August 11, 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 (1)
Disability Compensation Division’s Modernization Project – Electronic Case Management System (eCMS)

MONTHLY ON-SITE IV&V REVIEW REPORT
June 26, 2020 | Version 1.0

REPORT FINALIZED
July 31, 2020
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<td>Monthly On-site IV&amp;V Review Report Draft created</td>
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<td>07/31/20</td>
<td>Monthly On-site IV&amp;V Review Report Final made change on page 5 based on comment submitted in Appendix F.</td>
<td>Julia Okinaka</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 developing both the Content Management and Case Management solution components for Phase 1. In response to COVID-19 impacts to the eCMS Project, the project is also beginning the planning stage of Phase 2. The focus of our IV&V activities for this report included the completion of a two-month evaluation of requirements management and testing, review of change management processes, and the start of a two-month evaluation of security. We will continue our review of security through the next report for a more in-depth assessment.

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 June 26, 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.
Deficiencies were observed that merit attention and remediation in a timely manner.

**PROJECT ASSESSMENT**

**SUMMARY RATINGS**

**OVERALL RATING**

As of June 26, 2020

- **PROGRAM GOVERNANCE**: G
- **PROJECT MANAGEMENT**: R
- **TECHNOLOGY**: Y

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

**SEVERITY RATINGS BY ASSESSMENT AREA**

- **PROGRAM GOVERNANCE**: 1 HIGH, 10 MEDIUM, 2 LOW, 4 PRELIM, 10 POSITIVE
- **PROJECT MANAGEMENT**: 1 HIGH, 10 MEDIUM, 4 LOW, 2 PRELIM, 4 POSITIVE
- **TECHNOLOGY**: 1 HIGH, 10 MEDIUM, 4 LOW, 2 PRELIM, 10 POSITIVE

**PROJECT BUDGET**

- **MILLIONS**: $3.2 M

  - **INVOICED**
  - **TOTAL**

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

**PROJECT PROGRESS**

- **AS OF 6/12/20. IV&V UNABLE TO VERIFY %**

**PHASE 1**

- **ORIGINAL**
- **ACTUAL**
- **REVISED**
- **DELAYED**

- **PLAN**:
  - AUG 2018
- **DESIGN**: Aug 2018
- **BUILD**: DEC 2019
- **TEST**: Aug 2020

- **DEPLOY**: NOV 2, 2020

  - **5 MONTHS BEHIND**

  *** Go-live dates to be revised due to COVID-19.

**PHASE 2**

- **PLAN**: JUNE 2020
- **DESIGN**: FEB 2021
- **TEST**: OCT 2021
- **BUILD**: JUNE 2022

- **DEPLOY**: MAR 31, 2022

  **** Based on high-level timeline. Detailed schedule pending.
### Overall

DataHouse continues to be flexible and supportive as DLIR adjusts to evolving circumstances. DataHouse proposed a high-level plan and timeline to move Phase 2 project work up in an effort to keep the project moving forward with limited DLIR project resources. DLIR approved the change request but additional clarity is needed regarding the path forward. Details regarding tasks, dates, and specific State resources are critical to minimize further delays as the COVID-19 pandemic is still significantly limiting the availability of DCD, DLIR Electronic Data Processing Systems Offices (EDPSO), and the Office of Enterprise Technology Services (ETS) resources. A detailed schedule for at least the next rolling two months will help State resources to have a clear understanding of upcoming project assignments and sufficient lead time to be able to adequately prepare for and complete project tasks on-time. Understandably the project pace slowed over the last few months as the project team was forced to make adjustments due to the pandemic, however, the eCMS Project will increasingly be at risk unless DLIR and DataHouse are able to work together to rebuild momentum, increase efficiency, and improve project performance within the project budget and resource constraints.

### Program Governance

The eCMS Project Executive Steering Committee (ESC) discussed major project decisions and issues including the plan to move Phase 2 project work up. Continued ESC guidance and oversight will help the project make adjustments to working with limited budget and resource options.

### Project Management

A majority of the DLIR project resources, including the DLIR Project Manager, are still reassigned or unavailable to the eCMS Project. A few were able to participate during the current month on a limited basis and additional DLIR project resources are expected to have some availability in the upcoming months as DCD employees are slowly transitioned back from the Unemployment Insurance (UI) Division. Without a dedicated DLIR Project Manager, many project management activities are not being consistently or effectively performed and DLIR review of a few key project deliverables is still on hold. Additionally, there has not been significant progress to address prior IV&V findings (refer to Appendix D: Prior Findings Log) related to a number of foundational project management processes. With the start of the planning stage of Phase 2, this is a great opportunity to review the effectiveness of current project processes and reflect on lessons learned on the project to-date. Making improvements to and addressing prior IV&V findings regarding foundational project processes will help to minimize delays and risks, manage limited budget and resources, and better position the project to handle and adjust to changes going forward.

### Technology

The Content Management build is nearly complete and is open for an additional change request, the Amazon Web Services (AWS) environments, and the integration with Case Management. DataHouse ran a vulnerability scan for AWS resulting in a significant number of findings. DataHouse is in the process of remediating findings and plans to complete the remediation in July. For Case Management, DLIR was able to bring in necessary Subject Matter Experts (SMEs) for Epic 3 review sessions. DLIR plans to have SMEs review and provide feedback on the Epic 2 and 3 build in July. DLIR project resources are needed to perform key data conversion, user acceptance testing (UAT), and security management activities.
FINDINGS AND RECOMMENDATIONS BY ASSESSMENT AREA

OVERALL RATING

The overall rating is assigned based on the criticality ratings of the IV&V Assessment Categories and the severity ratings of the underlying findings (see Appendix A: IV&V Criticality and Severity Ratings). The tables below summarize the criticality ratings for each IV&V Assessment Category in the three major IV&V Assessment Areas. One IV&V Assessment Category improved from the prior report while the rest remained the same. The overall rating primarily reflects the need to improve many foundational project processes as well as the impact of the COVID-19 pandemic on the availability of DLIR project resources. The lack of adequate DLIR project resources significantly slowed the pace of the project and deficient foundational project processes have limited the project’s ability to respond and adjust.

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<td>Data Conversion</td>
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## PROGRAM GOVERNANCE

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<td>Governance Effectiveness</td>
<td>The eCMS Project Executive Steering Committee (ESC) discussed major project decisions and issues including the plan to move Phase 2 project work up and AWS remediation. ETS provided a resource to supplement EDPSO’s limited availability to review AWS security. Providing resource options such as this are extremely valuable to the project. Continued ESC guidance and oversight will help the project make adjustments to working with limited budget and resource options.</td>
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<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Benefits Realization</td>
<td>No significant updates since the prior report. DLIR still needs to begin collecting and monitoring success metrics data (2019.07.PG05).</td>
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## Findings and Recommendations

### APR MAY JUN IV&V ASSESSMENT CATEGORY

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### Project Organization and Management

DataHouse continues to be flexible and supportive as DLIR adjusts to evolving circumstances. The DataHouse Project Manager is working with the DCD Executive Sponsor's limited capacity to coordinate project activities. Without a dedicated DLIR Project Manager, many project management activities are not being consistently or effectively performed, project deliverables are not reviewed timely, and little progress to address prior IV&V findings was made. The COVID-19 change request with a high-level plan and timeline to move Phase 2 project work up was approved but additional clarity is needed regarding the path forward (2020.03.PM01) including updates to impacted project plans and stakeholders (2019.09.PM01). Prior key change requests for AWS and project schedule changes are still pending. DLIR’s review of project deliverables, including DataHouse’s test plan and AWS design document and a third-party vendor’s requirements assessment results, are also not yet complete (2019.07.PM03). Improvements in project organization and collaboration between DLIR and DataHouse (2019.07.PM02) are not possible at this time due to limited availability of DLIR project resources and should be reassessed as resources return to the project. With the start of the planning stage of Phase 2, this is a great opportunity to review the effectiveness of current project processes and reflect on lessons learned on the project to-date. Making improvements to foundational project processes will help to minimize delays, manage costs, and better position the project to handle and adjust to changes going forward.
### Findings and Recommendations

#### APR MAY JUN IV&V ASSESSMENT CATEGORY IV&V OBSERVATION

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#### Scope and Requirements Management

The DataHouse Case Management development team continues to refine user stories during sprint review sessions. DLIR’s review of their third-party vendor’s requirements assessment results is still pending. IV&V’s in-depth review of requirements reconfirmed that documentation of requirements (e.g., functional, integrations, security, performance, hardware, AWS, acceptance criteria) is still incomplete (2019.07.PM10) and traceability needs improvement (2019.10.PM01). Requirements processes, roles, and responsibilities should be reevaluated and rediscussed for Phase 2.

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#### Cost, Schedule, and Resource Management

The COVID-19 pandemic is still significantly limiting the availability of DCD, DLIR EDPSO, and ETS resources (2020.03.PM01). DLIR substituted assigned SMEs and DataHouse proposed shifting work in an effort to keep the project moving forward. DLIR should keep exploring options to obtain necessary project resources (2019.07.PM14) and optimize utilization of assigned resources (2019.09.PM02). DataHouse is still in the process of updating the project schedule for the new plan. A detailed project schedule with specific tasks, dates, and required hours and resources for at least the next rolling two months will help State resources to have a clear understanding of upcoming project activities. This will also provide sufficient lead time for State resources to be able to adequately prepare for and complete project tasks. Understandably there are many unknowns in the long-term project schedule and availability of resources, however, improvements to schedule management processes (2019.07.PM13) are critical to minimizing further delays. Improvements are also needed for cost management (2019.07.PM12) to better track and monitor costs. DataHouse’s contract payment schedule for Phase 1 was not revised for changes in completion of milestones.

