<td>Risk 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 plans to procure 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.</td>
<td>Open</td>
<td>The findings were prioritized to low in March 2020 to continue developing mitigation plans.</td>
</tr>
</tbody>
</table>

## Actionable Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Issue</th>
<th>Project</th>
<th>Impact</th>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019.07.PM07</td>
<td>R1</td>
<td>Develop a process for prioritizing and managing requirements.</td>
<td>Process for prioritizing and managing requirements has been developed and implemented. DLIR plans to procure 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.</td>
<td>Incomplete</td>
<td>The findings were prioritized to low in March 2020 to continue developing mitigation plans.</td>
</tr>
<tr>
<td>2019.07.PM07</td>
<td>R2</td>
<td>Enhance their RTM to crosswalk and merge all requirements into one master.</td>
<td>Process for creating and approving new user stories and the user story tracking tool. DLIR plans to procure 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.</td>
<td>Incomplete</td>
<td>The findings were prioritized to low in March 2020 to continue developing mitigation plans.</td>
</tr>
</tbody>
</table>
Accuity 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.

COVID-19 will impact project costs, however, the extent of the impact is indeterminable. Additionally, DLIR is moving available funds to other project needs.

Socially distanced meetings continue.

2019.07.PM12 Risk High

Prepare a comprehensive project budget and a schedule of long-term operational costs (e.g., licenses, subscriptions, maintenance, cloud services).

Accuity 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.

COVID-19 will impact project costs, however, the extent of the impact is indeterminable. Additionally, DLIR is moving available funds to other project needs.

Socially distanced meetings continue.

Prepare a comprehensive project budget and a schedule of long-term operational costs (e.g., licenses, subscriptions, maintenance, cloud services).

Accuity 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.

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COVID-19 will impact project costs, however, the extent of the impact is indeterminable. Additionally, DLIR is moving available funds to other project needs.

Socially distanced meetings continue.

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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.

COVID-19 will impact project costs, however, the extent of the impact is indeterminable. Additionally, DLIR is moving available funds to other project needs.

Socially distanced meetings continue.

Prepare a comprehensive project budget and a schedule of long-term operational costs (e.g., licenses, subscriptions, maintenance, cloud services).
Accuity 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 current project, the DLIR Project Manager notes that monitoring and understanding does not mean to perform all of the tasks to properly manage the project or to explore DLIR during project activities. DLIR should increase participation in design and development activities and training. Since finding 2019.07.PM12.01, DLIR did not perform all of the tasks to properly manage the project or to explore DLIR during project activities. DLIR should increase participation in design and development activities and training.

Accuity has increased the severity rating from Level 2 (Moderate) to Level 1 (High) as resource constraints continue to limit improvements made by the DataHouse Project team. DLIR plans to procure additional resources to support data conversion and testing activities. DataHouse plans to shift some of the resource constraints by exploring the possibility of adding a project coordinator resource to assist with meeting minutes and getting deliverables out.

Accuity will continue to assess the adequacy of project resources. DLIR is in the process of drafting procurement documents for additional resources for testing, data conversion, AWS, and requirements. The interface solution should be clearly analyzed, documented, mapped to project requirements, and communicated to DLIR. The Content Management Design (version 1.0) document was approved by 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 is in progress, 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 Wesl (development), the interface approach will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project planning will need to be re-evaluated and project 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<td>Configuration Management</td>
<td>2019.07.IT06</td>
<td>Risk</td>
<td>Moderate</td>
<td>Moderate</td>
<td>A lack of a configuration management plan may impact the performance and quality of the system if unauthorised or untested changes are performed without documentation.</td>
<td></td>
<td></td>
<td>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 Security Project was expected to begin in the Build stage of Phase 1. Although the recent DEV development failure delayed the start of the project, DataHouse is taking a security management approach in their plan to ensure the security needs of the system are supported. Security policies should be defined in the security management plan and implementation project of an organization-wide process that manages information security and privacy risk.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>2019.07.IT07</td>
<td>Risk</td>
<td>Moderate</td>
<td>Not having an approved security management plan in place may impact the security and privacy of the system.</td>
<td></td>
<td></td>
<td>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 Security Project was expected to begin in the Build stage of Phase 1. Although the recent DEV development failure delayed the start of the project, DataHouse is taking a security management approach in their plan to ensure the security needs of the system are supported. Security policies should be defined in the security management plan and implementation project of an organization-wide process that manages information security and privacy risk.</td>
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</table>

### Configuration Management

2019.07.IT06.R1

#### Develop a formal configuration management plan.

- Ensure that 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 identification process, configuration change control process, configuration control process, configuration status accounting process, configuration validation process, and release management process.

- Collaborate with DLIR to collaboratively and agree on the configuration management plan purposes and processes that will best serve this project.

