June 19, 2020

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 (IV&V) 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.

In accordance with HRS section 93-16, this report may be viewed electronically at http://ets.hawaii.gov (see “Reports”).

Sincerely,

DOUGLAS MURDOCK  
Chief Information Officer  
State of Hawai‘i

Attachment (2)
Hawaii BHA Integrated Case Management System Project – Phase 3

Final IV&V Report for the period of

May 1 – May 31, 2020

Final submitted: June 10, 2020
Agenda

Executive Summary
IV&V Findings & Recommendations

Appendices

• A – Rating Scales
• B – Inputs
• C – Project Trends
Executive Summary

The project deployed Release 3.8 and pushed two mid-sprint deployments into production in May. Both DDD and CAMHD completed end-to-end regression testing for R3.8 demonstrating Test Practice Validation improvements. The project continues to pursue automated regression testing tools.

The RSM Team continued to provide essential support during May alleviating some of the bandwidth concerns expressed by DOH to meet crucial business needs.

The current COVID-19 pandemic continues to impact the workload of project stakeholders. The project remains substantially on track with scheduled project tasks/activities and milestones.

<table>
<thead>
<tr>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Category</th>
<th>IV&amp;V Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>G</td>
<td>G</td>
<td>Sprint Planning</td>
<td>The sprint planning category remains Green (low) for the May reporting period, maintaining one active finding for this category. The RSM Team continued to assist the DOH Team with tasks and activities during May and will continue to do so for upcoming releases which helps to alleviate some of the bandwidth concerns for the DOH staff.</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>G</td>
<td>User Story (US) Validation</td>
<td>IV&amp;V reports no active findings for User Story (US) Validation category which remains Green (low) for the May reporting period. IV&amp;V will continue to monitor the US development and validation process in upcoming reporting periods.</td>
</tr>
<tr>
<td>Y</td>
<td>Y</td>
<td>G</td>
<td>Test Practice Validation</td>
<td>IV&amp;V reduced the Test Practice Validation category to Green (low) for the May reporting period as a result of the execution of regression testing for both DDD and CAMHD for Release 3.8. Automating regression testing remains outstanding which IV&amp;V will continue to monitor.</td>
</tr>
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</table>
# Executive Summary

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Release / Deployment Planning</td>
<td>As with Release 3.7, IV&amp;V confirmed the presence of release notes/scripts for the deployment of Release 3.8 to production. DOH continues to demonstrate rigor in this area resulting in the closure of a couple of IV&amp;V recommendations. During this reporting period, IV&amp;V observed issues with the ISP Cloning functionality released in R3.8, which were corrected in early June. The rating for this category remains as yellow for May and IV&amp;V will continue to monitor deployment activities in June.</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>G</td>
<td>OJT and KT Sessions</td>
<td>The rating for the OJT and KT Sessions category remains Green (low) for the May reporting period with no active findings. RSM provided BHA with skills matrix information for the Solution Architect role. Additional skills matrix documentation to help identify strengths, gaps, and training needs specific to long-term maintenance and support of the solution is pending from RSM.</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>G</td>
<td>Targeted KT</td>
<td>IV&amp;V continues to rate the Targeted KT category at Green (low) for the May reporting period and maintains one active concern in this category. The project scheduled a Calculator 3.0 Knowledge Transfer session on 5/29/20 which IV&amp;V attended.</td>
</tr>
<tr>
<td>G</td>
<td>G</td>
<td>G</td>
<td>Project Performance Metrics</td>
<td>IV&amp;V continues to rate the Project Performance Metrics category Green (low) for the May reporting period. The project exceeded its planned velocity expectation for the R3.8 May deployment.</td>
</tr>
</tbody>
</table>
## Executive Summary

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<thead>
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</thead>
<tbody>
<tr>
<td>🟢</td>
<td>🟢</td>
<td>🟢</td>
<td><strong>Organizational Maturity Assessment</strong></td>
<td>IV&amp;V continues to rate the Organization Maturity Assessment (OMA) at Green (low) for the May reporting period. The project team completed an Agile Maturity Assessment this month reflecting maturity improvements in 50% of the agile areas assessed. IV&amp;V proposed additional organization assessment areas for the project’s consideration.</td>
</tr>
<tr>
<td>🟢</td>
<td>🟢</td>
<td>🟠</td>
<td><strong>Project Management</strong></td>
<td>The Project Management category remains a Yellow (medium) for the May reporting period. The current COVID-19 crisis continues to impact the workload of Product Owners and staff, however to date, current project work tasks and activities are being sustained.</td>
</tr>
</tbody>
</table>
As of the May 2020 reporting period, there are a total of six open findings, comprised of one High Risk, three Low Risks, one Low Issue, and one new Preliminary Concern spread across the Sprint Planning, Release / Deployment Planning, Test Practice Validation, Targeted Knowledge Transfer, and Project Management assessment areas.
IV&V Findings & Recommendations
IV&V Findings & Recommendations
Assessment Categories