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### Findings and Recommendations

#### IV&V Assessment Category: Risk Management
- **FINDINGS**: New 1  Open 0  Closed 0
- **IV&V Observation**: DataHouse and DLIR discuss and independently log risks and issues. DataHouse and DLIR need to work together to properly manage risks and improve the risk management process (2019.07.PM09). Additional focus on timely developing and executing mitigation plans for critical risks and issues will help to reduce individual threats and overall project risk exposure including those caused by COVID-19 (2020.03.PM01).

#### IV&V Assessment Category: Communications Management
- **FINDINGS**: New 0  Open 2  Closed 0
- **IV&V Observation**: Monthly ESC meeting and weekly project status meetings with the DataHouse Project Manager and the DCD Executive Sponsor continued. Other standing team meetings and planned stakeholder communications are on hold due to unavailability of DLIR project resources (2020.03.PM01). DLIR initiated communications with external stakeholders regarding upcoming changes to the electronic form submittal process. Improvements are needed to increase the effectiveness and timeliness of project team (2019.07.PM06) and stakeholder (2019.07.PM07) communications.

#### IV&V Assessment Category: Organizational Change Management (OCM)
- **FINDINGS**: New 0  Open 1  Closed 0
- **IV&V Observation**: A structured OCM approach is still needed (2019.07.PM08) to ensure stakeholders accept and embrace changes. DataHouse plans to draft communications for DLIR to garner external stakeholders support for adopting the new electronic form submittal process.

#### IV&V Assessment Category: Business Process Reengineering (BPR)
- **FINDINGS**: New 0  Open 0  Closed 0
- **IV&V Observation**: BPR improvements continue to be delivered through Case Management development sprints.

#### IV&V Assessment Category: Training and Knowledge Transfer
- **FINDINGS**: New 0  Open 0  Closed 0
- **IV&V Observation**: Significant training and knowledge transfer activities are not yet occurring. The Content Management training is on hold due to unavailability of DLIR project resources (2020.03.PM01). Training materials drafted by the Content Management development team are pending DataHouse Project Manager review.
## Findings and Recommendations

### IV&V Assessment Category

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### IV&V Observation

- **Unavailability of key DLIR project resources (2020.03.PM01)** is impacting both Content Management and Case Management.
  
  The Content Management build is nearly complete and is open for completion of one remaining change request, the AWS environments, and the integration with Case Management (Issue #15 DataHouse RAID Log February 2020). DLIR SMEs are needed for review, training, and testing of the Content Management solution.

  For Case Management, DLIR was able to bring in necessary SMEs for Epic 3 review sessions. DLIR plans to have SMEs review and provide feedback on the Epic 2 and 3 build in July. DataHouse and DLIR are evaluating options for completing Epic 4 and Phase 1 work with available or substitute SMEs.

  In an effort to keep the project and development moving forward within DLIR project resource constraints, DataHouse and DLIR agreed to move Phase 2 work up.

  The interface solution (2019.07.IT02) remain unclear. Options are being explored to overcome limitations of the Content Management solution to provide the desired user experience integration with the Case Management solution. IV&V does not have full visibility of integrations to provide a complete assessment.

  M&O roles and responsibilities (2019.09.IT02) still need further clarification.
**Findings and Recommendations**

**APR MAY JUN IV&V ASSESSMENT CATEGORY**

### Design

- **Design**
  - The Content Management and Case Management designs continue to be refined during the Build stage. Security design is covered in the Security IV&V Assessment Category.

### Data Conversion

- **Data Conversion**
  - Content Management data conversion activities are awaiting remediation of AWS environments. Case Management data conversion activities are on hold for Epic 4. DLIR and DataHouse’s data conversion plans and processes need to be developed or further clarified (2019.11.IT01). There is limited availability of DLIR project resources to perform data conversion activities (2020.03.PM01). Additionally, there is a potential impact on data conversion due to the unsupported legacy system (2019.09.IT03).

### Quality Management and Testing

- **Quality Management and Testing**
  - As a part of the Scrum methodology, user review and feedback are a part of each sprint and epic. The DataHouse Case Management development team previously discussed a process for DLIR to perform a lite UAT review of each completed user story after each epic. Completion of the Epic 2 lite review was originally targeted for March 2020 but was put on hold due to unavailability of DLIR resources (2020.03.PM01). DLIR plans to have SMEs perform the lite UAT review on the Epic 2 and 3 builds in July. DLIR SMEs are also needed to perform the pending Content Management UAT and DLIR project resources are needed to prepare the DLIR test plan (2019.10.IT01). DLIR’s review of DataHouse’s test plan is still pending and additional clarification of DataHouse’s test plan is still needed (2020.02.IT01). IV&V does not have full visibility to provide a complete assessment of ongoing DataHouse testing. The DataHouse and DLIR quality management plans have not yet been finalized (2019.07.IT05).
### Findings and Recommendations

**APR** | **MAY** | **JUN** | **IV&V ASSESSMENT CATEGORY** | **IV&V OBSERVATION** | **FINDINGS**
---|---|---|---|---|---
|  |  |  | Configuration Management | No significant updates since the prior report. DataHouse has drafts of the configuration management approaches for the Content Management and Case Management development teams, however, a comprehensive configuration management plan including the DLIR approval process is still pending (2019.07.IT06). | 0 1 0 |
| Y | Y | Y | Security | DLIR’s security assessment of AWS was previously on hold due to unavailability of DLIR project resources (2020.03.PM01). To keep the project moving forward, ETS provided a resource to supplement EDPSO’s limited availability to review AWS security. DataHouse ran a vulnerability scan for AWS resulting in a significant number of findings. DataHouse is in the process of remediating the findings and plans to complete the remediation in July. IV&V will continue an evaluation of security and the AWS remediation as a focus area in July 2020. Formalizing DLIR’s Security Management Plan (2019.07.IT07) and DLIR security policies (2019.10.IT02) are pending and expected timelines for completion are still unknown. | 0 2 0 |
Appendix A: IV&V Criticality and Severity Ratings

IV&V CRITICALITY AND SEVERITY RATINGS

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

Criticality Rating

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

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

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

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

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

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

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

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

TERMS

POSITIVE
Celebrates high performance or project successes.

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

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<td>ADKAR®</td>
<td>Prosci ADKAR: Awareness, Desire, Knowledge, Ability, and Reinforcement</td>
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<td>BABOK® v3</td>
<td>Business Analyst Body of Knowledge</td>
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<tr>
<td>DAMA-DMBOK® v2</td>
<td>DAMA International’s Guide to the Data Management Body of Knowledge</td>
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<td>NIST 800-53 Rev 4</td>
<td>National Institute of Standards and Technology (NIST) Security and Privacy Controls for Federal Information Systems and Organizations</td>
</tr>
<tr>
<td>NIST Cybersecurity Framework v1.1</td>
<td>NIST Framework for Improving Critical Infrastructure Cybersecurity</td>
</tr>
<tr>
<td>LSS</td>
<td>Lean Six Sigma</td>
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</table>
# Appendix C: Interviews, Meetings, and Documents

## Interviews

<table>
<thead>
<tr>
<th>DATE</th>
<th>INTERVIEWEE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
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</table>

## Meetings

<table>
<thead>
<tr>
<th>DATE</th>
<th>MEETING DESCRIPTION</th>
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<tbody>
<tr>
<td>05/28/20</td>
<td>Case Management Hearing Matrix Meeting</td>
</tr>
<tr>
<td>05/29/20</td>
<td>ETS Meeting</td>
</tr>
<tr>
<td>06/02/20</td>
<td>Case Management API for Carriers</td>
</tr>
<tr>
<td>06/04/20</td>
<td>IV&amp;V Update and Planning Meeting</td>
</tr>
<tr>
<td>06/05/20</td>
<td>AWS Security Meeting</td>
</tr>
<tr>
<td>06/09/20</td>
<td>Requirements Working Session</td>
</tr>
<tr>
<td>06/10/20</td>
<td>IV&amp;V DataHouse Update Meeting</td>
</tr>
<tr>
<td>06/10/20</td>
<td>Requirements Working Session</td>
</tr>
<tr>
<td>06/12/20</td>
<td>Monthly eCMS Steering Committee Meeting</td>
</tr>
<tr>
<td>06/15/20</td>
<td>Requirements Working Session</td>
</tr>
<tr>
<td>06/16/20</td>
<td>DataHouse Status Meeting</td>
</tr>
<tr>
<td>06/16/20</td>
<td>Requirements Working Session</td>
</tr>
<tr>
<td>06/25/20</td>
<td>Case Management Sprint 3.1 and 3.2 Review Meeting</td>
</tr>
<tr>
<td>06/26/20</td>
<td>Case Management Sprint 3.3 Review Meeting and Epic 2 Discussion</td>
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## DOCUMENTS