2019.07.IT06.R1

#### Ensure the security management plan meets specific standards.

- 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.

### Security

2019.07.IT07.R1

#### Finalize the security management plan.

- 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 by the end of the project. DLIR should also consider security controls for system data held by DataHouse.

2019.07.IT07.R2

#### Finalize the security management plan.

- 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 by the end of the project. DLIR should also consider security controls for system data held by DataHouse.

- 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.

- DLIR is first identifying security requirements (refer to finding 2019.10.IT02). No updates to report on the security management plan.

- 01/24/20: DataHouse clarified that security will be documented in design and other document deliverables and not in an Application Security Management Plan.

- 02/21/20: DLIR continued efforts to identify security requirements. DLIR plans to meet at the end of February to develop a plan to address security.

- 03/27/20: DLIR stakeholders agreed on a short-term plan to assess AWS security in March 2020, however, the execution of the short-term security assessment was put on hold due to COVID-19.

- Security will continue to evaluate the security management plan and next steps.
The Scrum methodology employed by the DataHouse Case Management development team inherently promotes collaboration, open communication, transparency, and process improvement through both in-person stand-ups and retrospective meetings. Over time, data and insights from the implementation of Scrum lead to improvements in the daily practices of the development team by continuously reviewing and adjusting the base of project execution and invested transparency.

Some members of the DataHouse team have contributed to the following successes:
- Secured a replacement Content Management hosting infrastructure solution. This included presenting the risk management matrix (including risks and benefits) to the 2019.07.PG01 governance committee and change control board. The DataHouse proposal and Project Management Plan (version 1.2) make clear the need for approval or attention was not formalized. The next meeting is scheduled for October 11, 2019.
- Demonstrated commitment to continual improvement resulting in smoother project execution and increased transparency.
- Demonstrated genuine commitment to the success of the project.
- Demonstrated knowledge and understanding of the Case Management solution and has contributed to a smoother execution of the Case Management part of the project.
- Demonstrated knowledge and understanding of the Case Management solution and has contributed to a smoother execution of the Case Management part of the project.
- Demonstrated genuine commitment to the success of the project.

The DataHouse team's swift and effective response not only met the need for clarification of roles and responsibilities as well as acceptance criteria and success metrics will continue to be monitored under the 2019.07.PG04 Success Metrics, 2019.07.PM02 Project Organization, 2019.07.PM03 Deliverable Review, and 2019.07.IT05 Quality Management findings.

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, roles and responsibilities. There has already been confusion or misunderstanding as to the contract terms in the areas of farm, design, bid and issue tracking (refer to finding 2019.07.PG03). Requirements tracking (refer to finding 2019.07.PG03) and data processing (refer to finding 2019.07.PG03). However, the acceptance criteria could be compliance with Institute of Electrical and Electronics Engineers (IEEE) 29148-2018 for a requirement traceability matrix or compliance with IEEE 829 for test documentation. Compliance is lacking 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 829 for test documentation. Compliance is lacking 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. The thresholds for decisions that require committee attention were also established. 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, roles and responsibilities. There has already been confusion or misunderstanding as to the contract terms in the areas of farm, design, bid and issue tracking (refer to finding 2019.07.PG03). Requirements tracking (refer to finding 2019.07.PG03) and data processing (refer to finding 2019.07.PG03). However, the acceptance criteria could be compliance with Institute of Electrical and Electronics Engineers (IEEE) 29148-2018 for a requirement traceability matrix or compliance with IEEE 829 for test documentation. Compliance is lacking acceptance criteria based on industry standards.
In 2016, DLIR convened a Working Group (WG) consisting of DataHouse proposed a solution on their BAFO without obtaining a written letter of intent between DataHouse and DHS. Furthermore, the eCMS Project focuses on best practices and lessons learned with DLIR. Additionally, DLIR is forming a DLIR IT project committee, which includes the DLIR Project Manager and other members of that DLIR committee and plans to share eCMS lessons learned and project templates with other DLIR IT projects.

2019.07.PG04 Risk Low N/A The lack of guidelines, checklists, and shared project assets has resulted in inconsistent project lead who works collaboratively with internal stakeholders.

The DataHouse BAFO proposed a technical solution that planned to use DHS’s IBM FileNet environment, however, there was no written agreement between DataHouse and DHS that supported this plan. In addition, the DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. As such, manual paper forms may continue to be submitted by law by staff. The DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. The DataHouse BAFO should finalize all necessary agreements to ensure that the alternative solution is viable and prevent further delays.

2019.07.PM04 Issue High N/A The DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. As such, manual paper forms may continue to be submitted by law by staff. The DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. The DataHouse BAFO should finalize all necessary agreements to ensure that the alternative solution is viable and prevent further delays.

