DEPT. COMM. NO. 392

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TODD NACAPUY CHIEF INFORMATION OFFICER

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#### OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

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June 18, 2018

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

The Honorable Scott K. Saiki,
Speaker, and
Members of The House of Representatives
Twenty-Ninth 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 reports to the Legislature within ten days of receiving the report, please find attached the report the Office of Enterprise Technology Services received for the State of Hawaii Department of Health Hawaii BHA Integrated Case Management System Project Independent Verification and Validation (IV&V).

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

Sincerely,

TODD NACAPUY
Chief Information Officer
State of Hawai'i

Attachment (2)



### Hawaii BHA Integrated Case Management System Project

Final IV&V Report for the period of April 19 - May 25, 2018

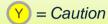


### Overview

- Executive Summary
- IV&V Activities
- IV&V Findings and Recommendations
- Appendices
  - A Findings and Recommendations Log
  - B Inputs



Overall Project Health:



The overall project health has changed from a low to a medium criticality rating due to a slight increase in risk related to the deliverable expectation document (DED) process, requirements traceability, and the timing of delivery for test cases. Two observations were closed and merged with existing findings during this reporting period: #25 (solution architect) was combined with #17 (SI resources) and #26 (user stories) was combined with #14 (requirements traceability). IV&V opened one new observation related to Scribe Insight licenses for data conversion activities, one new medium risk regarding the process validating test cases, and one new high risk regarding the current DED process. Thus far, the project remains on schedule for completion.

Mar 18	Apr 18	May 18	Process Areas	IV&V Observations	Overall Health
L	L	M	Vendor Project Management	Various potential impacts on the project timeline (e.g., deliverable reviews, resource availability) have been cited in this process area. Several of the findings that IV&V is monitoring relate to ensuring that system functionality will meet the DOH's needs. See pages 8 – 9 for more details on IV&V findings in this area.	Y
L	L	M	Requirements Management	TFS governance has not been thoroughly established, which can lead to inadequate requirements management. Requirements elaboration, including the formalization of agreed-upon scope changes, is not currently tracked in TFS, which can negatively impact the project timeline. It is unclear how TFS is tracing requirements through user stories and the state has requested an RSM-developed query to validate this traceability.	Y



Mar 18	Apr 18	May 18	Process Areas	IV&V Observations	Overall Health
L	L	M	Design and Development	The project is not adhering to the DED process outlined in the SI contract. Deliverable review and approval timeframes are typically elongated when a DED is not developed and agreed to in advance of development of each deliverable. For example, the Architecture Blueprint has been reviewed and deemed inadequate twice and still requires revision. Also, while the project has asserted firmer deadlines to address delays in BHA's approval of user stories and the SI has been able to move unapproved early iteration user stories to future iterations to avoid delays in development, further delays could impact the project schedule.	Y
n/a	n/a	L	Testing	The contract requires delivery of Test Cases with Test Plans, and the State needs to be afforded the opportunity for review and approval. This process should be evaluated for improvement opportunities. DOH staff possess institutional knowledge of the needed depth, breadth, and overall coverage of requirements as well as an optimal understanding of how the requirements and associated test activities best transition from process-to-process, for an overall end-to-end business viewpoint.	G

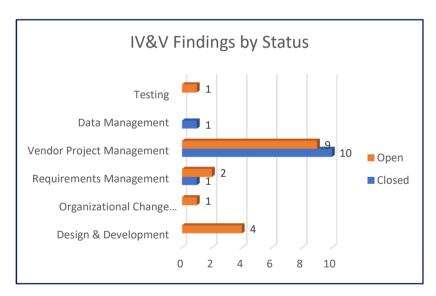


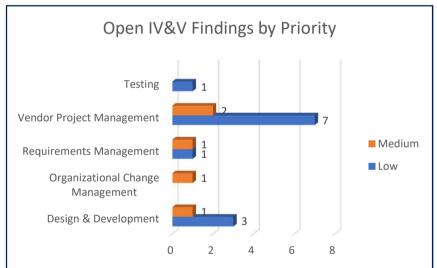
Mar 18	Apr 18	May 18	Process Areas	IV&V Observations	Overall Health
n/a	n/a	L	Data Management	IV&V observed that the Data Management Team is working collaboratively and making very good progress on migration activities. RSM has also added another experienced resource to the Data Migration Team, and has commenced efforts for development of the Data Dictionary. In light of this progress, IV&V's initial rating is Low and IV&V will monitor the SI's planning for future Iterations.	G
M	M	М	Organizational Change Management	A comprehensive strategy to support user adoption has been agreed to; however, the agreed upon artifacts and documents have not yet been provided. IV&V anticipates the risk in this category will be effectively reduced when this documentation has been completed and approved. The SI has committed to a training (sandbox) environment to provide the opportunity for user feedback beginning with Iteration 2. The execution details regarding the training (sandbox) environment (e.g., entrance criteria, feedback loops, etc.) have not yet been defined. The BHA completed a "User Engagement and opportunities for Organizational Change Management" SME survey to gather user adoption metrics to help focus their OCM efforts. IV&V plans to review the results of this survey in the next reporting period.	Y



As of this reporting period, PCG has identified a total of 29 findings (1 issue, 21 risks, and 7 observations) on the Hawaii BHA Integrated Case Management System Project.

Focusing on the total number of IV&V findings, 12 of the 29 findings have been closed, leaving 17 open findings. Of those, there is one medium issue (6%), 4 medium risks (23%) and 12 low risks (71%) as shown below.