Throughout this project, IV&V will verify and validate activities performed in the following process areas:

- Sprint Planning
- User Story Validation
- Test Practice Validation
- Release / Deployment Planning
- On-the-Job Training (OJT) and Knowledge Transfer (KT) Sessions
- Targeted Knowledge Transfer (KT)
- Project Performance Metrics
- Organizational Maturity Assessment
- Project Management
Sprint Planning

### Key Findings

<table>
<thead>
<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>Low Risk – <em>The BHA Technical Team bandwidth may not be adequate to meet the needs of the project, which could compromise project productivity.</em> The RSM Team continued to assist the DOH Team with tasks and activities during May, which continued to help alleviate some of the bandwidth concerns for the DOH staff. Release 3.10 will be managed by RSM as a water-scrum-fall release, which should help limit the impact of minimal bandwidth for the DOH Solution Architect. IV&amp;V will continue to monitor this issue in June.</td>
<td>L</td>
</tr>
</tbody>
</table>

### Recommendations

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<thead>
<tr>
<th>Recommendations</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The Project should investigate mechanisms of increasing the bandwidth of the BHA Technical Team, either by adding resources through new hires, or existing vendor contracts.</td>
<td>In progress</td>
</tr>
<tr>
<td>• The Project should assess, where possible, if there are responsibilities of the BHA Technical Team that can be reassigned to other project staff.</td>
<td>In progress</td>
</tr>
<tr>
<td>• The Project should evaluate where process inefficiencies can be addressed and streamlined to possibly free up the BHA Technical Team’s availability.</td>
<td>In progress</td>
</tr>
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</table>
### IV&V Findings & Recommendations

#### Test Practice Validation

<table>
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<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>2</td>
<td><strong>Reduced to Low Criticality Issue</strong> – As a result of regression testing not being consistently performed, production releases are breaking and/or deprecating existing functionality in the production environment. CAMHD has invested resources to develop end-to-end regression test scripts, which reduces the time necessary to execute this testing on a recurring basis. Both DDD and CAMHD regression scripts were executed for release 3.8. As a result, IV&amp;V is reducing this issue to a low criticality. Automating regression testing is still outstanding and is planned to occur during Release 3.10. IV&amp;V will continue to monitor progress.</td>
<td>L</td>
</tr>
</tbody>
</table>

#### Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Updating the regression test scripts to ensure consistency with system configuration.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Modifying release schedules to allow for regression testing timeframes.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Planning releases by functionality type to avoid unnecessary repetitive work being performed in any given section of the solution.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Performing regression testing after every release, or possibly every other release, or potentially tying regression tests to full solution upgrade releases. In addition, consider alternating the DDD and CAMHD scripts every other release.</td>
<td>Completed</td>
</tr>
</tbody>
</table>
## IV&V Findings & Recommendations

### Test Practice Validation (cont’d)

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Modifying regression test scripts to start AFTER case creation, limiting the time it takes to execute.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Potentially modifying the deployment scripts based on information gained from any or all of the steps listed above.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Pursuing additional formal training in AzureDevOps for test automation at the earliest possible juncture and commence efforts to automate at least the 2 primary regression test scripts.</td>
<td>Open</td>
</tr>
<tr>
<td>• Consulting with RSM to determine how the ‘interim testing processes’ can be improved until such time that automated testing is available for repeatable and complete industry standard regression testing.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Implementing ‘hard’ code freeze dates as well as test environment deployment dates to ensure that testing and deployment activities are not rushed.</td>
<td>Completed</td>
</tr>
</tbody>
</table>
## IV&V Findings & Recommendations
### Release / Deployment Planning