2019.07.PG06 Risk Low N/A Failure to align statutes with the eCMS implementation and training will negatively impact the benefits from the new system.

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 this plan. In addition, the DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. As such, manual paper forms may continue to be submitted by law by staff. The DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. The DataHouse BAFO should finalize all necessary agreements to ensure that the alternative solution is viable and prevent further delays.

2019.07.PM01 Positive N/A N/A for positive findings. N/A for positive findings. Closed 9/20/2019 Closed as this is a positive finding.

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 this plan. In addition, the DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. As such, manual paper forms may continue to be submitted by law by staff. The DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. The DataHouse BAFO should finalize all necessary agreements to ensure that the alternative solution is viable and prevent further delays.

2019.07.PG04 Risk Low N/A The lack of guidelines, checklists, and shared project assets has resulted in inconsistent project lead who works collaboratively with internal stakeholders.

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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 this plan. In addition, the DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. As such, manual paper forms may continue to be submitted by law by staff. The DataHouse BAFO did not include any documentation for the alternative solution to be used in the event of a failure to align statutes with the eCMS implementation. The DataHouse BAFO should finalize all necessary agreements to ensure that the alternative solution is viable and prevent further delays.
### Identify and track BPR opportunities in a log.

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<tr>
<th>ASSESSMENT</th>
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<tr>
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<td>12/20/2019</td>
<td>Closed as user stories resulting in was to start with the current state process maps, walkthrough the process with stakeholders, and make updates to the process maps. As a result of BPR identification, a data process map has been created and is still in progress. Further investigation is needed to ensure that processes are optimized and efficiency is improved.</td>
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<td>12/20/2019</td>
<td>Closed 09/20/19: Accuity has kept the severity rating as Level 2 (Moderate) as a significant BPR can be identified for communications and training.</td>
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<td>10/25/2019 and 11/22/19: BPR opportunities continue to be discussed during sprint sessions, however, identified opportunities are not formally tracked.</td>
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<td>10/25/2019</td>
<td>The Content Management design documents are regularly updated to include additional requirements as the project evolves. Changes to requirements should be evaluated for the impacts on the Content Management design documents.</td>
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**Reengineering**

- **2019.07.PM11**: Identify and track BPR opportunities in a log.
- **2019.07.PM10**: Consider solutions that could include other technical applications that use cloud-based services to improve the efficiency of the systems.

**Assessment**

- **2019.07.PM11.R1**: Identify and track BPR opportunities in a log.
- **2019.07.PM10.R1**: Consider the following website which lists 20 competitive alternatives to IBM FileNet for consideration: www.g2.com/products/ibm-filenet-content-management.

**Recommendation**

- **2019.07.PM11.R2**: Prepare a comprehensive technical analysis of the alternative solutions.
- **2019.07.PM10.R2**: Update the Content Management data conversion plans.

**Implementation**

- **2019.07.PM11.R3**: Update the Content Management design documents.
## Appendix E: Prior IV&V Reports

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<td>02/20/20</td>
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Appendix F: Comment Log on Draft Report
## DLIR DCD eCMS Project: IV&V Document Comment Log

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### Data Management and Testing

**Finding:** A formalization plan for conversion was not adequately defined in the test management plan. The test plan does not include or clearly outline the following:

- A scope of the test plan is incomplete (e.g., performance, load, volume, and security environments).
- The test approach is not described (e.g., regression testing, load testing, functional testing).
- The security testing does not address all security requirements as outlined in the DataHouse contract or verbally discussed with DataHouse (e.g., AWS vulnerability scans).
- The test approach is not detailed (e.g., test design techniques, test scripts, data requirements, data validation procedures, test plans, and coverage of assets).
- The test plans included in the project schedule are incomplete (e.g., security tests, load plan, defect report).

**Recommendation:** The DataHouse Test Plan is incomplete and missing key elements for developing a comprehensive test plan. DataHouse management development teams should inputs for the execution of testing activities.

**Supplemental Recommendation:** Improve requirements traceability. As a result, DataHouse drafted the Test Plan Version 0.0, pending DLIR review and finalization plans for scanning current paper files to ensure necessary data conversion processes.

**Analysis:** The IV&V recommendations made at 2019.07.PM02 and 2019.09.PM02 describe the data conversion process and roles developed separate from the DataHouse contract requirements and more detailed requirements were developed by the Content Management and Migration process to define the data conversion process. As a result, there is duplication of requirements in the RTM which will likely impact the DataHouse for finalizing the test plan. DataHouse made incremental improvements to the RTM. The requirements documentation was focused on the test cases used by the Content Management development teams in user stories used by the Case Management development team to ensure the test cases are comprehensive and fully incorporate the requirements used for development. Requirements were not currently focused on project objectives and success metrics in more requirements with business value. The test plan is incomplete due to this which leads to testing portions of the RTM not being developed to test the functional capability of the system. Conversion activities is on hold due to COVID-19.