#### **Process Areas Reviewed**

Throughout this project, IV&V will verify and validate activities performed in the following process areas. Those areas that were reviewed during the current period are asterisked below:

- Vendor Project Management\*
- Requirements Management\*
- Design and Development\*
- Testing\*
- Data Management\*
- Organizational Change Management\*



<sup>\*</sup> Indicates process area addressed in this report

#### Vendor Project Management

#	Key Findings	Criticality Rating
16	<b>Unclear review and approval process for project deliverables:</b> An approval process has been agreed to, however the project has yet to create the documentation that outlines the details of the agreement. IV&V will continue to monitor for and review the agreed documentation when it is made available.	L
19	Access to enhanced federal funding may impact the project budget and/or scope: Ability to access enhanced federal funding as initially planned is at risk due to external dependencies (e.g., State Medicaid Agency delays in completing its MITA State Self-Assessment (SS-A) and completion of P-APD). DOH is planning on completing the IAPD for submittal to CMS next month.	M
28	Contractual DED Process not being utilized by SI: The contractually required DED process was not being followed so the project agreed to a revised approach moving forward. The SI will provide one (1) DED for each iteration; and each iteration's DED will be inclusive of all the deliverables specific to that iteration. Deliverable review and approval timeframes are typically elongated when a DED is not developed and agreed to in advance of development of each deliverable. IV&V will monitor this risk for closure as the project begins executing the new DED process for upcoming Iterations. (New Risk)	M

Recommendations	Progress
<ul> <li>Clarify the deliverable review and approval processes in accordance with RFP requirements and agree on deliverables best suited to be "live" documents (updated throughout the project)</li> </ul>	In-process
BHA to work closely with DHS to pursue available funding options.	In-process
<ul> <li>SI to document the agreed upon process for the iteration DEDs prior to developing the DEDs and deliverables</li> </ul>	In-process



#### Vendor Project Management (cont'd)

	Monitoring for Closure	
2	Long sprint / iteration cycles: The SI has committed to providing a training environment for DOH to conduct demonstrations on the previous iteration's functionality in order to support OCM efforts and the current iteration is in the QA environment for project team members to review design questions at the weekly team meeting. IV&V will monitor the both prospective and retrospective approaches for clarifying and validating functionality.	L
3	<b>Attention to process improvement seems insufficient:</b> While some improvements have been seen in this area, IV&V continues to have concerns over the SI's attention to DOH's expressed needs (e.g., TFS queries for RTM traceability).	L
5	Late-game analysis of requirements awaiting details from external sources: Sign-off is being sought on some user-stories that may require further analysis based upon external dependencies.	L
6	<b>SI identification/tracking of pain points:</b> While CAMHD and DDD have identified pain points, the SI's process to address these pain points remains unclear.	L
17	<b>SI Resource Constraint:</b> Since the Solution Architect position currently fills several significant project roles (e.g., Development Lead, Lead Business Analyst, and Scrum Master), the extended absence of the assigned resource may impact the project. IV&V observation #25 regarding the Solution Architect role has been merged with this observation and closed. IV&V expects this finding to close next period as the Solution Architect has returned from family leave.	L
18	Competing priorities of BHA SMEs could negatively impact the project timeline: At times, project team members have been constrained by other duties and have shown some resistance to participate in project activities. BHA continues working with SI to mitigate resource challenges, as some key members of the project team have been over-tasked.	L
23	Potential project timeline impact due to data migration delays: The SI and BHA have made strides in mitigating the data migration risks through weekly status/planning meetings and other activities with the hopes that development roadblocks can be avoided. In light of this progress, IV&V is closing this risk.	L

### Requirements Management

#	Key Findings		Criticality Rating	
14	Tracking of requirement elaborations: Requirements elaboration (i.e. the formalization of scope changes based on agreements between the SI and BHA) is not currently tracked in TFS, which can generate rework and impact the project schedule. IV&V has observed the review and approval of user stories but not requirements which may not be a comprehensive approach. DOH has been working diligently with the SI to understand the traceability of requirements in TFS and the SI has provided artifacts, clarifications to questions, and developed a query to extract the TFS data needed by DOH to verify traceability. Since Iteration 2 approaches completion and DOH is still verifying the query and traceability in TFS, IV&V is raising severity of this risk to Medium. IV&V awaits DOH's review and approval of the query as well as the TFS demonstration anticipated May 31. Finally, IV&V observation #26 regarding the user story clarification has been merged with this observation and closed.		M	
20	<b>TFS governance process</b> : TFS (Microsoft's Team Foundation Server) is the Project's central report database of all requirements, user stories, development tasks, test cases, bugs, and source code. It some progress has been made towards clarifying TFS governance (how the tool, and certain aspect tool will be used), concerns remain that confusion may still exist, which can lead to inadequate requirements management. SOH has requested documentation which clarifies how the tool is being and how to interpret the status of any one item.	While cts of the	L	
Rec	Recommendations Progress			
<ul> <li>Request SI define and employ a process for requirements elaboration tracking and approval, including user stories</li> </ul>				
• R	Request IV&V perform a targeted requirements traceability assessment  In property of the			
• R	Request SI to document a TFS governance process which is approved by BHA			



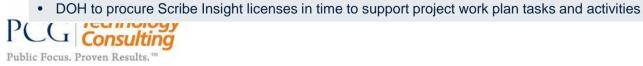
• SI to document sufficient design details in the architectural blueprint document and that content focus on what

#### **Design and Development**

the SI will do as opposed to what the products/platform can do.

• BHA to work with SI to ensure delays do not incur project delays or additional costs.

#	Key Findings	Criticality Rating
12	<b>Use of accelerator:</b> While IV&V recognizes efficiencies can be gained with an accelerator, failure to optimize the system to meet BHA specific needs is a potential risk that should be regularly monitored. The SI is working on documentation which outlines how the system is configured, including net code or scripts, to assist the SOH understand the level of customization and/or level of effort of making changes using the accelerator.	
21	<b>Architecture Blueprint deficiencies:</b> During the last reporting period, IV&V continued to cite deficiencies (based on industry best practice) in the SI's revised Architecture Blueprint deliverable. Our review of the final Architecture Blueprint is pending delivery by the SI.	M
24	<b>Delays in approving user stories could impact the project schedule:</b> While the Project has asserted firme deadlines to address delays in BHA's approval of user stories and the SI has been able to move unapproved early iteration user stories to future iterations to avoid delays in development. There are currently only two stories pending approval; and approval is pending the Project's decisions regarding a long-term data architecture plan.	r L
27	DOH requires procurement of Scribe Insight Licenses for Data Conversion activities: Scribe Insight licenses are required to create Scribe packages to migrate and program data transformations for legacy data dictionaries. It is unclear when these licenses are required to support the data conversion effort in accordance with the project work plan. (New Observation)	
Rec	ommendations	Progress
BHA to ensure SI design decisions are based on what's best suited for BHA and not on existing (base) accelerator functionality.		In-process