<table>
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<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>5</td>
<td>Low Risk - Due to the project not following a detailed deployment script, the project may continue to experience defects related to deployment activities. Release 3.8 was successfully promoted to production during the May reporting period. The project team is producing effective deployment scripts, which has resulted in repeatable deployment activities. However, in a mid-sprint push to production on 5/22/2020, ISP cloning features were not successfully deployed to production. The ISP cloning functionality was successfully tested in the test environment, however the absence of Azure functionality needed in the UAT and SIT2 environments prevented additional final pre-production testing of these features prior to deploying to production. IV&amp;V notes BHA has since configured the Azure components in the SIT2 environment for pre-production testing for this functionality.</td>
<td>L</td>
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**Recommendations**

<table>
<thead>
<tr>
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<th>Status</th>
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<tbody>
<tr>
<td>• IVV recommends documenting deployment scripts for both the patch method and the full solution upgrade method. The script(s) should be in the form of a step-by-step procedure that walks through from start to finish of the deployment process and involve several technical staff to ensure staff availability to accomplish these tasks when primary deployment personnel are unavailable.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Standardize the content of all developer deployment task notes, with a goal of eliminating any potential ambiguity to the Deployment Team, resulting in a cleaner and more repeatable set of deployment processes and instructions.</td>
<td>Completed</td>
</tr>
<tr>
<td>• As appropriate, consult with RSM on best practices that BHA could employ to support deployment.</td>
<td>In Progress</td>
</tr>
<tr>
<td>• Look at implementing 'hard' code freeze dates as well as test environment deployment dates to ensure that testing and deployment activities are not rushed.</td>
<td>Completed</td>
</tr>
<tr>
<td>• Allow for complete functionality testing in pre-production environments before deploying code to production.</td>
<td>New</td>
</tr>
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</table>
**IV&V Findings & Recommendations**

**Targeted KT**

<table>
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<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>3</td>
<td>Low Risk – Usage of open source JavaScript framework for development and ongoing maintenance of Calculator 3.0 requires BHA to take a proactive approach to support and security. The project continued to focus attention on the Calculator 3.0 user stories and defects during the month of May. RSM conducted another Calculator 3.0 Knowledge Transfer session on 5/29/2020 which IV&amp;V attended. This session included the new C3.0 year-end changes. Additional KT sessions is planned for and IV&amp;V will continue to monitor this project component during June.</td>
<td>L</td>
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**Recommendations**

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<thead>
<tr>
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<th>Status</th>
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<tbody>
<tr>
<td>• IV&amp;V recommends BHA work to establish a reliable and repeatable process for keeping abreast of communal updates and support opportunities for a new suite of tools.</td>
<td>Open</td>
</tr>
<tr>
<td>• IV&amp;V recommends BHA continue to hold targeted KT sessions with RSM on maintaining Calculator 3.0 via a suite of tools, and determine what additional skillsets, training, and/or resources are needed to support BHA’s long-term ownership of Calculator 3.0.</td>
<td>In Progress</td>
</tr>
</tbody>
</table>
# IV&V Findings & Recommendations

## Project Management

<table>
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<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>7</td>
<td><strong>Low Risk - The lack of consistent backlog grooming could result in the project backlog having obsolete, non-estimated, and poorly defined user stories.</strong> The project team has determined the backlog grooming effort has caught up, as details for release 3.9 are completed and 3.10 is near completion. IV&amp;V will keep this finding open for an additional month to validate that the backlog continues to be groomed as new stories and defects are identified. Efforts to keep the backlog groomed should take place each month so that release planning efforts are not delayed.</td>
<td>L</td>
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</tbody>
</table>

### Recommendations

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<th>Status</th>
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<tbody>
<tr>
<td>• CAMHD and DDD should prioritize grooming the backlog to bring it as current and accurate as possible. This should include removing items no longer needed, and ensuring all items are fully defined, readying them for configuration or developer resources. To the extent feasible, BHA should involve RSM SMEs in this process, if only for the interim to get “caught up” on grooming efforts.</td>
<td>In Progress</td>
</tr>
<tr>
<td>• IVV recommends that the project consider utilizing an age-based methodology for the deprecation of 'older' user stories in the backlog that may no longer be applicable or needed by the Product Owners and developing a process for periodic cleansing of the backlog using the same methodology.</td>
<td>In Progress</td>
</tr>
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</table>
### IV&V Findings & Recommendations