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DOCUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request for Proposal</td>
<td>State of Hawaii DLIR DCD RFP No. RFP-17-002-DCD (Release Date 04/12/18)</td>
</tr>
<tr>
<td>DataHouse Proposal</td>
<td>DataHouse ECMS Best and Final Offer (BAFO) Proposal (Dated 06/20/18)</td>
</tr>
<tr>
<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>
</tr>
<tr>
<td>Contract</td>
<td>Contract between State of Hawaii and DataHouse Consulting Inc. (Effective 08/27/18)</td>
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<tr>
<td>Project Management</td>
<td>DataHouse Project Management Plan 1.3 (Updated 08/30/19)</td>
</tr>
<tr>
<td>Project Management</td>
<td>DataHouse Project Status Report (Status Date 06/24/20 for reporting period 04/01 – 04/15/20, finalized 05/26/20)</td>
</tr>
<tr>
<td>Project Management</td>
<td>DataHouse Project Status Report (Status Date 05/24/20 for reporting period 04/16 – 04/30/20, finalized 05/26/20)</td>
</tr>
<tr>
<td>Project Management</td>
<td>DataHouse Project Status Report (Status Date 06/21/20 for reporting period 05/01 – 05/15/20, pending DLIR approval)</td>
</tr>
<tr>
<td>Project Management</td>
<td>DataHouse Project Status Report (Status Date 06/21/20 for reporting period 05/16 – 05/31/20, pending DLIR approval)</td>
</tr>
<tr>
<td>Project Management</td>
<td>Change Log (Updated 06/19/20)</td>
</tr>
<tr>
<td>Project Management</td>
<td>Change Request (CR008) COVID-19</td>
</tr>
<tr>
<td>Costs</td>
<td>Change Request (CR008) Attachment – Phase 2 and 3 Payment Schedule</td>
</tr>
<tr>
<td>Risk and Issues</td>
<td>Risk Action Issue Decision (RAID) Log (Updated 06/19/20 by DataHouse Project Manager)</td>
</tr>
<tr>
<td>Schedule</td>
<td>eCMS Microsoft Project Plan as of 06/12/20 (MPP file)</td>
</tr>
<tr>
<td>Requirements</td>
<td>Case Management User Stories (06/15/20)</td>
</tr>
<tr>
<td>Development</td>
<td>DataHouse Development Team Status Meeting Minutes for 05/27/20</td>
</tr>
<tr>
<td>Development</td>
<td>DataHouse Development Team Status Meeting Minutes for 06/03/20</td>
</tr>
<tr>
<td>Development</td>
<td>DataHouse Development Team Status Meeting Minutes for 06/10/20</td>
</tr>
<tr>
<td>Development</td>
<td>DataHouse Development Team Status Meeting Minutes for 06/17/20</td>
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## DOCUMENTS (CONTINUED)

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DOCUMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development</td>
<td>DataHouse Email re: Electronic File Sizes (06/16/20)</td>
</tr>
<tr>
<td>Development</td>
<td>Hearings Type, Purpose, Required Documents Matrix (06/16/20)</td>
</tr>
<tr>
<td>Development</td>
<td>DataHouse Email re: Hearing Type, Purposes, and Required Docs (06/16/20)</td>
</tr>
<tr>
<td>Communication</td>
<td>DCD Email to Carrier Pilot Group (06/22/20)</td>
</tr>
<tr>
<td>Security</td>
<td>AWS Inspector Vulnerability Scan on UAT as of 05/30/20 (PDF and Excel file)</td>
</tr>
<tr>
<td>Security</td>
<td>AWS Inspector Vulnerability Scan on UAT as of 06/26/20 (Excel file)</td>
</tr>
<tr>
<td>Security</td>
<td>DataHouse Email re: Status of Remediation of AWS UAT Environment (06/26/20)</td>
</tr>
<tr>
<td>Forms</td>
<td>WC-1 Employer's Report of Industrial Injury (rev 05/2020)</td>
</tr>
<tr>
<td>Forms</td>
<td>WC-2 Physician's Report (rev 05/2020)</td>
</tr>
<tr>
<td>Forms</td>
<td>WC-3 Carrier's Case Report (rev 05/2020)</td>
</tr>
<tr>
<td>Forms</td>
<td>WC-5 Employee's Claim for Workers' Compensation (rev 05/2020)</td>
</tr>
<tr>
<td>Forms</td>
<td>WC-5A Dependents' Claim for Workers' Compensation (rev 05/2020)</td>
</tr>
<tr>
<td>State</td>
<td>State of Hawaii EM 20-05 Interim Budget Execution Policies and Instructions for FY 21 (06/19/20)</td>
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</table>
Appendix D: Prior Findings Log
### Appendix D: Prior Findings Log

<table>
<thead>
<tr>
<th>COMPLIANCE CATEGORY</th>
<th>NUMBER</th>
<th>DATE</th>
<th>CRITICALITY</th>
<th>SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization and Management</td>
<td>2020.03.PM01</td>
<td>04/21/2020</td>
<td>High</td>
<td>The COVID-19 pandemic is impacting the state’s ability to effectively execute the project. The COVID-19 pandemic has created uncertainty with respect to the timely completion of the project and its costs. DLIR SMEs and DataHouse have prioritized other state-level initiatives and are currently unavailable.</td>
</tr>
</tbody>
</table>

The following is a summary of the status and tasks:
- **2020.03.PM01.R1** Explore possible ways to keep the project moving forward with available resources.
  - Evaluate DLIR SME 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, including people and quality impacts.
  - Evaluate the ability to maintain stakeholder and community resources as well as the amount of time needed to properly and accurately respond to COVID-19.
  - To prevent further delay, it is critical for DLIR to carefully plan how to quickly plan out the next project course, identify impacts, and develop risk mitigation strategies.

- **2020.03.PM01.R3** Accurately decreased the severity rating from Level 1 (High) to Level 2 (Moderate) as DataHouse presented the high-level plan and timeline to move Phase 2 project work up. Risks and risk mitigation plans related to the new plan also need to be managed and communicated.

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 undetermined.

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 impacted under the Project Organization and Management IV&V Examination Category, its finding also impacts the critically rating for the Governance Effectiveness, Cost, Schedule and Resource Management, Risk Management, Communications Management, Data Conversion, Quality Management and Testing, and Security categories.

IV&V is committed to effectively leveraging and utilizing the project team, project resources, and resources from other DLIR projects to meet project goals.

DataHouse will continue to evaluate COVID-19 impacts and plans.
### Overview of Data Conversion Plans and Activities

The DataHouse Test Plan is incomplete and does not adequately inform DLIR of the testing approach and scope which may hinder traceability, which may impact the ability to ensure the overall eCMS solution fulfills all requirements and provides context and expectations for design, development, and testing.

**Added complexity to traceability is due to the current project organization.** Requirements management tools which were developed separately from the DataHouse contract requirements and test documentation have been maintained by the Content Management and Case Management teams. As a result, there is duplication of requirements in the RTM which will likely become more complex as requirements change throughout the life of the project. The eCMS project management team will work with the Content Management and Case Management teams to achieve traceability between the RTM and requirements management tools.

**Recommendations:***
- **Addition of a requirements management tool with greater functionality.**
  - Ongoing.

#### Traceability:

<table>
<thead>
<tr>
<th>FINDING</th>
<th>RECOMMENDATION</th>
<th>STATUS</th>
<th>REASON</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020.02.IT01.R1</td>
<td>Improved DLIR understanding of the data conversion process.</td>
<td>Completed</td>
<td>02/21/20: DataHouse provided additional details of Case Conversion tasks and dates.</td>
</tr>
</tbody>
</table>
Quality Management and Testing

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 implementation, the test plan was revised to December 2019, due to resource constraints. The revised plan was approved by the DataHouse team.

The DataHouse test activities are scheduled to begin in November 2019. DLIR needs to understand DataHouse’s test strategy and test needs. As DataHouse test activities are scheduled to begin in November 2019, DLIR needs to establish their own test strategy as well as identify, train, and schedule DLIR test resources.

Security

Security requirements may impact the security and privacy of the data and may lead to project delays.

DLIR currently does not have formal security policies to determine security requirements for the eCMS Project, and does not have sufficient personnel to place to adequately protect at Project data. The lack of policies, primarily impacts the completion of the AWS setup and implementation. Management would consider security requirements for their cloud setup and implementation before the implementation of security procedures. The determination of security requirements is critical as good security practices are strongly advised for the AWS setup and testing activities.

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### Project Organization and Management

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019.09.PM01</td>
<td>Issue Moderate High The documented change management process was not followed as prescribed.</td>
</tr>
<tr>
<td>2019.09.PM01.R1</td>
<td>Documented changes in Change Requests, with an impact assessment, and the Change Log in accordance with the Project Management Plan.</td>
</tr>
<tr>
<td>2019.09.PM01.R2</td>
<td>Refine the change management process for greater clarity and effectiveness. Consider setting thresholds or criteria for changes that go through different approval processes. Define the different approval processes (e.g., project manager, product owners, change control board, steering committee).</td>
</tr>
<tr>
<td>2019.09.PM01.R2</td>
<td>Implement additional columns in the Change Log to ensure updates are made to all impacted project plans, documents, or deliverables and changes are communicated to all impacted stakeholders.</td>
</tr>
</tbody>
</table>

#### Findings

- **Findings:**
  - The Project Management Plan (version 1.3) documents the change management process that includes Change Requests, impact assessment and a Change Log. The change to AWS (refer to finding 2019.07.IT01 in Appendix D) and the revision of the Content Management go-live date were approved by DLIR but not documented in Change Requests or a Change Log. Additionally, the change management process does not have built-in mechanisms to ensure that impacted documents are updated for the change and changes are appropriately communicated to impacted stakeholders.