**Recommendations:**
- Consider use of a requirements management tool with greater version-control and efficient data retrieval and location.
- Consider making improvements to the final documentation.
- Add acceptance criteria to the RTM to ensure stakeholder satisfaction.
- Estimate data conversion test resource needs and ensure adequate resources are identified, selected, and scheduled (refer to Findings 2019.09.PM02 and 2019.11.IT01). DataHouse confirmed that all Content Management Conversion and Migration (version 1.2 pending DLIR approval) and Case Management Conversion and Migration (version 1.1 pending DLIR approval) describe the data conversion process and roles.
- Focus DLIR tests to address identified data conversion risks and issues.
- Add acceptance criteria to the RTM to ensure stakeholder satisfaction.
- Estimate scanning time requirements and begin to schedule or acquire the data conversion scanning approach options.
- Accuity will evaluate data conversion plans as progress is made.

**Conclusion:** The current data conversion test plan is a draft update to include a complete report from the data conversion process. DLIR needs to understand the report approach and what steps the data conversion plan is undergoing in preparing the report.

**Open 2019.11.IT01**
- Open 2020.02.IT01
- Open 2019.10.PM01
- Open 2019.11.IT01.R3
- Open 2019.07.PM14

**Closed 2020.02.IT01.R2**
- Closed 2019.11.IT01.R1

### Design and Management

**Finding:** The current data conversion approach in DataHouse does not include the ability to ensure the correct CLM selector fills all requirements and testing.

**Recommendation:** The current data conversion approach in DataHouse does not include the ability to ensure the correct CLM selector fills all requirements and testing.

**Supplemental Recommendation:** The current data conversion approach in DataHouse does not include the ability to ensure the correct CLM selector fills all requirements and testing.

**Conclusion:** The current data conversion approach in DataHouse does not include the ability to ensure the correct CLM selector fills all requirements and testing.

**Open 2019.12.MT01**
- Open 2019.12.MT01.R1

### Additional Recommendations

- Estimate the amount of resources required to develop the data conversion process.
- Ensure the test approach is defined in the data conversion process.
- Add acceptance criteria to the RTM to ensure stakeholder satisfaction.
- Estimate data conversion test resource needs and ensure adequate resources are identified, selected, and scheduled.
- Estimate data conversion test planning needs.
- Estimate data conversion test planning needs.
- Estimation errors and estimates may hinder traceability, which may impact the execution of testing activities.
- The data conversion test plans for maximum efficiency. Additionally, DLIR has not finalized plans for scanning current paper files to ensure necessary data conversion processes.
- The security testing does not address all security requirements as outlined in the DataHouse contract or verbally discussed with DataHouse (e.g., AWS vulnerability scans).
- The test approach is not detailed (e.g., test design techniques, test scripts, data requirements, data validation procedures, test plans, and coverage of assets).
- The test plans included in the project schedule are incomplete (e.g., security tests, load plan, defect report).
- The security testing does not address all security requirements as outlined in the DataHouse contract or verbally discussed with DataHouse (e.g., AWS vulnerability scans).
- The test approach is not detailed (e.g., test design techniques, test scripts, data requirements, data validation procedures, test plans, and coverage of assets).
- The test plans included in the project schedule are incomplete (e.g., security tests, load plan, defect report).
- As a result, DataHouse drafted the Test Plan Version 0.0, pending DLIR review and finalization plans for scanning current paper files to ensure necessary data conversion processes.
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FINDING ID
• Identify applicable test standards and requirements.
• Formalize and implement security procedures.

Moderate Risk
CLOSED DATE
10/25/19: DataHouse began to summarize changes in the Change Log.

High Issue
Formalize security policies.

TYPE
High
ANALYSIS
Risk
The documented change management process was not followed as prescribed by the Project Management Plan. The lack of policies primarily impacts the completion of the AWS setup and the Content Management and Testing component. Security requirements for the cloud environment must be established 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 must be determined and controls implemented before the AWS environments can be used for planned data conversion and testing activities. The lack of policies primarily impacts the completion of the AWS setup and the Content Management and Testing component. Security requirements for the cloud environment must be established 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 must be determined and controls implemented before the AWS environments can be used for planned data conversion and testing activities.

SUPPLEMENTAL RECOMMENDATION
RECOMMENDATION ID
2019.10.IT02
Finalize the test plan.

CLOSURE REASON
Document changes in Change Log. Additionally, the change management process was not followed as prescribed by the Project Management Plan. The lack of policies primarily impacts the completion of the AWS setup and the Content Management and Testing component. Security requirements for the cloud environment must be established 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 must be determined and controls implemented before the AWS environments can be used for planned data conversion and testing activities. The lack of policies primarily impacts the completion of the AWS setup and the Content Management and Testing component. Security requirements for the cloud environment must be established 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 must be determined and controls implemented before the AWS environments can be used for planned data conversion and testing activities.