In-process

In-process

In-process

### **Testing**

#	Key Findings	Criticality Rating
29	<b>Timing of Delivery of Test Case Details:</b> The contract requires delivery of Test Cases and Scripts with Test Plans, and the State needs to be afforded the opportunity for review and approval. This process should be evaluated for improvement opportunities. The State and SI are now meeting weekly so that testing results, which are not included in TFS but rather a defect log, can be reviewed and addressed timely by the State. ( <b>New Risk</b> )	L

Recommendations	Progress
<ul> <li>SI to include test cases, scripts, and expected and actual results associated with each Iteration Test Plan</li> <li>DOH review and approval</li> </ul>	for In-process



### **Data Management**

#	#	Key Findings	Criticality Rating
23		Potential project timeline impact due to data migration delays: The SI and BHA have made strides in mitigating the data migration risks through weekly status/planning meetings and other activities with the hopes that development roadblocks can be avoided. In light of this progress, IV&V is closing this risk.	L

Recommendations	Progress
SI to analyze data migration dependencies to avoid development delays.	In-process
• SI to validate and/or update the user stories and architectural plans (based on possible dependencies)	Not started



### Organizational Change Management

#	Key Findings	Criticality Rating
7	Minimal attention to User Adoption (buy-in): The SI has committed to a training (sandbox) environment to provide the opportunity for user feedback beginning with Iteration 2. The execution details regarding the training environment (e.g., entrance criteria, feedback loops, etc.) have not yet been defined. The BHA completed a "User Engagement and opportunities for Organizational Change Management" SME survey to gather user adoption metrics to help focus their OCM efforts. IV&V anticipates reviewing the results of this survey as well as the identified actions for the SI or State which resulted from the survey in the next reporting period. IV&V also plans to review the draft OCM plan scheduled to be delivered in June.	М
6	Use of pain points to improve OCM: (See Vendor Project Management Finding #6) While it does not appear that the SI has developed a strategy to support user adoption, they seem close to working out the process for how the project will leverage the BHA pain points list throughout the project. The BHA has requested more information from the SI on the practical application of its OCM strategy as the project moves ahead. A new weekly meeting has been scheduled between the SI and the State to touch base on project-related impediments or issues which will include OCM-related topics as well.	L

Recommendations	Progress
Request the SI adopt a general user adoption strategy	Not started
Agree on an approach for how the SI will utilize the pain point list created by BHA	In-process
Recommend SI commence work on a comprehensive OCM Plan immediately	In-process



### Appendix A

This appendix provides the details of each finding and recommendation identified by IV&V. Project stakeholders are encouraged to review the findings and recommendations log details as needed.

- See Findings and Recommendations Log (provided under separate cover)
- Project Health Rating Definitions
  - The project is under control and the current scope can be delivered within the current schedule.
- G
- The project's risks and issues have been identified, and mitigation activities are effective. The overall impact of risk and issues is minimal.
- The project is proceeding according to plan (< 30 days late).
- The project is under control but also actively addressing resource, schedule or scope challenges that have arisen. There is a clear plan to get back on track.



- The project's risk and/or issues have been identified, and further mitigation is required to facilitate forward progress. The known impact of potential risks and known issues are likely to jeopardize the project.
- Schedule issues are emerging ( > 30 days but < 60 days late).</li>
- Project Leadership attention is required to ensure the project is under control.
- The project is not under control as there are serious problems with resources, schedule, or scope. A plan to get back on track is needed.



- The project's risks and issues pose significant challenges and require immediate mitigation and/or escalation. The project's ability to complete critical tasks and/or meet the project's objectives is compromised and is preventing the project from progressing forward.
- Significant schedule issues exist (> 60 days late). Milestone and task completion dates will need to be re-planned.
- Executive management and/or project sponsorship attention is required to bring the project under control.



### Appendix A (cont'd.)

#### **Criticality Ratings**

Criticality Rating	Definition
Н	A high rating is assigned if there is a possibility of substantial impact to product quality, scope, cost, or schedule. A major disruption is likely and the consequences would be unacceptable. A different approach is required. Mitigation strategies should be evaluated and acted upon immediately.
M	A medium rating is assigned if there is a possibility of moderate impact to product quality, scope, cost, or schedule. Some disruption is likely and a different approach may be required. Mitigation strategies should be implemented as soon as feasible.
L	A low rating is assigned if there is a possibility of slight impact to product quality, scope, cost, or schedule.  Minimal disruption is likely and some oversight is most likely needed to ensure that the risk remains low.  Mitigation strategies should be considered for implementation when possible.



#### Appendix B: Inputs

This appendix identifies the artifacts and activities that serve as the basis for the IV&V observations.

#### Meetings attended during the reporting period:

- 1. Weekly SI project status meetings (4/21/18 5/25/18)
- 2. BHA IV&V Monthly Report review meeting
- 3. BHA/RSM IV&V Monthly Report review meeting
- 4. IV&V Status meeting (5/8/18)
- 5. Iteration 1 Demo (5/4/18)
- 6. BHA ITS Weekly Status Meeting (selected)
- 7. BHA-ITS Deliverables: Iteration Plan + MPP + overall timeline (5/4/18)
- 8. Weekly Data Migration Meeting (selected)
- 9. Daily Scrum meetings (selected)
- 10. BHA-only Planning for Phase 1, Calculator, Phase 2 story points and costs (5/23/18)
- 11. Phase 1 and Phase 2 Planning (5/25/18)

#### Artifacts reviewed during the reporting period:

- 1. SI Iteration Plan
- SI Iteration 1 Test Plan
- 3. SI Iteration Schedule
- 4. SI Updated Data Migration Strategy
- 5. SI Updated Roadmap
- 6. SI Updated User Story Life Cycle
- 7. SI Defect (Bug) Life Cycle
- 8. SI Weekly Status Reports
- 9. Daily Scrum Notes (selected)
- 10. SI Project Schedule