#### Findings Status Updates

- **Open 10/25/19:** DataHouse began to summarize changes in the Change Log.
- **11/22/19:** Entries were added to the Change Log but the Change Requests for the project schedule and AWS were still not drafted.
- **12/20/19 and 01/24/20:** No updates to report.
- **02/21/20:** Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as the change requests identified in the September 2019 report are still outstanding and need to be finalized and agreed upon soon. Currently, the draft 2019 change request is still outstanding but will not be revised or approved as it does not meet the criticality threshold set by DLIR for a project level change. Additionally, changes to baseline plans (e.g., Case Management data conversion 2019.11.IT01) and reasons for changes should be documented and approved.
- **03/27/20:** No updates to report.
- **04/24/20:** Two change requests for the Content Management solution were approved by DLIR. Critical change requests for AWS still need to be agreed on and approved. Changes that were approved by the Change Control Board need to be formally documented in the Change Log. Additional changes to baseline plans need to be documented and approved. (2019.12.PM01) and reasons for changes should be documented and approved.
- **05/22/20:** DataHouse is in the process of drafting the change request for the proposed plan to address COVID-19 impacts. The change request should include an impact assessment as outlined in the Project Management Plan. A thorough analysis of the project is needed to ensure the proposed plan is feasible and effective.
- **06/26/20:** The COVID-19 change request was approved by DLIR, however, the change requests did not include a thorough impact analysis, risks and mitigation plans related to the new plan. DLIR requested further information on specific COVID-19 resource requirements, project schedule changes, documentation of the payment arrangement, reasons for schedule changes, and any risks and mitigation plans related to the proposed plan. The change requests also did not document the other options considered and reasons supporting the selection of the specific option. Other critical change requests identified in previous months are still pending.
- **07/20/20:** Critical change request approved by DLIR; however, the change requests did not include a thorough impact analysis, risks and mitigation plans related to the new plan (2019.10.PM03); details of required COVID-19 resources and adjustments needed to execute the new plan (2019.10.PM03), or resources in the Phase 1 schedule and payment schedule for the accelerated Phase 1 in the 2019.10.PM03. Other critical change requests identified in previous months are still pending.

Locally will review the change requests to ensure they are finalized and evaluated in the Change Log.
2019.09.PM02 10/25/19 and 11/22/19: Accuity will continue to monitor this preliminary concern as the testing, data conversion, and sprint reviews with stakeholders activities are underway.

Resource Management
12/20/19: This was changed to a risk in the December 2019 IV&V Monthly Report.
01/24/20: DLIR implemented a new tool to manage resource assignments and deadlines to better utilize and manage existing project resources. DLIR also plans to procure additional resources to support data conversion and testing activities.

02/21/20 and 03/27/20: No updates to report.
04/24/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) as the need to better estimate resource requirements and optimize utilization of limited DLIR project resources will be critical for making realistic and feasible adjustments to the project schedule to account for COVID-19 impacts.

05/22/20: Specific DLIR resource requirements should be included as a part of the proposed plan (refer to finding 2020.03.PM01), related change request.

DLIR developed a rough estimate of hours to perform scanning and data entry of paper documents. DLIR has not yet completed a test plan (refer to finding 2019.10.IT01), estimated resource requirements for testing, or formalized a plan for scheduling testers.

The IV&V recommendations made at 2019.07.PM14.R1 and 2019.09.PM02.R1 Develop procedures to estimate resources requirements. Consult DataHouse for input on upcoming activities that require DLIR resources and clarify procedures and responsibilities. Consider preparing a request for proposal (RFP) and include requirements for outsourcing. Consider periodically reconfirming and renewing resource commitments. Process and track resource changes. Consider working with managers of project resources to reassign team members' other job duties. Consider reassigning team members to other project tasks. Identify potential training needs. Consider developing an integrated resource and risk management plan. Establish target due dates to develop resources estimates for major project activities (e.g., data conversion, testing).

06/26/20: Consideration of the unsupported Lotus Notes was not included in the change request for COVID-19. It is still unclear what the new Phase 1 go-live date will be and plans to address potential risks for continued reliance on Lotus Notes.

03/27/20, 04/24/20, 05/22/20, 06/26/20: No updates to report.
06/26/20: DLIR resource requirements related to the new plan were not provided. DataHouse is still in the process of updating the project schedule for the new plan. With very limited availability of DCD, EDPSO, and ETS resources, it is critical that resources are managed effectively.

System Software, Support Processes and Integrations

Software and Hardware
10/25/19, 11/22/19, 12/20/19, 01/24/20 and 02/21/20: DLIR is working with the State of Hawaii State Procurement Office (SPO) and the vendor to get the maintenance service required.

Hardware and Integrations
03/27/20, 04/24/20, 05/22/20, 06/26/20: No updates to report. Accuity will continue to monitor this preliminary concern as plans for M&O are finalized.

COVID-19 responses should include consideration of Lotus Notes maintenance support if the Phase 1 go-live date and DLIR's reliance on Lotus Notes is extended.

06/26/20: Consideration of the unsupported Lotus Notes was not included in the change request for COVID-19. It is still unclear what the new Phase 1 go-live date will be and plans to address potential risks for continued reliance on Lotus Notes.

03/27/20, 04/24/20, 05/22/20, 06/26/20: No updates to report.
06/26/20: DLIR resource requirements related to the new plan were not provided. DataHouse is still in the process of updating the project schedule for the new plan. With very limited availability of DCD, EDPSO, and ETS resources, it is critical that resources are managed effectively.

Accuity will continue to review maintenance management practices.

IV&V Resource Management

2019.09.PM02.R2 Develop processes to optimize resource management practices. Consider preparing an RFP and include requirements for outsourcing. Consider periodically reconfirming and renewing resource commitments.

Funding
No updates to report.

IV&V Resource Management

2019.09.PM02.R1 Develop procedures to estimate resources requirements. Consult DataHouse for input on upcoming activities that require DLIR resources and clarify procedures and responsibilities. Consider preparing a request for proposal (RFP) and include requirements for outsourcing. Consider periodically reconfirming and renewing resource commitments. Process and track resource changes. Consider working with managers of project resources to reassign team members' other job duties. Consider reassigning team members to other project tasks. Identify potential training needs. Consider developing an integrated resource and risk management plan. Establish target due dates to develop resources estimates for major project activities (e.g., data conversion, testing).

06/26/20: Consideration of the unsupported Lotus Notes was not included in the change request for COVID-19. It is still unclear what the new Phase 1 go-live date will be and plans to address potential risks for continued reliance on Lotus Notes.

Accuity will continue to monitor this preliminary concern.
2019.07.PG05.R1 Formalize measurable goals and success metrics in a project charter. Consider financial, nonfinancial, tangible, and intangible metrics such as operational Key Performance Indicators (KPIs), customer or employee satisfaction, user adoption, return on investment, or cycle or processing times. Formulate project management, organizational change management, and benefits evaluation and management objectives as well as alignment to DLIR goals.

2019.07.PG05.R2 Collect baseline and project performance data. Consider methods for collecting data such as surveys, queries, observation, open forums, or actual performance testing. Consider sources of data such as legacy systems, operations, and internal and external stakeholders.

2019.07.PG05.R3 Use performance data to monitor or evaluate project or contractor performance. Consider methods for monitoring project performance, monitoring, observations, open forums, or actual performance testing. Consider sources of data such as legacy systems, operations, and internal and external stakeholders.

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9/20/19: Accuity decreased the severity rating from Level 1 (High) to Level 2 (Moderate). The DCD Business Manager has been assigned the task of developing and monitoring eCMS Project success metrics. The business manager will work with the support of the Executive Sponsor. The DCD Business Manager will develop project success metrics that will continue to be refined and finalized.

10/25/19: DLIR continued to refine the success metrics and began to identify data sources for baseline metrics. Success metrics are expected to be finalized and communicated to stakeholders in November 2019.

11/22/19 and 12/20/19: DLIR is close to finalizing and plans to post to the new DLIR website.

1/24/20: DLIR formalized project success metrics. DLIR still needs to communicate these measures of success and begin collecting data.

2/21/20: DLIR began to communicate project goals and success metrics to stakeholders through the DCD website.DLIR plans to also communicate the success metrics to the DataHouse development team and develop a timeline to collect baseline data for all metrics.

3/27/20: DLIR shared the goals and success metrics with the DataHouse Case Management development team. DLIR also developed a timeline to collect baseline data for all metrics, however, the timing may now be impacted by COVID-19.

4/24/20, 5/22/20, and 6/26/20: Progress on the success metrics stalled due to shifting priorities and changes in DLIR project resources. Accuity will continue to evaluate the collection and monitoring of success metrics data.

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Open
The eCMS Project does not have a project charter that would have helped to formalize the project goals, target benefits, and success metrics at the start of the project. Based on informal recommendations made by team members during the initial meeting, baseline goals are vitally important when implementing a project with an estimated time of completion of two years. The lack of clear and measurable goals and success metrics makes it difficult to determine if the project and technical solution will achieve the desired level of improvement or benefit that justify the property’s financial investment. Goals and success metrics need to be defined before going any further in the project as they should be guiding all key decisions throughout the entire project.
The eCMS Project has failed to achieve team synergy between DLIR and DataHouse, project team members and appear to work as separate teams instead of one. DataHouse works almost exclusively on design or development activities. The unclear contract terms regarding roles and responsibilities between DLIR and DataHouse and the physical separation of the project team, and limited collaboration or DLIR involvement from all project activities (refer to finding 2019.07.PG03) have contributed to the slack communications within the project team (refer to finding 2019.07.PM06). The Project Manager and DCD Executive Sponsor feel that there is more overall project cohesion and that the DataHouse Project organization may hinder project performance.