**Project Management (cont’d)**

<table>
<thead>
<tr>
<th>#</th>
<th>Key Findings</th>
<th>Criticality Rating</th>
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<tbody>
<tr>
<td>10</td>
<td><strong>High Risk - The COVID-19 pandemic and the related &quot;stay at home&quot; order could hinder project activities and negatively impact the project schedule and budget.</strong> The COVID-19 pandemic continued to require more staff and management time than anticipated in May, as Departmental priorities are focused on providing services to clients. Both the DDD and CAMHD Product Owners have stated that a significant percentage of available managerial and staff time continues to be redirected to the Department's COVID-19 response, as opposed to being able to focus on the project. To date, project activities have not been impacted IV&amp;V will continue to monitor this risk during the month of June.</td>
<td>H</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Status</th>
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<tbody>
<tr>
<td>• IV&amp;V recommends BHA to ramp up efforts to setup, train, and assist stakeholders on remote work devices and tools and make every effort to help them to become highly functional with remote access technology (e.g. MS Teams/Skype).</td>
<td>Completed</td>
</tr>
<tr>
<td>• IV&amp;V recommends the project and DOH create a detailed, documented risk mitigation strategy and plan that is reviewed regularly and revised to address the current state of the COVID-19 threat and related impacts over the next 6 to 12 months.</td>
<td>In Progress</td>
</tr>
<tr>
<td>• IV&amp;V recommends updates to the OCM Plan to include any new activities or updates to planned activities to aid the organization through this COVID-19 situation in the short and long term.</td>
<td>Open</td>
</tr>
</tbody>
</table>
# IV&V Findings & Recommendations

## Project Management (cont’d)

<table>
<thead>
<tr>
<th>#</th>
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<th>Criticality Rating</th>
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<tbody>
<tr>
<td>11</td>
<td><strong>New Preliminary Concern</strong> - The lack of design reviews for complex user stories has resulted in the promotion of incomplete solutions into production. There were a couple incidents during May where the code promoted to production did not fully meet all requirements of associated user stories for CAMHD Progress Notes. The components that were developed and implemented were functional, however the effort was complicated by additional requirements being added during development that necessitated additional changes to the design. IV&amp;V will continue to monitor the design review activity for large user stories moving forward.</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## Recommendations

<table>
<thead>
<tr>
<th>Recommendations</th>
<th>Status</th>
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<tbody>
<tr>
<td>• IV&amp;V recommends (and DOH has commenced) conducting technical design reviews for complex user stories prior to development to ensure designs are complete and all requirements associated with the design are met. IV&amp;V observed this activity has been implemented by DOH in the month of May.</td>
<td>In Progress</td>
</tr>
</tbody>
</table>
### IV&V Findings & Recommendations

#### Project Performance Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>IV&amp;V Observations</th>
<th>IV&amp;V Updates</th>
</tr>
</thead>
</table>
| Velocity | • Review and validate the velocity data as reported by the project  
• Verify the project is on pace to hit the total target number of US/USP for Phase 3 | **May** - During Sprint Planning for Release 3.8, available velocity was calculated as 98 US Points (USP) with a total of 167 USP being released to production. | **May** – The project continues to estimate the User Stories in the Backlog.  
BHA resources are working in sequential order to estimate stories targeting those items tagged with 3.9, 3.10, etc. |
## IV&V Findings & Recommendations

### Project Performance Metrics (cont’d.)

<table>
<thead>
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<th>IV&amp;V Updates</th>
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</thead>
<tbody>
<tr>
<td><strong>US Point Estimates vs Actuals</strong></td>
<td>• Verify the project is tracking US Point estimates and actual data&lt;br&gt;• Determine the delta between estimates and actuals&lt;br&gt;• Based on the delta (if any) investigate the potential root cause for the delta</td>
<td><strong>May</strong> - The Project Scrum Master closely tracks the USP on a daily basis. Determining the delta between USP estimates and actuals is work in progress.</td>
<td><strong>May</strong> – DDD and CAMHD have standardized a format for resources to track hours. The recording of resource hours is not completed by all team members making it difficult to calculate the variance between actual vs. projected hours.</td>
</tr>
</tbody>
</table>
### IV&V Findings & Recommendations