#### **Eclipse IV&V® Base Standards and Checklists**





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Id	Identi Date	tified S	Gummary	Observation	Significance	Recommendation	Updates	Process Area	Туре	Priority	Status
2	09/01,	1/17 L	ong sprint / iteration cycles	The SI has chosen to employ long iteration cycles.	Typical agile development projects employ two-week iteration cycles. The benefits of Agile development revolve around timely feedback from users based on short iteration cycles. Longer iterations can introduce a risk that the SI will waste valuable time developing a design without timely user feedback to course correct, which could negatively impact the project schedule and budget.	further SDLC and iteration activity details and	5/21/18: SI committing to a training (sandbox) environment for Division level staff beginning in Iteration 2.  4/18/18: Unclear if SI is providing sufficient mid-sprint demos to validate user story implementations. IV&V is only aware of one such demo reported by BHA during Iteration 1.  4/1/18: SI has committed to providing mid-sprint demos for select SMEs to validate complex or unclear user story implementations.  3/20/18: SI has provided good details of their Agile methodology as part of the scrum kickoff meeting and distributed the PowerPoint deck that was presented to attendees for future reference.  3/2/18: The SI has provided additional methodology details which has given IV&V a better understanding of the SI's methodology and the rational for 6-week iterations as well as their intent to perform mid-sprint demonstrations of functionality. IV&V will continue to monitor.	Vendor Project Management	Risk	Low	Open
3 3	09/01,	ir	nsufficient	SI analysis techniques that seem to avoid delving into opportunities for process improvement.	This could lead to a 'to-be' design that automates existing processes rather than improve them.  Requirement 272 in the DOH's RFP states, "The SI will be vigilant to look for and identify opportunities for process improvement and notify DOH". See related risk titled "Visual Tools".  The SI could decide BHA must pay for (via contract mods or swaps) enhancements that should have been part of the original design and identified during discovery and design phases. Swaps involve the removal of original requirements in place of newly discovered requirements/functionality (enhancements). Swapping out original requirements/features can degrade the quality of the system and lead to unmet user expectations. Swapping can incur significant future costs as it's likely BHA will need to implement (and acquire separate funding for) features that get swapped out of the original fixed price project scope.	request greater detail around the SI's 'to-be' analysis methods. Other suggestions include:  1) Consider a short CRM overview session for SMEs to familiarize them with CRM capabilities to better understand and articulate process improvements that can be supported by the Dynamics CRM platform.  2) Consider demos from other similar BHA Dynamics CRM implementations to better understand and articulate process improvements that the solution can support.  3) Meet with the SI to request elicitation and maintenance of prioritized business problems, pain points, and improvement opportunities that are	5/25/18: The BHA Deliverables Summary Memo has been finalized and includes agreed upon terms for a training (sandbox) environment, a demo of the TFS system, and the development of queries for the RTM.  5/21/18: IV&V has not observed progress towards the mitigation of this risk during the reporting period.  4/11/18: During a sprint demo of the Calculator, BHA was surprised to find out that drag & drop functionality was overlooked by the SI analysts. SI has stated that this feature was out identified by BHA as a requirement, even though the tool that the Calculator is mimicing includes this feature. When asked if the SI analyst asked SMEs if the Calculator would require the same drag and drop functionality, the SI provided no response. Seems the SI analysts assumed the more difficult method of opening each event and changing the time/date.  3/14/18: SI demo'd progress on a separate development effort called the "Calculator". SI garnered and encouraged feedback from SME's.  3/1/18: BHA has indicated that individual efforts by SI analysts during user story approval seems to have made up for some of the lack of analysis depth during the discovery phase.  2/27/18: BHA has contracted BHA in a separate effort to develop a calendar (calculator). BHA has indicated that initial SI analysis seems to continue to lack appropriate depth.  2/16/18: BHA detailed related concerns in an email to RSM. RSM replied with assurances that there will "always be follow on sessions" and that they "will seek for more collaboration in the future".  1/25/18: Now that discovery is complete and user stories are scheduled for approval, many opportunities to capture process improvements from SMEs have been lost. IV&V will monitor whether any attempts are made to elicit process improvements during future activities (e.g., sprint demos and UAT).  9/1/17: SI continues to avoid questioning the necessity of existing processes (i.e. asking the "why" questions around existing processes, asking for "wish list" items from the SMEs) to identify potential	Vendor Project Management	Risk	Low	Open
5	09/01,	re d	equirements awaiting letails from external ources	Appears the SI does not perform late game analysis of requirements, preferring to define all user stories upfront until other dependencies are known. For example, instead of putting the DHS interface requirement specification on hold until it's clear whether DHS will provide a web service, the SI is now defining specifications for a manual import (non-web service).	One of the primary benefits of an Agile approach is that requirements that are not ready to be fully defined (e.g. requirements that are awaiting outside agency information/details) can be addressed later without a loss of productivity. An unwillingness to define requirements at a later date may increase the risk that the SI develops features that are not needed or no longer meet the needs of the users. This could also incur additional project costs if the SI fails to accurately estimate late-game user stories and considers any late-game requirements as enhancements that will incur additional cost or swaps (see observation #26).	limited list of requirements that will be defined at a later date. Recommend the SI avoid spending time, where it makes sense, on requirements with external dependencies. Once an agreement is reached, IVV will continue to monitor to validate that	5/21/18 - IV&V has not observed progress towards the mitigation of this risk during the reporting period. The project awaits feedback from DHS regarding when resources will be available; if State resources cannot be made available timely, some interfaces requirements may need to be moved to Phase 2.  3/25/18: The SI is seeking User Story signoff in order to lock in project scope. When asked about requirements whose details may become more clear at a later point in the project they have stated that there will be the opportunity to swap out functionality for requirements whose details may be more readily available later in the project. However, it may not be clear that swapped out functionality has an associated future cost as it's likely BHA will need to implement (and acquire separate funding for) features that get swapped out sometime in the future.	Vendor Project Management	Risk	Low	Open