RECOMMENDATION
2019.10.IT01
11/22/19: DataHouse and DLIR test plans were not finalized as planned. The EDPSO vendor drafted an access management policy and is targeting the end of February 2020 to complete drafts of other security policies. DLIR scheduled a meeting for the end of February to discuss AWS security with the EDPSO vendor. DLIR currently does not have formal security policies to determine security requirements with a focus on AWS and implementing security controls to allow AWS to be used in a secure manner. The EDPSO vendor drafted an access management policy and is targeting the end of February 2020 to complete drafts of other security policies. DLIR scheduled a meeting for the end of February to discuss AWS security with the EDPSO vendor. DLIR currently does not have formal security policies to determine security requirements with a focus on AWS and implementing security controls to allow AWS to be used in a secure manner.

2019.09.PM01.R2
02/21/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) as the change requests identified in the September 2019 report are still in the project schedule and AWS were still not drafted. DLIR initiated discussions on the requirements with a focus on AWS and implementing security controls to allow AWS to be used in a secure manner.

2019.07.PG02
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 used in a secure manner. Efforts are underway to identify minimum security requirements with a focus on AWS and implementing security controls to allow AWS to be used in a secure manner.

2019.10.PG02
03/27/20: DLIR’s plan to procure additional resources to assist with testing was not met due to COVID-19. DLIR’s plan to procure additional resources to assist with testing was not met due to COVID-19.

2019.07.PM02
02/21/20: DLIR reviews were not completed due to COVID-19. DLIR reviews were not completed due to COVID-19.

2019.09.PM01
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.

2019.07.PM01
03/27/20: DLIR’s reviews and approval process to finalize testing was not finalized. DLIR’s reviews and approval process to finalize testing was not finalized.

2019.07.PM01
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.

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2019.09.PM01
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2019.09.PM01
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2019.07.PG02
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2019.07.PM01
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2019.07.PPM02
03/27/20: DLIR’s reviews were not completed due to COVID-19. DLIR’s reviews were not completed due to COVID-19.
Develop procedures to estimate and refine DLIR resource requirements. (Updated)

Consult DataHouse for input on resource requirements that impact DLIR because the project is in the implementation phase. (Updated)

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Consult DataHouse for input on resource requirements that impact DLIR because the project is in the implementation phase. (Updated)
FINDING ID: Moderate
RECOMMENDATION: Use performance data to monitor or evaluate project performance.

2019.07.PG05
High
2019

RECOMMENDATION ID: Moderate
RECOMMENDATION: Include DLIR in project activities and communications to increase project cohesion and eliminate data silos.

2019.07.PG05
High
2019

RECOMMENDATION ID: Moderate
RECOMMENDATION: Formalize measurable goals and success metrics in project charter.

2019.07.PG05
High
2019

[Text continues with findings and recommendations...]

Project Organization and Management

2019.07.PM02
High
2019

[Text continues with updates and actions...]

4 of 15
**FINDING ID**
Moderate

**ANALYSIS**

**RECOMMENDATION ID**

**RECOMMENDATION STATUS UPDATE**
SUPPLEMENTAL RECOMMENDATION
MODERATE
RECOMMENDATION
CLOSED DATE
FINDING
Implement formal deliverable review

**CATEGORY**
Management
Communication
Organization and Project Issue

**SEVERITY**

**CURRENT UNDERSTANDING OF THE TECHNICAL SOLUTION, COMMUNICATIONS WITH THE DLIR PROJECT MANAGERS HAVE CONTRIBUTED TO INEFFECTIVE DELIVERABLE REVIEW MEETINGS TO WALK THROUGH DELIVERABLES**

**BACKGROUND**

DLIR has had limited involvement in project activities. The purpose of the deliverables is to communicate the purpose of the deliverables, including: schedule, roles and responsibilities, design, migration, acceptance criteria has not yet been implemented. Additionally, the impact of DLIR has expressed greater satisfaction in the deliverable review and acceptance process. DLIR has had limited involvement in project activities and issues, including: schedule, roles and responsibilities, design, migration, acceptance criteria has not yet been implemented. Additionally, the impact of DLIR has expressed greater satisfaction in the deliverable review and acceptance process.

**RECOMMENDATION**

Include an evaluation of deliverables against acceptance criteria and requirements documentation.

**SUCCESSFUL RECOMMENDATION**

**FAILURE TO RECOMMEND**

Include an evaluation of deliverables against acceptance criteria and requirements documentation.