### ASSESSMENT

<table>
<thead>
<tr>
<th>ID</th>
<th>FINDING</th>
<th>CATEGORY</th>
<th>STATUS</th>
<th>DESCRIPTION</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019.07.PM01</td>
<td>Team synergy between DLIR and DataHouse is still weak.</td>
<td>High</td>
<td>Open</td>
<td>It appears that the DataHouse project team is working as separate teams instead of one. This has led to lack of collaboration and communication within the project team. The Project Manager and DCD Executive Sponsor feel that there is more overall project cohesion and that the DataHouse Project organization may hinder project performance.</td>
<td>Consider the need to include an outline of DLIR and DataHouse roles and responsibilities in a contract modification letter to DataHouse.</td>
</tr>
<tr>
<td>2019.07.PM02</td>
<td>The eCMS Project has failed to achieve team synergy between DLIR and DataHouse.</td>
<td>High</td>
<td>Open</td>
<td>The eCMS Project has failed to achieve team synergy between DLIR and DataHouse. The current project management process is missing key project management processes. The Project Manager and DCD Executive Sponsor feel that there is more overall project cohesion and that the DataHouse Project organization may hinder project performance.</td>
<td>Consider revising project management processes to include key project management processes.</td>
</tr>
<tr>
<td>2019.07.PM03</td>
<td>Roles and responsibilities for Content Management data conversion were clarified.</td>
<td>High</td>
<td>Open</td>
<td>Roles and responsibilities for Content Management data conversion were clarified. DataHouse has included DLIR in Content Management development but DLIR is not sufficiently included in DataHouse's data conversion, integrations, and testing activities. There is limited visibility and collaboration in other areas of the project which have impacted DLIR's understanding of and ability to properly prepare for upcoming tasks.</td>
<td>Consider the need to include an outline of DLIR and DataHouse roles and responsibilities in a contract modification letter to DataHouse.</td>
</tr>
<tr>
<td>2019.07.PM04</td>
<td>The project organization of the Case Management development team is working very well.</td>
<td>High</td>
<td>Open</td>
<td>The project organization of the Case Management development team is working very well. DLIR has limited visibility and collaboration in other areas of the project which have impacted DLIR's understanding of and ability to properly prepare for upcoming tasks.</td>
<td>Include DLIR in project activities and communications to increase DLIR and DataHouse project team cohesion.</td>
</tr>
<tr>
<td>2019.07.PM05</td>
<td>Due to COVID-19, DLIR project resources were unavailable to work on the project and DLIR cancelled all project meetings effective March 18, 2020.</td>
<td>High</td>
<td>Open</td>
<td>Due to COVID-19, DLIR project resources were unavailable to work on the project and DLIR cancelled all project meetings effective March 18, 2020. DataHouse continues to do what they can, however, project execution is impacted without DLIR participation on collaboration.</td>
<td>Consider revising project management processes to include key project management processes.</td>
</tr>
<tr>
<td>2019.07.PM06</td>
<td>The DataHouse Project Manager continues to work with the DCD Executive Sponsor's limited capacity to coordinate project activities. Significant improvements in project organization and collaboration are not possible at this time due to limited availability of DLIR project resources and should be reassessed as resources return to the project.</td>
<td>High</td>
<td>Open</td>
<td>The DataHouse Project Manager continues to work with the DCD Executive Sponsor's limited capacity to coordinate project activities. Significan improvements in project organization and collaboration are not possible at this time due to limited availability of DLIR project resources and should be reassessed as resources return to the project.</td>
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</tr>
</tbody>
</table>

### PROJECT UPDATES

- **04/24/20**: As the DLIR Project Manager was temporarily reassigned, weekly project status meetings are still on hold. Some of the Case Management sprint meetings resumed with a few DLIR project resources. A few project status meetings are tentatively scheduled for May 2020.
- **05/22/20**: Although the DLIR Project Manager is still reassigned, the DCD Executive Sponsor and the DataHouse Project Manager began holding weekly project status meetings. The weekly Scrum standup meetings for Case Management and periodic Content Management check-in meetings are still on hold.
- **06/26/20**: The DataHouse Project Manager continues to work with the DCD Executive Sponsor's limited capacity to coordinate project activities. Significant improvements in project organization and collaboration are not possible at this time due to limited availability of DLIR project resources and should be reassessed as resources return to the project.

Occasionally, it will be necessary to evaluate the clarity of roles and responsibilities and to improve the effectiveness of project organization.
Issue DataHouse prepares project deliverables and submits to DLIR for review.

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 report was not completed until February 2019. Despite the commencement of regular project status meetings between DataHouse and DLIR Project Managers, there has been a lack of communications regarding the upcoming build stage activities (refer to finding 2019.07.PM05). There has also been a lack of communications regarding the ongoing build stage activities (refer to finding 2019.07.PM06). The IV&V recommendations made at 2019.07.PM02.R2 and 2019.07.PM03.R1 regarding DataHouse meeting needs and including DLIR in sprint planning activities are needed only for sprint planning activities for the full sprint. Accuity will continue to evaluate the effectiveness of these project communication channels.

2019.07.PM03.R1 Implement daily touch point meetings between DataHouse and DLIR Project Managers.

2019.07.PM06.R1 Implement weekly meeting touch point between DataHouse Test Plan and DLIR Project Managers.

Although the DLIR Project Manager is still reassigned, the DCD Executive Sponsor and the DataHouse Project Manager began holding weekly project status meetings. All other standing meetings are still on hold. A few project status meetings are tentatively scheduled for May 2020. New methods need to be explored to ensure communications are timely and effective even with limited DLIR project resources.

2019.07.PM03, DLIR has been included in more DataHouse meetings including sprint planning, reviews, and retrospectives.

Accuity will continue to evaluate the effectiveness of the deliverable review and acceptance process.

2019.07.PM03.R3 Implement formal deliverable review and approval processes. Add both to the scope validation process for acceptance and the quality review process for communications (refer to finding 2019.07.IT02). Additionally, information regarding upcoming project activities is time sensitive and needs to be communicated to DLIR. 

DataHouse scheduled a deliverable review meeting for the AWS environment Design document but a meeting of the DataHouse Test Plan was not scheduled.

A meeting was scheduled for early March to discuss and review DataHouse's Test Plan, however, this meeting was cancelled due to COVID-19.

Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High) and reopened the 2019.07.PM03.R2 recommendation. DLIR's review and approval of DataHouse's AWS environment Test Plan are still pending. Delays in DLIR's review and approval of DataHouse deliverable review meetings (the completion of the current project), as was previously experienced. DLIR and DataHouse's evaluation of patterns for COVID-19 responses should include specific DLIR project management measures to perform timely deliverable reviews.

02/21/20: No updates to report.

By continuing to evaluate the effectiveness of the deliverable review and acceptance process.

2019.07.PM03.R2 Hold joint DLIR and DataHouse review and approval meetings to walk through deliverables.

Although Accuity observed DataHouse and DLIR meetings to review draft deliverables and DLIR has expressed greater satisfaction in the deliverable review and acceptance process, the process remains difficult to implement due to the resource constraints and lack of project management processes.

03/27/20: A meeting was scheduled for early March to discuss and review DataHouse's Test Plan, however, this meeting was cancelled due to COVID-19.

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, email) to communicate project status.

Accuity will continue to evaluate the effectiveness of the deliverable review and approval processes.

The current deliverable review and approval process has contributed to project delays and resulted in the acceptance of deliverables that do not meet industry standards.

2019.07.PM03.R1 Implement daily touch point meetings between DataHouse and DLIR Project Managers.

Accuity has kept the severity rating as Level 2 (Moderate).

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02/21/20: No updates to report.

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, email) to communicate project status.

Accuity will continue to evaluate the effectiveness of these project communication channels.

The IV&V recommendations made at 2019.07.PM02.R2 and 2019.07.PM03.R1 regarding DataHouse meeting needs and including DLIR in sprint planning activities are needed only for sprint planning activities for the full sprint. Accuity will continue to evaluate the effectiveness of these project communication channels.

2019.07.PM02.R1 Implement weekly meeting touch point between DataHouse Test Plan and DLIR Project Managers.

2019.07.PM03, DLIR has been included in more DataHouse meetings including sprint planning, reviews, and retrospectives.

2019.07.PM03, DLIR has been included in more DataHouse meetings including sprint planning, reviews, and retrospectives.

01/24/20: 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. New methods need to be explored to ensure communications are timely and effective even with limited DLIR project resources.

The current deliverable review and approval process has contributed to project delays and resulted in the acceptance of deliverables that do not meet industry standards.

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Although Accuity observed DataHouse and DLIR meetings to review draft deliverables and DLIR has expressed greater satisfaction in the deliverable review and acceptance process, the process remains difficult to implement due to the resource constraints and lack of project management processes.

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02/21/20: No updates to report.

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, email) to communicate project status.

Accuity will continue to evaluate the effectiveness of these project communication channels.

The IV&V recommendations made at 2019.07.PM02.R2 and 2019.07.PM03.R1 regarding DataHouse meeting needs and including DLIR in sprint planning activities are needed only for sprint planning activities for the full sprint. Accuity will continue to evaluate the effectiveness of these project communication channels.

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2019.07.PM03, DLIR has been included in more DataHouse meetings including sprint planning, reviews, and retrospectives.

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Accuity has kept the severity rating as Level 2 (Moderate).

Issue: 2019.07.PM03.R2 Hold joint DLIR and DataHouse review and approval meetings to walk through deliverables.

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02/21/20: No updates to report.

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, email) to communicate project status.

Accuity will continue to evaluate the effectiveness of these project communication channels.

The IV&V recommendations made at 2019.07.PM02.R2 and 2019.07.PM03.R1 regarding DataHouse meeting needs and including DLIR in sprint planning activities are needed only for sprint planning activities for the full sprint. Accuity will continue to evaluate the effectiveness of these project communication channels.
Further refine communication management plans. Segment stakeholders into groups by communication needs such as by department and job function (e.g., managers, supervisors, or interns and external stakeholders). The Communications Management Plan (CMP) is updated to reflect the stakeholder requirements by using communication methods listed in Datalabor’s Gmatrix. Communication activities are planned through surveys or interviews to identify pockets of resistance or adequately enable individual change. Create and mobilize a change coalition group of managers, supervisors, and key influencers. Implement reinforcement mechanisms to support change and increase adoption.

The project website was launched with high-level background, timeline, and success metrics. DLIR plans to develop videos as project communications. OCM was occurring indirectly through DLIR SME participation in project meetings, however, almost all DLIR SMEs are unable to participate in project meetings. New OCM methods need to be explored for DLIR SMEs as well as all impacted stakeholders. OCM activities are not executed continually or consistently to keep stakeholders engaged. Although projects may progress without a formal OCM approach, industry best practices support that a structured OCM approach compliments project management approaches in increasing probability of project success. Performing the activities with an 80/20 rule helps to better support projects, respect, and support individuals throughout the project and to ensure that the application is ultimately adopted and embraced by employees.