Id	Identified Date	Summary	Observation	Significance	Recommendation	Updates	Process Area	Туре	Priority	Status
6	09/01/17	SI identification/ tracking of pain points	SI currently does not track or effectively utilize business process pain points.	Agile methods typically focus on solving real problems and employ methods to allow the users to provide timely (typically with shorter sprints) feedback to ensure that the business problems are being solved. Tracking pain points can be an effective OCM strategy for user adoption and buy-in by providing visibility to the users of problems the system is solving as well as showing them traceability of pain points to system features during sprint demos.  Failure to track pain points and business problems can lead to a final product that fails to provide maximum value to the users. Failure to succinctly document, track, and reference business process pain points in sprint demos could lead to reduced user adoption and executive buy-in, support, and satisfaction. In the end, this could lead to a reduction of ongoing project funding, a weakened SI reputation, and public scrutiny.	also recommends that the project's OCM strategy address/incorporate these pain points to show users that the system is solving real business problems	5/25/18: A weekly Thursday to troubleshoot and discuss issus has been scheduled. 5/21/18 - IV&V has not observed progress towards the mitigation of this risk during the reporting period. 4/11/18: CAMHD is tracking pain points, which have been sent to RSM, DD will do the same. BHA plans to meet with SI to discuss use of pain points. 3/2/18: SI has stated that tracking pain points is out of scope and that pain points have been addressed within the user stories. IV&V will continue to recommend, at minimum, the project maintain a short list of (mostly high-level) business pain points. 1/25/18: BHA has assumed responsibility for tracking pain points. The process for how the SI will utilize this list needs to be identified and monitored.	Vendor Project Management	Risk	Low	Open
7	09/01/17	Minimal attention to User Adoption (buy-in)	SI seems to lack a comprehensive strategy to support user adoption.	Failure to implement an effective user adoption strategy could lead to resistance during system rollout, refusal to participate in the development/rollout process, resistance to use the system, and negative public perceptions (including the media). In the end, this could lead to a reduction of ongoing project funding, a weakened SI reputation, as well as long-term public scrutiny and criticism.	Recognizing that the SI has committed to a training (sandbox) environment for SME validations of functionality and to provide the opportunity for user involvement, IV&V would suggest that other measures should be taken as well. For example, although the State has initiated the practice of tracking pain points, the process for how the SI will utilize this list has not been clearly identified and monitored. Tracking pain points can be an effective OCM strategy for user adoption and buy-in as it provides visibility to the users of problems the system is actually solving and provides traceability of pain points to system features during sprint demos. IV&V also recommends BHA request the SI adopt a general user adoption strategy going forward. IVW will continue to monitor to validate that the BHA's expectations are met.	5/21/18 - SI committing to training (sandbox) environment for Division level staff beginning with Iteration 2. In addition, the project conducted a survey focused on gathering to support the OCM effort. The CIO requested that an updated survey, building on the responses and lessons learned from the last survey, be developed and used going forward in future iterations. The DOH has captured the survey data but the actions for both RSM and the State have not yet been documented or communicated.  4/18/18: Unclear if SI is providing sufficient mid-sprint demos to validate user story implementations. IV&V is only aware of one such demo reported by BHA during Iteration 1; seems this demo was initiated by BHA.  4/13/18: BHA is in the process of gathering feedback from their users/SMEs through a "User Engagement and opportunities for Organizational Change Management" survey to address this risk.  4/1/18: SI has committed to mid-sprint SME validations of functionality which should provide the opportunity for better user involvement.  3/7/18: BHA indicated that RSM subcontractor met with them recently to address OCM.  3/2/18: The SI view seems to be that this risk should be addressed as part of OCM which is outside the scope of their contract. IV&V has explained that opportunities to increase user adoption can occur throughout the SDLC and the SI should take advantage of those opportunities whenever possible as part of good SDLC practices.  2/21/18: SI has released a new plan and presented to BHA a high-level strategy that seems to address some elements of user adoption. The IV&V team will continue to monitor this risk in future reporting periods.	Organizational Change Management	Risk	Medium	Open
12	09/01/17	Use of accelerator	The SI intends to utilize an accelerator as a starting point for system development. Seems the accelerator involves essentially retrofitting code and a configuration package, from system(s) previously developed, into the BHA ITS as a foundational component. Additionally, at times it seems like the SI is remiss to suggest design concepts that don't align with the existing functionality of their accelerator.	While IV&V recognizes efficiencies can be gained and the value of re-use, failure to optimize the system to meet BHA specific needs can lead to a solution that is less than optimal/productive and require BHA users to employ work arounds and lengthy processes to complete their work.  The risks around employing the RSM accelerator are still unclear, however, use of accelerators, in general, have been known to be difficult to modify and maintain due to:  - Bugs could occur that are not easy to track down because its buried in the complex functionality of the accelerator - Interactions with accelerator could cause bugs - Added complexity - Removal of any component that's not needed can cause unforeseen interactions or complications (may break other things in the accelerator)	Recommend BHA request the SI identify strategies and activities to mitigate typical issues/problems/risks associated with the use of accelerators. Recommend BHA monitor for and request SI base design decision on what's best suited for BHA and not on what functionality already exists in the accelerator. IV&V will continue to monitor for the same throughout the development phase.	5/25/18 - RSM committed toproviding documentation to the State which outlines how the system is configured, including.net code or scripts, to assist the SOH understand the level of customization and/or level of effort of making changes using the accelerator. No time commitment was offerred during the discussion but IV&V will review this information when it becomes available.  5/21/18 - Accelerator documentation request still unfulfilled. The documentation outlining the methodology for how this tool will be used is insufficient and does not address how the SI plans to mitigate the use of the tool in absence of documented best practices for tool usage. The project has no visibility into the Accelerator.  4/19/18: SI responding to Accelerator documentation request with details of Accelerator capabilities but provided little to no details that would help assure mitigation of this risk.  4/5/18: SI responded with more details regarding risk mitigation steps they are taking and mentioned accelerator documentation. IV&V has requested documentation be provided to the project.  4/3/18: IV&V received response from the SI on 4/3/18, stating that "Our Accelerator was made available for Hawaii use on March 19, 2018, which belies this finding."  IV&V is not clear how this response addresses the potential risks raised in the January IV&V report. IV&V has requested a further details.  4/2/18: SI has agreed to provide mitigation strategies they've employed for this risk.	Design & Development	Risk	Low	Open