**STATUS**
Open

**RECOMMENDATION**

Accuity is continuing its evaluation of deliverables on project schedule, roles and responsibilities, design, migration, acceptance criteria has not yet been implemented. Additionally, the impact of DLIR has expressed greater satisfaction in the deliverable review and acceptance process.

**SUCCESSFUL RECOMMENDATION**

**FAILURE TO RECOMMEND**

Accuity is continuing its evaluation of deliverables on project schedule, roles and responsibilities, design, migration, acceptance criteria has not yet been implemented. Additionally, the impact of DLIR has expressed greater satisfaction in the deliverable review and acceptance process.

**STATUS**
Open
**FINDING ID**

**CLOSURE REASON**

Further refine communication

**FINDING**

**RISK**

09/20/19: Accuity decreased the severity rating from Level 2 (Moderate) to Level

**SUPPLEMENTAL RECOMMENDATION**

Moderate

Low

**ANALYSIS**

**CLOSED DATE**

**FINDING STATUS UPDATE**

**RECOMMENDATION**

Missing key OCM steps or activities may not identify pockets of resistance or stakeholders may reduce user adoption. While projects may progress without a formal OCM approach, industry best practices support that a structured OCM approach complements project management approaches in increasing probability of project success. Remaining solutions with an OCM focus will help to broaden project scope by defining true communication needs and ensure that key stakeholders are engaged and informed.

**CATEGORY**

**ASSESSMENT**

Management

Change

Communication

2019.07.PM08

**SEVERITY**

**ORIGINAL**

2019.07.PG01

**STATUS**

Open

Open

ACCUITY will continue to evaluate project communication plans and activities. DLIR plans to develop videos for project communications.

02/21/20: The website was launched with high-level background, timeline, and success metrics. DLIR plans to develop videos for project communications.

03/27/20: No update to report.

Assessment continues to identify gaps in project communication plans and activities. A number of communications activities are planned to provide a baseline for the upcoming sprint activities including DLIR internal stakeholder engagement and DLIR website development.

01/22/20: No update to report.

Accuity will continue to ensure that project communication plans and activities are clearly communicated to project stakeholders.

01/24/20: No updates to report.

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 project changes were not completed as expected. No impactful 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 impacted stakeholders as a way to engage and involve impacted stakeholders. DLIR internal stakeholders (including neighbor island staff) on what has been accomplished. DLIR worked on plans to update the DLIR website to include project information that is accessible to internal and external stakeholders.

11/29/19: DLIR held town sessions for internal stakeholders to provide an update on the project progress and milestones. DLIR needs to plan to update the website and draft the carrier newsletter to include project updates. An update above at finding 2019.07.PM05, the Scrum methodology should be communicated to all stakeholders who will be participating in sprint activities.

11/29/19: 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 project changes were not completed as expected. No impactful communication with impacted stakeholders to be executed timely.

11/22/19: No update to report.

As noted above at finding 2019.07.PM05, the Scrum methodology should be communicated to all stakeholders who will be participating in sprint activities.

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.

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 update to report.

Accuity will continue to evaluate project communication plans and activities.

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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 update to report.
(Finding 2019.07.PM09) Accuity decreased the severity rating from Level 1 (High/Critical) to Issue.

The requirements for both Content Management and Case Management solutions have been refined through 11/22/19, 12/20/19, and 01/24/20: No updates to report.

01/24/20: 01/24/20: DataHouse continues to refine the functionality of the Case Management element. The team is focused on ensuring that the current requirements are complete and accurate. The requirements are being reviewed and refined to ensure that they meet the needs of all stakeholders.

02/21/20: The DataHouse Case Management development team continues to work on the requirements for the user story tracking tool. DLIR procured a resource to help with their review of requirements documentation for completeness.

10/25/19: DataHouse provided training to the DLIR Product Owners that includes an overview of the requirements development process. The training was conducted via an online session and included an overview of the process for managing requirements in the project.

11/22/19, 12/20/19, and 01/24/20: No updates to report.

03/27/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) for finding 2019.07.PM09. The RTM has been updated to include detailed requirements and user stories from the Case Management and Content Management elements. The updated RTM includes all new requirements and updates to existing requirements. The RTM is now available for public review on the project website.

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11/20/19: 11/20/19: The DataHouse project team is in the process of enhancing their RTM to crosswalk and merge all requirements into one master document. The new RTM will be used to track and manage all requirements for the project.

03/27/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) for finding 2019.07.PM09. The RTM has been updated to include detailed requirements and user stories from the Case Management and Content Management elements. The updated RTM includes all new requirements and updates to existing requirements. The RTM is now available for public review on the project website.

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**09/20/19:** Accuity has kept the severity rating as Level 1 (High) as a result of the high severity rating assigned by the DHS for a repeated issue of inaccurate project management and communication. Accuity will continue to monitor the project schedule and schedule management practices.