11/22/19: Accuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate) as plans to update the website and send out a letter to carriers regarding upcoming changes were not completed as expected. It is important for communications with impacted stakeholders to be executed timely.

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

03/27/20: No updates to report.

04/24/20: Accuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate). OCM was occurring indirectly through DLIR SME participation in project meetings, however, almost all DLIR SMEs are unable to participate in project meetings. New OCM methods need to be explored for DLIR SMEs as well as all impacted stakeholders.

05/25/20: OCM activities are not executed continually or consistently to keep stakeholders engaged. Although projects may progress without a formal OCM approach, industry best practices support that a structured OCM approach compliments project management approaches in increasing probability of project success. Performing the activities with an 80/20 rule helps to better support projects, respect, and support individuals throughout the project and to ensure that the application is ultimately adopted and embraced by employees.

06/29/20: Accuity decreased the severity rating from Level 2 (Moderate) to Level 3 (Low). Accuity will continue to evaluate the OCM approach and monitor the change resistance performance.

The CMP is updated to reflect the stakeholder requirements by using communication methods listed in Datalabor’s Gmatrix. Communication activities are planned through surveys or interviews to identify pockets of resistance or adequately enable individual change. Create and mobilize a change coalition group of managers, supervisors, and key influencers. Implement reinforcement mechanisms to support change and increase adoption.

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08/27/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 3 (Low). Accuity will continue to evaluate the OCM approach and monitor the change resistance performance.

The CMP is updated to reflect the stakeholder requirements by using communication methods listed in Datalabor’s Gmatrix. Communication activities are planned through surveys or interviews to identify pockets of resistance or adequately enable individual change. Create and mobilize a change coalition group of managers, supervisors, and key influencers. Implement reinforcement mechanisms to support change and increase adoption.

09/10/20: Accuity increased the severity rating from Level 3 (Low) to Level 2 (Moderate) as plans to update the website and send out a letter to carriers regarding upcoming changes were not completed as expected. It is important for communications with impacted stakeholders to be executed timely.

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11/04/20: OCM activities are not executed continually or consistently to keep stakeholders engaged. Although projects may progress without a formal OCM approach, industry best practices support that a structured OCM approach compliments project management approaches in increasing probability of project success. Performing the activities with an 80/20 rule helps to better support projects, respect, and support individuals throughout the project and to ensure that the application is ultimately adopted and embraced by employees.

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A formalized process should clearly define responsibilities and steps in identification, resolution and action items tracking, and escalation procedures. The project team must encourage open, transparent discussion about risks and issues.

2019.07.PM09.R2 Conduct regular meetings to discuss project risks and issues.

Include DataHouse and DLIR teams, on occasion, the executive steering committee (refer to finding 2019.07.IT.04). Perform a detailed review of new items, status of open items, risk/issue owners, and mitigation plans.

Risk Management 2019.07.PM09 Issue High Risks and issues have not been clearly identified, tracked, or reported resulting in the lack of understanding of potential impacts across project team members and there are no mitigation plans to adequately address them.

Only three risks and two issues have been identified by DataHouse on the project to date with no history of any risks being closed. DLIR project team was not tracking any of its own risks or issues. The DLIR 2019.07.PM09.R2 recommendation was not included in the risks and issues log, indicating an ineffective risk and issue management process. Based on information IV&V recommendation made during the assessment period, both DLIR and DataHouse have communicated plans to start identifying and tracking risks jointly as needed. DLIR continues to maintain its own risk log.

Detailed analyses of risks and issues are critical to project success, a formal process should be implemented before moving forward in the project.

Open 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 track risks and issues. The DLIR plans to meet with DataHouse and DLIR logs into one source, assign risk owners, and develop mitigation or remediation plans for each risk or issue.

10/25/19: Risks were discussed at the weekly status meetings and monthly ESC meetings. DLIR plans to meet with DataHouse in March 2020 to continue developing mitigation plans.

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

02/21/20: DLIR began to develop mitigation plans for all high IV&V risks and issues. DLIR plans to meet with DataHouse in March 2020 to continue developing mitigation plans.

03/27/20: Accuity increased the severity rating from Level 2 (Moderate) to Level 1 (High/Critical) and reopened the 2019.07.PM09.R2 recommendation. Discussions of risks were paused as weekly project status and monthly ESC meetings were temporarily halted due to COVID-19. Discussions of risks were paused. DLIR and DataHouse developed the mitigation plan and tracked mitigation risks in early March, however, the timing is needed to be revised to align with COVID-19. Discussions of risks are needed to be revisited to align with COVID-19.

Additionally, ensuring risk management activities are documented during periods of significant uncertainty and will help to reduce individual threats and avoid project risk exposure.

04/24/20: Discussions of risks at weekly project status and monthly ESC meetings are still on hold. Some of the meetings are tentatively scheduled for May 2020. Some discussions of risks are needed to be revisited to align with COVID-19. Discussions of risks at weekly project status and monthly ESC meetings are still on hold. Some of the meetings are tentatively scheduled for May 2020. Additionally, ensuring risk management activities are documented during periods of significant uncertainty and will help to reduce individual threats and avoid project risk exposure.

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06/26/20: Discussions of risks at weekly project status and monthly ESC meetings are still on hold. Some of the meetings are tentatively scheduled for May 2020. Discussions of risks are needed to be revisited to align with COVID-19. Discussions of risks are needed to be revisited to align with COVID-19. Additionally, ensuring risk management activities are documented during periods of significant uncertainty and will help to reduce individual threats and avoid project risk exposure.

Accuity will continue to monitor the risk management process.
The Content Management and Case Management requirements documentation is incomplete.

The requirements for both Content Management and Case Management have already been submitted, however, the requirements are incompletely developed and incomplete, and do not incorporate all contract requirements and all development plans.

The requirements documentation is missing additional details regarding requirements management and development. The requirements documentation should clearly outline the process for managing requirements, including the use of databases, tools, and other resources. The requirements documentation should be reviewed and updated as necessary.

Requirements management is a part of the Project Management Plan developed by the DLIR. However, the process for managing requirements is not comprehensive. The requirements documentation should be reviewed and updated as necessary.

As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation are complete and meet industry standards and best practices.

2019.07.PM10 Issue High Moderate

Scope and Requirements Management

The requirements for both Content Management and Case Management have already been submitted, however, the requirements are incompletely developed and incomplete, and do not incorporate all contract requirements and all development plans.

The requirements documentation is missing additional details regarding requirements management and development. The requirements documentation should clearly outline the process for managing requirements, including the use of databases, tools, and other resources. The requirements documentation should be reviewed and updated as necessary.

Requirements management is a part of the Project Management Plan developed by the DLIR. However, the process for managing requirements is not comprehensive. The requirements documentation should be reviewed and updated as necessary.

As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation are complete and meet industry standards and best practices.

RECOMMENDATION

2019.07.PM10.01

Revised Content Management and Case Management requirements documentation and RTM.

Include requirements following SMART (specific, measurable, actionable, realistic and time bound) guidelines. Ensure requirements documentation include all requirements listed in the Statement of Work, including all contract requirements and all development plans.

Disclose requirements include functional, performance, non- functional, security, and interface requirements. Ensure requirements include performance, process, non-

functional, security, and traceability requirements.

2019.07.PM10.02

Revised requirements management processes.

Ensure there is a clear understanding between DataHouse and DLIR regarding who is responsible for identifying and tracking different types of requirements. Develop a process for prioritizing and reporting requirements. Develop a process for tracing requirements to specific system design elements.

As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation are complete and meet industry standards and best practices.

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RECOMMENDATION

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Include requirements following SMART (specific, measurable, actionable, realistic and time bound) guidelines. Ensure requirements documentation include all requirements listed in the Statement of Work, including all contract requirements and all development plans.

Disclose requirements include functional, performance, non- functional, security, and interface requirements. Ensure requirements include functional, performance, non-

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As requirements are the foundation for proper system design, development, and testing, it is essential that requirements documentation are complete and meet industry standards and best practices.

RECOMMENDATION

2019.07.PM10.01

Revised Content Management and Case Management requirements documentation and RTM.

Include requirements following SMART (specific, measurable, actionable, realistic and time bound) guidelines. Ensure requirements documentation include all requirements listed in the Statement of Work, including all contract requirements and all development plans.

Disclose requirements include functional, performance, non- functional, security, and interface requirements. Ensure requirements include functional, performance, non-

functional, security, and traceability requirements.
<table>
<thead>
<tr>
<th>ASSESSMENT CATEGORY</th>
<th>ASSESSMENT ID</th>
<th>DATE</th>
<th>SEVERITY</th>
<th>CURRENT SEVERITY</th>
<th>COST, SCHEDULE and RESOURCE MANAGEMENT</th>
</tr>
</thead>
</table>
| Finding              | 2019.07.PM12.D | 09/20/19 | High      | High             | 2019.07.PM12.I2 Prepare a comprehensive project budget and a schedule of long-term operational costs (e.g., licenses, subscriptions, maintenance, cloud services). 2019.07.PM12.R2 Prepare regular cost reports for management and the executive steering committee. 09/20/19: 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. 03/27/20: COVID-19 will impact project costs, however, the extent of the impact is indeterminable. Additionally, DLIR is assessing available funding for planned procurements of resources and other project costs. 04/24/20: DLIR is still reviewing recent expenditure restrictions and guidance from the State Governor that may impact project spending, including planned procurements of additional project resources. Evaluation and discussion of the impact of COVID-19 to the DataHouse contract is also needed. 05/22/20: Accuity changed this finding from a risk to an issue as the DataHouse Phase 1 contract amount will be fully paid prior to completion of the Phase 1 milestones. An adjustment to the payment schedule for Phase 1 milestones is considered as a part of the proposed plan and related change request (refer to findings 2020.03.PM01 and 2019.09.PM01). 06/22/20: The change request for COVID-19 did not include a revision to Phase 1 payments. It still indicates a new payment schedule for Phase 2 and Phase 3 payments. However, the amount of payments for the planning period did not appear to align with the percentage of completion associated with those phases. Phase 2 is scheduled to begin early July 2020 but a substantiated payment is not recorded by 4 June 2020. (DataHouse and DLIR are currently discussing this payment schedule.)