**Project Performance Metrics (cont’d.)**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
<th>IV&amp;V Observations</th>
<th>IV&amp;V Updates</th>
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</thead>
</table>
| **Defect Metrics** | Understand and track the following:  
- Defects by category (bug fixes)  
- US Points assigned to defects in a release vs US Points assigned to planned US in a release | **May** – Release 3.8 was planned for 98 user story points; however 167 user story points were promoted to production on 5/14/2020.  
- **143** User Story Points (**86%** of the total) were associated with planned user stories  
- **24** User Story Points (**14%** of the total) were associated with defects from the backlog.  
IVV notes that some of the “planned” items were production defects identified through previous releases and prioritized as part of the 3.8 backlog along with Requests that resulted in User Stories. | **May** – A mid-sprint deployment was conducted on 5/15/2020 to re-promote functionality from R3.8 associated with CAMHD Progress Notes.  
A second mid-sprint deployment was conducted on 5/22/2020, to again address the CAMHD Progress Notes issue, as well as to deploy ISP Cloning, and One-time mid-year changes and PA Status/Comments on the Calculator 3.0 component. |
IV&V Findings & Recommendations
Organizational Maturity Assessment

<table>
<thead>
<tr>
<th>Measure</th>
<th>IV&amp;V Observations</th>
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<tbody>
<tr>
<td></td>
<td>The project team completed an Organizational Maturity Assessment on May 13, 2020. The results showed an overall maturity improvement for 50% of the areas assessed as shown in the next slide. IV&amp;V has provided the project with proposed agile assessment areas for the BHA organization as a whole and will be sharing a User Story Powerpoint which will provide tips on how to write user stories following the INVEST principle that can be shared with the team.</td>
</tr>
</tbody>
</table>
IV&V Findings & Recommendations
Organizational Maturity Assessment – Agile Maturity

Agile Maturity Matrix Assessment for May 2020

- Morale
- Sustainable pace
- Cross functional (Scrum Team)
- Self organization
- Shippability
- Product management strategy
- Team level product management
- Use of INVEST
- Backlog grooming
- Vertical slicing
- Work in progress
- Reviews
- Unit testing (software)
- Cycle time of Backlog

May Current Level
Jan Current Level
Target Level
Jan Target Level
Appendix A: IV&V Rating Scales
Appendix A
IV&V Rating Scales

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)
- IV&V Assessment Category Rating Definitions

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>G</td>
<td>The assessment category is under control and the current scope can be delivered within the current schedule. The assessment category’s risks and issues have been identified, and mitigation activities are effective. The overall impact of risk and issues is minimal. The assessment category is proceeding according to plan (&lt; 30 days late).</td>
</tr>
<tr>
<td>Y</td>
<td>The assessment category 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 assessment category’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 assessment category. Schedule issues are emerging ( &gt; 30 days but &lt; 60 days late). Project Leadership attention is required to ensure the assessment category is under control.</td>
</tr>
<tr>
<td>R</td>
<td>The assessment category is not under control as there are serious problems with resources, schedule, or scope. A plan to get back on track is needed. The assessment category’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 (&gt; 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 assessment category under control.</td>
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## Appendix A

### Criticality Ratings

<table>
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<tr>
<th>Criticality Rating</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>H</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>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.</td>
</tr>
</tbody>
</table>
Appendix B: Inputs
Appendix B

Inputs

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

Meetings attended during the May 2020 reporting period:
1. Daily Scrum Meetings (selected)
2. Twice Weekly RSM Issues Meeting
3. Release 3.8 Deployment Planning Meeting
4. Release 3.8 Retrospective Meeting
5. Sprint Planning (Part 1 & 2) for Release 3.9
6. Weekly CCB Meeting
7. Weekly BHA-ITS Project Status Meeting
8. Bi-Weekly Check-in: CAMHD
9. Bi-Weekly Check-in: DDD
10. BHA IAPDU Planning Meeting
11. DHS Interfaces Meeting
12. Organizational Maturity Assessment Meeting
13. IV&V Draft IV&V Status Review Meeting with DOH
14. IV&V Draft IV&V Status Review Meeting with RSM and DOH
15. Calculator 3.0 - DOH Knowledge Transfer Session
16. BHA Report and Data Planning Meeting

Artifacts reviewed during the May 2020 reporting period:
1. Daily Scrum Notes (selected)
2. Twice Weekly Issues Meeting Notes (selected)
3. Release Notes – R3.8
4. R3.9 Backlog Spreadsheet
5. Release 3.10 Plus Visio Diagram
6. R3.10 Backlog Extract Spreadsheet
7. Hawaii MOD 4 – Gantt Spreadsheet
8. Phase 3 and Future Phase Extract from TFS Spreadsheet

Eclipse IV&V® Base Standards and Checklists

![Document Icon]
Appendix C: Project Trends
### Project Trends

#### Trend: Overall Project Health

<table>
<thead>
<tr>
<th>Process Area</th>
<th>2019</th>
<th>2020</th>
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<tr>
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## Process Area

### Observation

In order to provide a high level summary of the project status, the team will be able to identify areas for improvement and ensure that the project is staying on track for each release through the end of Q4. It is not unusual for the project to be working on a “task” for a few days and then spend a significant amount of time on a “task” or a “feature” but not be able to determine the overall impact or cost of these efforts. This will help the team leverage resources and productivity.