Id	Identified Date	Summary	Observation	Significance	Recommendation	Updates	Process Area	Туре	Priority	Status
14	09/03/17	Tracking of requirement elaborations	to capture features SMEs want most seem to be inadequate. For example, during a sprint demo of the Calculator, BHA was surprised to find out that drag & drop functionality was overlooked by the SI analysts. SI has stated that this feature was not identified by BHA as a requirement, even though	can generate significant rework and cause confusion amongst the project team.  Further, failure to capture sufficient details of user stories can lead to user stories that fail to adequately address user needs and preferences. This could lead to future increased project costs. For example, the SI could decide BHA must pay for (via contract mods or swaps) enhancements that should have been part of the original design and identified during initial user story definition. Swaps involve the removal of original (lower priority) requirements in place of newly discovered requirements/functionality (enhancements). Swapping out original requirements/features can degrade the quality of the system and lead to unmet user expectations when feature communicated to users at the beginning of the project are found to be missing in the end product. Swapping can incur significant future costs as it's likely BHA will eventually need to implement (and	process for formalizing scope changes as well as requirement elaboration tracking and approval. Once an agreement is reached, IVV will continue to monitor to validate that the BHA's expectations are met.  Recommend that requirements are fully elaborated as component of user story development, with results of requirements being re-stated and agreed-to by DOH. In instances where user stories are already completed, IAD sessions are recommended to ensure the requirements are fully elaborated, documented, and agreed to.  Recommend that requirements are fully elaborated and where needed, re-stated and agreed to as part	5/21/18 - IV&V has observed the review and approval of user stories but not requirements which may not be a comprehensive approach. In instances where use stories are already completed, JAD sessions are recommended to ensure the requirements are fully elaborated, documented, and agreed to. The State has been working diligently with the SI to understand the traceability of requirements in TFS and the SI has provided artifacts, clarifications to questions, and developed a query to extract the TFS data needed by the State to verify traceability. Since Iteration 2 approaches completion and the State is still verifying the query and traceability in TFS, IV&V is raising severity of this risk to Medium. IV&V awaits the State's review and approval of the query as well as the TFS demonstration anticipated May 31.  4/11/18: Disagreements have arisen regarding expected features in the Calculator product. BHA expected features such as drag & drop as well as the tools connection to service authorizations and was surprised when the SI stated the features were not captured in the user stories. Without clear elaboration of requirements and clear sign off on the elaborations, conflicts such as these may continue throughout the project. Failure to properly elaborate system requirements can result in loss of important functionality, unmet user expectations, and/or force BHA to swap (remove other requirements) to make up for misunderstood requirements.  1/25/18: SI has stated that they are tracking requirements elaborations, but it seems they are doing it outside of TFS. The IV&V team needs more information on how this is occurring.	Requirements Management	Risk	Medium	Open
16	01/23/18	Unclear review and approval process for project deliverables	SI has delivered the Project Management Plan (including project work plan), Deliverable Expectation Document, and Test Strategy. The SI PM/Lead Analyst has stated there is an assumption of tacit signoff on some or all of these deliverables due to the fact that they have been delivered and that BHA has offered little to no response. To date, the SI has not conducted review	that the deliverable was satisfactorily performed/developed."  Without an explicit signoff process for deliverables, the SI may assume their customer has agreed to plans, methodologies, activities and processes, when they have serious concerns. For example, the Project Management Plan should provide details of methods, processes and activities that will be employed throughout the project. Lack of clear	Recommend BHA request the SI clarify and follow an agreed upon deliverable acceptance and sign-off process, which should include review sessions to ensure clear understanding and open dialog around each deliverable. Recommend deliverables only be signed off when all issues have been resolved with BHA leadership as well as a signoff process that leaves no room for ambiguity.  Recommend BHA and SI come to agreement on deliverables best suited to be "live" documents (documents that will continue to be updated throughout the project as content becomes available/solidified). Recommend BHA request SI deliverable review sessions on key deliverables (e.g. Architecture Blueprint, Configuration Management Plan, Data Management Plan, Data Management Plan, prior to signoff.  Once an agreement is reached, IV&V will continue to monitor to validate that the BHA's expectations are met.	5/25/18: The BHA Deliverables Summary Memo has been finalized and includes agreed upon terms for reviewing and approving deliverables moving forward.  05/21/18 - An approval process which clarifies and ensures all deliverables are meeting project needs has been agreed to though the project has yet to produce the documentation that was included in the agreement which will provide the details of the agreed upon process.  4/16/18: IV&V provided the Project with a revised DCF review process document to help clarify the process. BHA is currently reviewing the process.  4/11/18: Recommend requesting SI update PMP, agreeing it is a living document.  4/11/18: BHA has stated there does appear to be some confusion around terminology (e.g., document names). IV&V believes there remains room for clarification around the DCF process as part of the overall deliverable review and acceptance process. Unbeknownst to IV&V, some of the deliverables that we have been waiting for (such as the Configuration Management Plan) were approved quite some time ago, which has added to the confusion. In response, IV&V has created a deliverable tracking log. IV&V recommends BHA review any critical deliverables that RSM and/or DOH consider to be approved, and rather than re-opening them, identify if there are any critical findings associated with the deliverables that may impact the project, and add them to our risk log as appropriate.  4/9/18: Although the SI provided comments on IV&V's proposed DCF Review process on 3/14/18, we could not find any evidence of BHA's final approval of this document/process. Re-categorization of this risk as 'monitor for closure' in the March 2018 IV&V report is pending BHA's acceptance of RSM's proposed revisions to the DCF Review process.	Vendor Project Management	Risk	Low	Open