Informal cost management practices may lead to unexpected costs or overpayments of contracts. There is no formal cost management plan. A comprehensive total project budget is not created, tracked, or reported. Cost management is decentralized and is performed on a project-by-project basis. There is no formal tracking of project costs, subcontracts, change orders, or shared services. Without the recent DataHouse development, costs of all budgeted resources and sufficient of the alternative solutions as well as lag time operational costs need to be properly evaluated and managed before proceeding to finding 2019.07.PM13. Additionally, total project costs and funding sources are not formally reported.

The DataHouse contract states that all payments are contingent upon delivery of services, deliverables, and reports in accordance to the milestones that were the expectation of the RFP. DataHouse provided DLIR with a monthly payment schedule and as of 6 June 2019, 0% of the paid DataHouse invoices through May 2019 and June 2019 manual payment schedules are still pending. Although the project schedule, deliverables, and reports have been pulled back, no adjustments were made to the monthly payment schedule which could result in overpayments. Due to the lack of clear and specific requirements and the DataHouse contract states that payments are contingent upon receipt of services, deliverables, and reports in accordance to the milestones that meet the expectations of the RFP, it will be difficult for DLIR to establish any milestones that would be contingent upon DataHouse payments. Additionally, in order to determine if DataHouse payments are appropriately managed, there is a lack of security to determine if DataHouse payments are appropriately managed.

12 of 19
2019.07.PM13.R1 Document and approve revisions to project schedule deliverables, milestones, and go-live dates in accordance with the Project Management Plan.

2019.07.PM13.R2 Refine the project schedule with details of tasks, durations, phases, and assigned resources.

2019.07.PM13.R3 Prepare regular schedule reports and schedule variance analyses for management and the executive steering committee.

09/20/19: Accuity has kept the severity rating as Level 1 (High). Although DataHouse updated the project schedule to include additional tasks for Phases 1, 2, and 3 and identified specific resources, assigned for selected tasks, there are still a number of differences noted. The project schedule is not yet ready for validation by the DLIR Project Manager or the IV&V auditor. The revised project schedule does not include all project tasks, milestones, or identified issues; and impacts of the delays have not been thoroughly performed, documented, or reported. Decision on change requests to review the project schedule and project plan are recommended or approved in accordance with the Project Management Plan.

DataHouse has prepared a higher-level project schedule and a more detailed task listing. Although the project schedule needs to be updated due to the recent O2M development and selection of an alternative alternative, below following different tasks were noted in the current project schedule:

1. Does not include all project tasks such as Build shape spirits.

2. Content Management go-live date is in jeopardy again. The schedule should be updated to include this key event for stakeholders.

3. Specific schedule details should be included as part of the project plan. DLIR project resources are critical to the project schedule.

4. Specific schedule details should be included as part of the project plan. DLIR project resources are critical to the project schedule.

5. Specific schedule details should be included as part of the project plan. DLIR project resources are critical to the project schedule.

6. Specific schedule details should be included as part of the project plan. DLIR project resources are critical to the project schedule.

10/25/19: The project schedule was updated with time percentages for some of the tasks. However, the Content Management go-live date has not yet been approved. The schedule should be updated to include all key events for stakeholders.

11/22/19 and 12/20/19: No updates to report. The Content Management go-live date has not yet been adjusted.

01/24/20: The Content Management go-live date was approved by DLIR; however, specific task dates are still pending DLIR approval.

02/21/20: DataHouse added more detailed data conversion tasks to the project schedule. There are already some delays due to collect integrations and Content Management tasks from the project schedule. The schedule should be updated to include all key events for stakeholders.

03/27/20: COVID-19 will impact the current project schedule, however, the extent of the impact is indeterminable.

04/24/20: Some tentative updates were made to project schedule dates but no changes were officially approved. Careful consideration is needed to estimate realistic task hours and assignment of tasks to DLIR project resources specific to the project schedule. DLIR project resources are critical to the project schedule.

05/22/20: Specific schedule details should be included as part of the project plan. The scheduling team is committed to developing a detailed project schedule that is approved by the IV&V auditor (refer to finding 2019.09.PM01) to ensure the plan is feasible, comprehensive, and revised tasks, realistic task durations, and assigned resources aligned to resource availability (refer to finding 2019.09.PM02). As the availability of DLI resources is continuously evolving, the project schedule should be frequently reevaluated and adjusted as needed.

06/26/20: DataHouse is still in the process of updating the project schedule for the new plan. A detailed project schedule with specific tasks, dates, and required hours and resources is critical to the project schedule. Detailed task listings are critical to the project schedule.

08/20/20: The project schedule should include all key events for stakeholders.

09/01/20: The project schedule should include all key events for stakeholders.

10/12/20: The project schedule should include all key events for stakeholders.

2019.07.PM13.R1 Document and approve revisions to project schedule deliverables, milestones, and go-live dates in accordance with the Project Management Plan.

2019.07.PM13.R2 Refine the project schedule with details of tasks, durations, phases, and assigned resources.

2019.07.PM13.R3 Prepare regular schedule reports and schedule variance analyses for management and the executive steering committee.

2019.07.PM13.R4 Document and approve updates to project schedule deliverables, milestones, and go-live dates in accordance with the Project Management Plan.
Consider including resource needs for unassigned tasks or roles.

Consider including DLIR resources needed and estimated hours for upcoming project activities (e.g., design sessions, user demonstrations, or user testing).

High: Inadequate assigned project resources may lead to project delays, reduced project performance, or turnover of project resources. Cost, Schedule and System Software, Hardware and Integrations statements that “resources will be provided based on project needs. This will be reviewed with DCD on a quarterly basis.” The Project Status Reports prepared by DataHouse do not note any resource needs under the Assumptions column. However, there is a note that the DataHouse Quality Assurance team has not been assigned any roles to testing (2019.07.IT01). Stakeholders also are considering adding a project coordinator resource to assist with meeting minutes and getting deliverables out.

Although two of the eCMS DLIR project team members have been assigned additional responsibilities to lighten the load of other tasks, inadequate resources and the timing of upcoming and critical project activities continue to be a concern.

An unclear interface solution may impact technical work from the DataHouse Project Manager to a technical resource to develop the interface solution. 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 interface between Content and Case Management was defined during the Enterprise Content Management design phase 1.0 project, the exact interface solution has not been defined. The interfaces between Content and Case Management need to be fully defined to ensure seamless functionality. The interfaces between Content and Case Management are integral to the success of the project and should be fully defined in design documents in accordance with industry standards.

Due to the recent DHS development, the interface options will need to be re-evaluated and additional research required to confirm the feasibility of the content management solution. How the interface between Content and Case Management is designed is critical to the success of the project and should be fully defined in design documents in accordance with industry standards.

Due to the recent DHS development, the interface options will need to be re-evaluated and additional research required to confirm the feasibility of the content management solution. How the interface between Content and Case Management is designed is critical to the success of the project and should be fully defined in design documents in accordance with industry standards.

The interface between Content and Case Management was defined during the Enterprise Content Management design phase 1.0. The interfaces between Content and Case Management need to be fully defined to ensure seamless functionality. The interfaces between Content and Case Management are integral to the success of the project and should be fully defined in design documents in accordance with industry standards.

Due to the recent DHS development, the interface options will need to be re-evaluated and additional research required to confirm the feasibility of the content management solution. How the interface between Content and Case Management is designed is critical to the success of the project and should be fully defined in design documents in accordance with industry standards.

Accuity will continue to assess the adequacy of project resources. Accuity will continue to assess the adequacy of project resources.

Accuity will continue to assess the adequacy of project resources.
Quality Management and Testing

2019.07.IT05

Risks: Moderate

The Quality Management Plan is an essential tool to establish in DataHouse on June 25, 2019 but has not yet been approved by DLIR. The draft plan did not include quality metrics, quality standards, or quality objectives for the project; instead only identified quality requirements. At the project team meeting on June 26, 2019, the DataHouse and DLIR team decided that the Quality Management Plan should be revised to include quality metrics, quality standards, and quality objectives.

2019.07.IT06

Risks: Moderate

A lack of a configuration management plan may impact the performance and quality of the system if unauthorized or untested changes are promoted between environments.

2019.07.IT07

Risks: Moderate

A Configuration management plan has not yet been deployed. Building a configuration management plan is an essential tool for DataHouse on June 25, 2019 but has not yet been approved by DLIR. The draft plan did not include configuration metrics, configuration standards, or configuration objectives for the project; instead only identified configuration requirements. At the project team meeting on June 26, 2019, the DataHouse and DLIR team decided that the Configuration Management Plan should be revised to include configuration metrics, configuration standards, and configuration objectives.

2019.07.PM02

Risks: Moderate

The Quality Management Plan (version 0.1) was drafted by DataHouse on June 23, 2019 but was not yet approved by DLIR. The draft plan did not include quality metrics, quality standards, or quality objectives for the project; instead only identified quality requirements. Additionally, the Quality Assurance Lead identified in DataHouse's BAFO is not assigned to the project team at this time. As it is almost eleven months into the eCMS Project and several deliverables were already approved and many are pending approval, it is important for a quality management plan to be formalized and resources assigned to perform quality management activities.