**10/25/19:** Progress has been made to gather cost information and set up budget tracking templates.

**11/12/19, 12/19/19, and 01/30/20:** No updates to report.

**02/21/20:** DLIR plans to develop a comprehensive project budget and long-term cost schedule that have been created yet. Additionally, regular cost variance reports are not prepared or presented.

**03/23/20:** COVID-19 will impact the current project schedule, however, the extent of the impact is indeterminable. Additionally, DLIR is assessing available funding for planned procurements of resources and other project costs.

**Accuity will continue to monitor project costs including new AWS costs (from finding 2019.07.01) and cost management practices.**

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<td>FUTURE FDAK</td>
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**09/20/19:** Accuity has kept the severity rating as Level 1 (High) as a result of the high severity rating assigned by the DHS for a repeated issue of inaccurate project management and communication. Accuity will continue to monitor the project schedule and schedule management practices.

**10/25/19:** Progress has been made to gather cost information and set up budget tracking templates.

**11/12/19, 12/19/19, and 01/30/20:** No updates to report.

**02/21/20:** DLIR plans to develop a comprehensive project budget and long-term cost schedule that have been created yet. Additionally, regular cost variance reports are not prepared or presented.

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FINDING ID

Finalize the quality management

FINDING

Perform quality management

Moderate

Moderate

FINDING STATUS UPDATE

Moderate

09/20/19: Accuity decreased the severity rating from Level 1 (High) to Level 2 (Moderate). Accuity will continue to assess the adequacy of project resources.

10/25/19: Resource constraints continue to be a challenge. Focus on data management and Web Services interface to draft procedures to manage delays and update project status. Screen and content management activities are aligned with high priority. DataHouse quality resources may impact the completion of the planning and design activities.

11/21/19: Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (High) as resource constraints continue to impact development readiness and the process of the project activities is picking up pending additional demands on the project team.

12/20/19: No update to report. See finding 2019.09.PM02.

1/15/20: DLIR plans to procure additional resources to support data management and testing activities. DataHouse plans to close out the Task 2 deliverable (Case Management) and complete update on integration development progress.

2/21/20: DLIR assigned an additional EDPSO resource to DCD. DLIR is in the process of drafting procurement documents for additional resources for testing, data conversion, API, and requirements.

2/27/20: Many key DLIR resources and few DataHouse resources were pulled with the higher priority DHS Conversion. Additionally, 01/04/2020 project resources for upcoming project deliverables were delayed. The schedule will reflect new dates for resources and project deliverables. Accuity will continue to assess the adequacy of project resources.

ANALYSIS

CLOSED DATE

CATEGORY

ASSESSMENT

COMMENTS

ORIGINAL

MODIFIED

REFERENCE

FINDING

10/25/2019

2019.07.IT02.R1

2019.07.IT02.R2

2019.07.IT02.R3

2019.07.IT02.R4

2019.07.PM14

2019.07.PM13

2019.07.PM12

2019.07.PM11

2019.07.PM10

2019.07.PM09

2019.07.PM08

2019.07.PM07

2019.07.PM06

2019.07.PM05

2019.07.PM04

2019.07.PM03

2019.07.PM02

2019.07.PM01

2019.07.PM00

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2019.07.PM00
FINDING ID: 09/20/19: Accuity has kept the severity rating as Level 2 (Moderate). Although Risk Moderate

SUPPLEMENTAL RECOMMENDATION

Finalize the security management plan and processes.

CLOSURE REASON: Accuity agreed to submit future updates. The configuration management plan includes security management tasks and should be updated to include AWS plans and to show progress in providing due diligence over the compliance and security processes.

ANALYSIS

RECOMMENDATION

TYPE: CLOSURE

REASONS

10/25/19: Accuity agreed to submit future updates. The configuration management plan includes security management tasks and should be updated to include AWS plans and to show progress in providing due diligence over the compliance and security processes.

10/25/19: Accuity will continue to better understand the current IT Environment.

11/26/19: DLIR continues to document the security in March 2020, however, the eCMS Project was supposed to begin on June 3, 2019 but was not yet approved by DLIR. Based on the current project plan, the eCMS Project is supposed to begin on June 3, 2019 but was not yet approved by DLIR. As the project progresses, DLIR should continue to ensure that the project meets specific standards.

12/20/19: The configuration management plan has not yet been approved by DLIR. DataHouse and DLIR should collaborate and agree on the specific security requirements must be documented and approved prior to data migration and task dependencies and other document deliverables and not in an Application Security Management Plan.

12/20/19: DLIR should also consider security controls for system data in place by data migration. DataHouse also clarified that they are only responsible for application security management plans.

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 security management plan.

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.

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.

12/20/19: There was confusion about configuration management plans to prepare a configuration management plan.

12/20/19: There was confusion about configuration management plans to prepare a configuration management plan.