Id	Identified Date	Summary	Observation	Significance	Recommendation	Updates	Process Area	Туре	Priority	Status
17		SI Resource Constraint	On 1/22/18, the SI announced that its PM/Lead Analyst is leaving the SI Firm. Concern has been raised by BHA leadership and IV&V that key project discovery, analysis, and design details will be lost. In addition, on 10/30/18 the SI lost a subcontracted project manager/assistant and their replacement has been delayed, currently scheduled for 2/5/18.	Loss of key project discovery, analysis, and design details could negatively impact the productivity of SI efforts and the project schedule. The risk of an ineffective knowledge transfer from the departing PM/Lead Business Analyst to the SI's new PM can still be realized despite the SI's best efforts. While the remaining team that participated in discovery remains largely intact, it is unclear how long it will take for the incoming PM to get up to speed and equal the same level of knowledge/productivity that the outgoing PM (who spent 100's of hours leading the discovery effort) provided.		5/21/18 - IV&V has not observed progress towards the mitigation of this risk during the reporting period but anticipates closing this finding next period with the return of key SI resources.  4/11/18: SI announced the Solution Architect will soon be out on paternity leave (estimated at 3-4 weeks), his responsibilities will be distributed to the existing project team while he is out. Recommend BHA request further details of coverage while he is out and how this will be managed.  4/2/18: Seems the project Solution Architect currently holds multiple additional project roles including: Scrum Master, Development Lead, Lead Business Analyst. Some additional roles may be temporary, while roles are transitioned to new resources, but may still pose a risk to the effectiveness of these roles when managed by a single individual.  3/15/18: SI provided a document providing clarification of roles and responsibilities. While the Scrum Master role was not mentioned, SI stated Scrum Master role would be split between the PM and the architect.	Vendor Project Management	Observa	Low	Open
						2/21/18: Engagement Manager seems to have an increased involvement in Lead Analyst and Lead Architect activities. SI has replaced PM resources that have left the project and involved their PMO who will assist on a limited basis. Lead Analyst responsibilities have shifted to another team member. Recommend SI clarify roles of their project team. SI has provided some details of transition planning.				
18	09/01/17	Competing priorities of BHA SMEs could negatively impact the project timeline	Some state staff have at times been constrained by other duties and have shown some resistance to participate in project activities. SME attendance and participation in project meeting has been waning at times, requiring meetings to be rescheduled.	SMEs competing priorities can negatively impact the overall quality of work the project relies on; delays SMEs response to project needs could negatively impact the project schedule.	Analyze/monitor BHA SME capacity to avoid potential project delays and communicate expectations clearly to staff. Recommend BHA leadership actively encourage and support staff participation and assist them with prioritizing their duties to accommodate full participation in the project. Recommend BHA consider staff augmentation to meet project specific needs. IV&V will continue to monitor concerns over constrained stakeholder capacity throughout the project.	5/21/18 - IV&V has not observed progress towards the mitigation of this risk during the reporting period.  4/11/18: BHA is working with SI to mitigate resource challenges, currently key members of the project team are over tasked. CAMHD resources to assist DDD in support of project tasks (e.g. data migration).  4/2/18: BHA stated that final user story approval delays are mostly due to SME indecisiveness, a smaller part due to limited SME capacity. BHA mitigation strategy is to propose a finalized user story and give SME's a deadline, if not met user story will be left as is.  3/25/18: BHA SME's will be a key resource for data migration. IV&V has concern these activities could be delayed if the level of effort is greater than expected.		Risk	Low	Open
						3/20/18: Final user story approval has been delayed and caused schedule slippage, seeming due to delays in BHA business resource responsiveness. SI has logged this as a project risk but it seems unclear whether this has hindered developer productivity.  10/2/17: BHA leadership has addressed this issue and attendance to project meetings has improved. However, participation still seems to be lacking. Many times, attendees prefer to call instead of attending in person. In person attendees are typically much more engaged than those who call in. Many attendees who call-in offer little				
19	09/01/17	Federal funding risk	Ability to access enhanced federal funding as initially planned is at risk due to State Medicaid Agency delays in completing its MITA State Self-Assessment (SS-A) prior to the submittal of DOH's IAPD.	Delays in securing enhanced funding has delayed system development. Inability to claim federal funds could negatively impact the project budget, scope and schedule.	Recommend BHA continue to work closely with DHS to pursue available funding options. IV&V will continue to monitor progress.	5/21/18 - DOH is planning on completing the IAPD for submittal to CMS next month.  2/22/18: Approach to draw-down of federal funding was discussed in the project steering committee meeting.  DHS plans to submit a PAPD, with which DOH's IAPD would be aligned. According to DHS, work on the PAPD is pending receipt of DOH's IAPD. In the meantime, DOH is also pursuing 50/50 admin claiming to support the project. This will require an update to DHS' Cost Allocation Plan (to allow DOH's project costs to be submitted on the CMS-64 form).	Vendor Project Management	Issue	Medium	Open