2019.07.PM03

Risks: Moderate

The Quality Management Plan is an essential tool to establish in DataHouse on June 25, 2019 but has not yet been approved by DLIR. The draft plan did not include quality metrics, quality standards, or quality objectives for the project; instead only identified quality requirements. At the project team meeting on June 26, 2019, the DataHouse and DLIR team decided that the Quality Management Plan should be revised to include quality metrics, quality standards, and quality objectives.
The security management plan (version 0.0) was prepared by DataHouse on June 3, 2019 but was not yet approved by DLIR. Based on the current project plan, the eCMS Project was supposed to finalize the security management plan and implemented as part of an organization-wide process that manages information security and privacy risk.

OpenSecurity 2019.07.IT07 Risk Moderate

11/22/19: ETS provided some guidance regarding AWS control tower and cloud security framework considerations. DLIR is working with EDPSO and IT1 to identify security requirements and evaluate security design options.

12/20/19: 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 conduct AWS security assessment in March 2020, however, the execution of the short-term security assessment was put on hold due to COVID-19.

04/24/20: The execution of the short-term AWS security assessment is still on hold due to unavailability of DLIR project members.

05/22/20: As the DLIR project members are still unavailable, the Office of Enterprise Technology Services (ETS) has agreed to assist with the short-term AWS security assessment to keep the project moving forward.

06/26/20: ETS provided a resource to supplement EDPSO’s limited availability to review AWS security. DataHouse ran a vulnerability scan for AWS resulting in a significant number of findings. DataHouse plans to complete the remediation in July and plans to complete the short-term security assessment in mid-August. A discussion of the responsibilities and timing of a comprehensive security management plan for the eCMS Project as a whole is still needed.

Accuity will continue to evaluate the security management plans and determine the security management plan that is appropriate for the project.

18/18
The DataHouse team’s swift and further delays to the project schedule. They have also built positive momentum in moving the project forward.

- **Governance**
  - 2019.07.PG02: Risk Moderate N/A The lack of a formal executive steering committee. The DataHouse proposal and Project Management Plan (version 1.2) make explicit how the DCD Executive Sponsor is assigned the authority in the Project Management Plan to approve all project changes.

- **Effectiveness**
  - 2019.07.PG03.R1: Evaluate the need for a contract requirements management plan and requirements traceability matrix (RTM) (refer to finding 2019.07.PM10), risk and issue tracking and monitoring, and project plan updates. The need for clarification of roles and responsibilities as well as acceptance criteria and success metrics will continue to be addressed under the 2019.07.PG04 Project Plan, 2019.07.PM03 and DataHouse (refer to finding 2019.07.PM02).

- **Project Organization, 2019.07.PM03**
  - 2019.07.PG04 Risk Low N/A The lack of guidelines, checklists, and data屋 project management processes including taking the DLIR Project Manager to sprint meetings for another demonstration. The DataHouse team has shown an openness to develop and continuously improve project deliverables including project plans. Furthermore, quality metrics and key roles and responsibilities will be defined which will also be an additional method for evaluating contractor performance and efficiency.

- **Project Modernization, 2019.07.PG05**
  - 2019.07.PG04.R1: Initiate conversations with ETS to discuss DLIR IT and project support needs and responsibilities. ETS is a member of the newly formed eCMS Executive Steering Committee (ESC) and will use that vehicle to share lessons learned with DLIR. Additionally, DLIR is forming a DLIR IT Project Sponsor to discuss key risks and issues and to target the eCMS Project within a high-level eCMS project plan. DLIR plans to draft statutory changes to mandate electronic filing in FY2022 and will ensure that this project is a member of that DLIR committee and plans to share eCMS lessons learned and project templates with other DLIR IT projects.

- **DataHouse**
  - 2019.07.PG04.R1: Assemble and formalize an executive steering committee. Currently, the DCD Executive Sponsor is assigned the authority in the Project Management Plan to approve all project changes. The need for clarification of roles and responsibilities as well as acceptance criteria and success metrics will continue to be addressed under the 2019.07.PG04 project plan, 2019.07.PM03 and DataHouse (refer to finding 2019.07.PM02).
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. Once the eCMS Project was underway, the MOU discussions with DHS were primarily led by the DataHouse Project Sponsor. Before moving forward in the project, the DataHouse should ensure that a proper agreement is in place to leverage IBM FileNet services.

### ASSESSMENT

**FINDING**

2019.07.PM01 Positive N/A N/A

### RECOMMENDATION

- Ensure that the DataHouse BAFO is modified to include a written agreement between DataHouse and DHS that supports the use of IBM FileNet services.

### SUPPLEMENTAL RECOMMENDATION

- Ensure that the MOU discussions with DHS are led by the DataHouse Project Sponsor to ensure proper agreement is in place.

### PROJECT TIMELINE

- **2019.07.PM04**
  - **Issue**: Identify and complete all critical tasks prior to moving forward with an alternative solution.
  - **Reason**: There were no written agreements between DataHouse and DHS that supported the plan to leverage IBM FileNet services. Once the eCMS Project was underway, the MOU discussions with DHS were primarily led by the DataHouse Project Sponsor. Before moving forward in the project, the DataHouse should ensure that a proper agreement is in place to leverage IBM FileNet services.
  - **Status**: Draft
  - **Due Date**: 10/25/2019

### RISK MANAGEMENT

- **Risk**: A lack of clarity on DataHouse’s development methodology may not allow or adequately prepare stakeholders to participate readily.
  - **Severity**: Moderate
  - **Due Date**: 10/25/2019
  - **Status**: Draft

### BUSINESS PROCESS IMPROVEMENT

- **Recommendation**: Establish a process for identifying BPR opportunities.
  - **Due Date**: 12/20/2019
  - **Status**: Draft
  - **Closed**: 12/20/2019: The Case Management user story tracker tool identifies which user stories will be created and tracked.

### IV&V RECOMMENDATION

- **Recommendation**: Develop a plan to handle the BPR opportunities identified.
  - **Due Date**: 12/20/2019
  - **Status**: Draft
  - **Closed**: 12/20/2019: The Case Management user story tracker tool identifies which user stories will be created and tracked.

### CONTACT INFORMATION

- **DataHouse BAFO**: Please contact your project manager for further information.
- **DHS**: Please contact your project manager for further information.
The original solution proposed by DataHouse in their BAFO to leverage the existing DHS FileNet hosting infrastructure is no longer a feasible solution. Although this issue relates to the proposed hosting infrastructure solution for Content Management, this is an opportunity for both DataHouse and DLIR to reassess the total solution considering all updated technological opportunities available today. DLIR should ensure that DataHouse was approved by DLIR. As a comprehensive analysis was not prepared and there is still a need for additional clarification regarding certain aspects of the replacement solution, Accuity will continue to monitor plans for AWS security under finding 2019.07.IT07, AWS M&O roles and responsibilities under the new preliminary concern 2019.10.IT02, and AWS costs under finding 2019.07.PM12.

09/20/19: In July 2019, DataHouse presented AWS as a potential alternative solution. The proposed AWS solution was compared to another cloud solution, Microsoft Azure, in respects to cost and performance. Although this analysis was performed, no formal analysis was presented. DLIR approved the AWS replacement solution found in the technical analysis of various solution options that includes a comparison of the alternative solution options.

Accuity had also recommended that a comprehensive technical analysis be performed before project design and to ensure that the alternative solution will meet operational and stakeholder requirements. DataConversion is currently in the design phase and design documents have not be provided. This Content Management Design Documents Design document was drafted by DataHouse on May 6, 2019. The recent DHS development will require design documents to be updated prior to an alternative Content Management hosting infrastructure solution to be selected. However, even prior to this recommendation, the Content Management design documents have not been completed. The Content Management Design Documents (version 0.0) should be remediated immediately and the design documents updated accordingly.

As data conversion is the process of converting data from one source to another, it is important that the data conversion plan is based on accurate system requirements. A Content Management data conversion plan that is based on incomplete, inaccurate, and outdated requirements may impact the data migration design and data conversion plan. The completeness of the design with respect to contract requirements will continue to be monitored under the 2017.07.PM10 requirements finding.

Accuity reviewed the taxonomy mapping with the primary manager/competitors/alternatives. Additional research could result in more extensive choices going forward. Accuity also decreased the severity rating from Level 1 (High) to Level 2 (Moderate). The requirements document deficiencies should be remediated immediately and the requirements updated accordingly.

Design 09/20/19: DataHouse presented AWS as a potential alternative solution. The proposed AWS solution was compared to another cloud solution, Microsoft Azure, in respects to cost and performance. Although this analysis was performed, no formal analysis was presented. DLIR approved the AWS replacement solution under finding 2019.07.IT07, AWS M&O roles and responsibilities under the new preliminary concern 2019.10.IT02, and AWS costs under finding 2019.07.PM12.

09/20/19: Accuity decreased the severity rating from Level 1 (High) to Level 2 (Moderate). The requirements document deficiencies should be remediated immediately and the requirements updated accordingly.
# Appendix E: Prior IV&V Reports

<table>
<thead>
<tr>
<th>AS OF DATE</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>06/30/19</td>
<td>Initial On-Site IV&amp;V Review Report</td>
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<tr>
<td>09/20/19</td>
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<td>05/22/20</td>
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Appendix F: Comment Log on Draft Report
Appendix F: Comment Log on Draft Report

<table>
<thead>
<tr>
<th>ID #</th>
<th>Page #</th>
<th>Comment</th>
<th>Commenter’s Organization</th>
<th>Accuity Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>Phrase “new project budget and resource constraints” can be misconstrued that there was a change in the project budget.</td>
<td>DCD</td>
<td>Accuity revised phrase to “project budget and resource constraints” to more accurately note that the project must work within the current constraints.</td>
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