10/25/19: No updates to report.

12/20/19: There was confusion about configuration items and required DLIR approval to track a comprehensive configuration management plan.

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10/25/19: No updates to report.

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12/20/19: There was confusion about configuration items and required DLIR approval to track a comprehensive configuration management plan.

10/25/19: No updates to report.
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 steering committee.

The DataHouse proposal and Project Management Plan (version 1.2) make meaningful progress toward establishing a formal steering committee. Currently, the DCD Executive Sponsor is assigned the authority in references to a steering committee, however, a formal committee was not formally operationalized.

The DataHouse Case Management solution has demonstrated genuine commitment to the success of the project. Many members of the DataHouse team have contributed to the following successes:

- Demonstrated genuine commitment to what's best for the project and have even proposed improvements.
- Openly communicated solution options including rationale for optimal design and configuration.
- Encouraged DLIR SMEs to really explore opportunities for business process and system and business needs are thoroughly understood.
- Worked closely with DLIR subject matter experts (SMEs) to ensure user acceptance of the solution, including how the data will be reported.
- Demonstrated and validated user real-world needs were being met.
- Demonstrated engagement of DLIR team members.
- Demonstrated discipline and problem-solving skills.
- Demonstrated openness to work towards a master RTM.
9/20/19: In 2016, DLIR convened a Working Group (WG) consisting of stakeholders to discuss the unclear DataHouse contract terms. DLIR has decided to address this finding through updates of project documents and project plans. Otherwise, the discussions due to her experience with the DLIR Project Manager and her position as a dedicated Project Sponsor have been more openly discussed and plan to be incorporated within project plans. DataHouse has shown an openness to develop and continuously update the data model to align with the planned course of action.

9/20/2019: DLIR plans to hold staff training to share new electronic filing guidelines and to provide ongoing training and education on electronic filing. This timeline was decided on after discussions with the Attorney General's office on September 17, 2019. Accuity has observed that DLIR has led the contact discussions and negotiations with AG.

9/20/2019: The Budget Office and Budget (BOB) worked closely with the Attorney General's office on the Fiscal Year 2023 budget request and worked closely with the BOB on the Fiscal Year 2023 budget request. In addition, DLIR is forming a DLIR IT Steering Committee to provide oversight to the implementation of the new system. The Budget Office and Budget (BOB) are working closely with the Attorney General's office on the Fiscal Year 2023 budget request.
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<th>RECOMMENDATION ID</th>
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<th>SUPPLEMENTAL RECOMMENDATION</th>
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<tbody>
<tr>
<td>2019.07.PM05.R2</td>
<td>Communicate the approach for executing Scrum phases to all team members and impacted stakeholders.</td>
<td>• Many of the DataHouse project team members work remotely and are unable to work on-site.</td>
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**Recommendation:**
- Implement an approach for ensuring Scrum phases is always executed and impacted stakeholders.
**FINDING ID**

**Issue**

N/A

**ANALYSIS**

09/20/19: Accuity has kept the severity rating as Level 2 (Moderate) as a High

**CLOSED DATE**

The original solution proposed by Update the Content Management

**RECOMMENDATION**

09/20/19: In July 2019, DataHouse presented AWS as a potential alternative

**FINDING STATUS UPDATE**

Not identifying and addressing BPR

**RECOMMENDATION ID**

Prepare a comprehensive technical

**CLOSURE REASON**

SUPPLEMENTAL RECOMMENDATION

09/20/19: Accuity decreased the severity rating from Level 1 (High) to Level 2

The Content Management design

**ORIGINAL**

**ASSIGNMENT**

Integrations

Hardware and System Software,

Reengineering development may require additional effort.

Costs are the result of adding new requirements to design documents. The data management and development may require additional effort.

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**REPORT**

5/25/2017

1. The original solution was Procurement

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**EXHIBITS**

5/25/2017

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<tr>
<td>2019.07.IT04</td>
<td>Data Conversion</td>
<td>Risk</td>
<td>Moderate</td>
<td>N/A</td>
<td>A Content Management data conversion 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 DataHouse on June 13, 2019 but not yet approved by DLIR. The document was drafted based on requirements that were outdated. Furthermore, the Content Management Conversion and Migration (version 0.0) document indicated that changes to the requirements after a certain point in the project may cause additional effort to refactor 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 should be remediated immediately and the data conversion plan updated accordingly.</td>
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<tr>
<td>2019.07.IT04.R1</td>
<td>Update the Content Management data conversion plan.</td>
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**Closed:** 09/20/19: Accuity has updated 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 are no significant impacts to the design or requirements document.

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.

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**Closed:** 11/22/2019: Accuity reviewed the taxonomy mapping with the primary stakeholder and determined that there are no significant impacts to the design or requirements document.