ld	Identified Date	Summary	Observation	Significance	Recommendation	Updates	Process Area	Туре	Priority	Status
20	2/23/18	TFS governance appears to be insufficient	TFS (Microsoft's Team Foundation Server) is the projects central repository database of all requirements, user stories, development tasks, test cases, bugs, and source code. Each project team member (from developers to analysts to project managers to BHA project leadership) relies on TFS as their primary source of project information and activity tracking.  Seems the SI's TFS governance (how the tool will be used) has not been clearly thought through or	TFS is a highly customizable, flexible, and complex tool that is utilized in different ways by different project team members. TFS veterans often tout the importance of establishing clear standards, templates and processes (i.e. governance) for entering and managing data in TFS before data entry begins.  While some progress has been made towards clarifying TFS governance through diagramming the user story process flow, concerns remain that TFS governance has not been thoroughly established, which can lead to ineffective/inefficient use of TFS throughout the project and inadequate requirements management.  In addition, the RFP requires that, "The SI firm shall utilize the fullest capabilities of Visual Studio Online (referenced throughout as Team Foundation Services, or TFS) for solution Application Lifecycle Management (ALM), in addition to Visual Studio for development purposes."	Recommend BHA request SI to document the TFS governance process and provide to BHA for review and approval. Once better governance has been solidified, IV&V will continue to monitor to validate that the BHA's expectations are met.	5/25/18 - RSM committed toproviding documentation to the State which clarifies how the tool is being used and how to interpret the status of any one item  5/21/18 - The state has requested an RSM-developed query that includes the Requirements Traceability Matrix requirement ID number to maintain overall traceability from requirements through user stories.  4/11/18: Some confusion seems to continue to exist over TFS governance. Details of governance (e.g. how they will use tags) continue to be worked out and communicated during scrum calls and other meetings. Unclear if TFS governance decisions made during these calls are documented or effectively communicated to all TFS users or to users that missed the call.  3/15/18: SI provided Visio diagram of "Request Life Cycle" includes some details of user story tracking and makes mention of new user story status conventions.  2/26/18: This finding is a breakout of a closed finding (#13) that focuses on TFS governance.  2/23/18: RFP requires TFS governance to be documented in the Configuration Management Plan which is currently being developed by the SI.	Requirements Management	Risk	Low	Open
21	2/23/18	Architecture Blueprint and Roadmap deficiencies	clearly established.  IV&V reviewed the SI's draft Architecture Blueprint and Roadmap deliverables and observed that the documents seem to be missing key information.	The architectural blueprint document provides key system design details (captured during the design phase) and infrastructure details critical to the development phase. Lack of a planned and documented design decisions could lead to confusion and rework by the development team and can hinder strategic planning (e.g. licensing) for the project team. In the end this could lead to a less than optimal development phase.  Similar deficiencies were noted in the Roadmap, and due to the signficance of this deliverable to the project, it was included in this finding.	Revise the latest draft of the Architecture Blueprint to align with industry standards.	5/25/18 - RSM confirmed that the updated Architecture Plan will be updated and resubmitted in June.  5/21/18 - Revised document still exhibits deficiencies and is being returned to SI for addional work.  4/25/18: Updated to include Roadmap deficiencies  3/19/18: SI provided responses to DCF comments but have yet to deliver updated Architecture Blueprint Document.  3/7/18: With the environment buildout beginning shortly and development currently slated to begin on 3/12, IV&V is concerned this document lacks sufficient environment buildout details.  2/23/18: IV&V provided comments to BHA via DCF (document comment form) and awaits BHA/SI responses. Draft seems to focus on what the Dynamics CRM platform can do (out of the box) as opposed to what the SI will	Design & Development	Observa	Medium	Open
24	4/17/18	Delays in approving user stories could impact the project schedule	BHA delays in finalizing the user stories could impact the project schedule. While BHA SME capacity constraints is partially to blame, SME indecisiveness appears to be the primary reason for the delays. BHA has stated that project leadership will soon finalized user stories for the SMEs and give them a due date for any objections/changes. So far, the SI has been able to move unapproved iteration 1 user stories to future iterations to avoid delays in development.	SI has stated that user story approval delays have impacted the project schedule and could delay iteration 1 sprint demo scheduled for 4/24/18. This delay could potentially push out the entire project schedule.	Recommend BHA work with SI to ensure delays do not incur additional project costs. Recommend BHA continue current mitigation strategy of project leadership finalizing user stories for SMEs and make efforts to ensure SME participation in sprint demos (and the training environment) so there is clear understanding system functionality as relates to the delayed user stories. Recommend BHA work with the SI to move user stories that require further analysis to later iterations. Recommend BHA requires the SI assist SMEs with user stories that require further analysis or demonstration of CRM functionality/capabilities in order for SMEs to confidently approve them.	5/25/18 - Approvals for Phase 1 user stories is at completion and team is moving on to review and approval of Phase 2 DHS-related user stories.	Design & Development	Risk	Low	Open
27	05/02/18	DOH requires procurement of Scribe Insight Licenses for Data Conversion activities	Scribe Insight licenses are required to create Scribe packages to migrate and program data transformations for legacy data dictionaries	It is unclear when these licenses are required to support the data conversion effort IAW the project workplan	DOH to procure licenses in time to support project workplan tasks and activities	5/25/18 - teams are discussing the licensing issue via emails and a follow-up meeting is scheduled next week. 5/21/18: IV&V opened this as a new observation during the reporting period. The State is investigating why this is required and the SI needs to determine 'when' this is needed.	Design & Development	Observa tion	Low	Open

Id	Identified	Summary	Observation	Significance	Recommendation	Updates	Process Area	Туре	Priority	Status
	Date									
28	05/21/18	,	DED process is not beng	Deliverable review and approval timeframes are typically elongated when a DED is not developed and agreed to in advance of development of each deliverable.		5/25/18: The BHA Deliverables Summary Memo has been finalized and includes agreed upon terms producing one DED per Iteration for each Deliverable Type. Anita is tasked with developing the first DED when she returns from vacation.  5/21/18: IV&V opened this as a new observation during the reporting period. The State assumes that RSM will make changes to deliverables, as requested after review, and then the state will accept. IV&V researched that the contract does not define this process that explicitly. One could assume that the review/approval cycle would keep repeating itself until the deliverable is accepted, but that is not stated either. What is clear, is that all deliverables are subject to the State's acceptance. So the project agreed to a revised approach moving forward. The SI will provide one (1) DED for each iteration; and each iteration's DED will be inclusive of all the deliverables specific to that iteration. Deliverable review and approval timeframes are typically elongated when a DED is not developed and agreed to in advance of development of each deliverable.	Vendor Project Management	Risk	Medium	Open
29	05/21/18		Test Plans, and the State needs to be afforded the	Per the RSM contract, the Iteration Test Plan(s) must include test cases, scripts, data sheets, and expected results. It is considered a Best Practice to have DOH program participation in review and acceptance of RSM's test scripts. DOH staff possess institutional knowledge of the needed depth, breadth, and overall coverage of requirements and how they trace to RSM test cases and test activities. Additionally, DOH staff have an optimal understanding of how the requirements and associated test activities best transition from process-to-process, for an overall end-to-end business viewpoint.	for providing Test Cases for DOH review and	5/25/18: The BHA Deliverables Summary Memo has been finalized and includes agreements regarding a weekly Thursday meeting to review and Clarify Test Cases and Scripts.  5/21/18: IV&V opened this as a new observation during the reporting period. It has been agreed that RSM will add a weekly 45 minute review session for feedback on Test Cases on Thursday mornings. In addition to the review sessions, BHA expects to receive the test cases delivered with the Iteration Test Plan. BHA will provide feedback on the test cases within two weeks from the start of the iteration and in the review session. It is unclear how the SI is tracking whether or not Test Cases have been run for each requirement since only User Stories with defects have any indication that testing occurred. Therefore, there is no visibility for the project as to what testing has been completed and how much remains.		Risk	Low	Open