**Updates**

- **Project Management:**
  - The project is following the project management plan and is on track to deliver the functionality as planned.
  - The team has identified several areas for improvement, including:
    - Improving communication and collaboration between team members.
    - Enhancing the project management tools and techniques.

- **Technical Development:**
  - The development team is making good progress on the features and functionality required for the project.
  - The team has identified several technical challenges and risks that need to be addressed.

- **Quality Assurance:**
  - The quality assurance team is working closely with the development team to ensure that the project meets the quality standards.
  - The team has identified several areas for improvement, including:
    - Enhancing the testing strategy and tools.
    - Improving the testing process and procedures.

- **Stakeholder Engagement:**
  - The team is actively engaging with stakeholders to ensure that their needs are being met.
  - The team has identified several areas for improvement, including:
    - Enhancing the communication and feedback mechanisms.
    - Improving the stakeholder engagement and management.

### Reflections

To address the root cause of the issues identified, the project team has developed a plan to:

- **Communicate and Collaborate:**
  - Increase communication and collaboration among team members.
  - Enhance the project management tools and techniques.

- **Technical Development:**
  - Enhance the development process and tools.
  - Improve the technical architecture and design.

- **Quality Assurance:**
  - Improve the testing strategy and tools.
  - Enhance the testing process and procedures.

- **Stakeholder Engagement:**
  - Enhance the communication and feedback mechanisms.
  - Improve the stakeholder engagement and management.

**Outcomes:**

- The project team has identified several areas for improvement and has developed a plan to address them.
- The team has made progress on the identified issues and is on track to deliver the functionality as planned.

**Next Steps:**

- Continue to monitor the project progress and adjust the plan as necessary.
- Ensure that the identified improvements are implemented and that the project continues to meet the quality standards.

---

## Status Report

**Date:** 03/31/2020

**Location:** Virtual Meeting

**Attendees:**

- Project Team Members
- Stakeholders

**Agenda:**

1. **Project Overview:**
   - Brief update on project status.
   - Overview of recent updates.

2. **Key Milestones:**
   - Review of key milestones achieved.
   - Discussion of upcoming milestones.

3. **Risk Management:**
   - Identification and mitigation of project risks.
   - Review of risk management plans.

4. **Quality Assurance:**
   - Review of quality assurance activities.
   - Discussion of quality assurance tools and techniques.

5. **Stakeholder Engagement:**
   - Communication and feedback mechanisms.
   - Engagement strategies.

6. **Next Steps:**
   - Action items and follow-up activities.

**Outcomes:**

- The project team has made progress on the identified issues and is on track to deliver the functionality as planned.
- The team has identified several areas for improvement and has developed a plan to address them.

**Next Steps:**

- Continue to monitor the project progress and adjust the plan as necessary.
- Ensure that the identified improvements are implemented and that the project continues to meet the quality standards.

---

## Project Summary

**Date:** 04/30/2020

**Location:** Virtual Meeting

**Attendees:**

- Project Team Members
- Stakeholders

**Agenda:**

1. **Project Overview:**
   - Brief update on project status.
   - Overview of recent updates.

2. **Milestones:**
   - Review of key milestones achieved.
   - Discussion of upcoming milestones.

3. **Risk Management:**
   - Identification and mitigation of project risks.
   - Review of risk management plans.

4. **Quality Assurance:**
   - Review of quality assurance activities.
   - Discussion of quality assurance tools and techniques.

5. **Stakeholder Engagement:**
   - Communication and feedback mechanisms.
   - Engagement strategies.

6. **Next Steps:**
   - Action items and follow-up activities.

**Outcomes:**

- The project team has made progress on the identified issues and is on track to deliver the functionality as planned.
- The team has identified several areas for improvement and has developed a plan to address them.

**Next Steps:**

- Continue to monitor the project progress and adjust the plan as necessary.
- Ensure that the identified improvements are implemented and that the project continues to meet the quality standards.

---

## Project Summary

**Date:** 05/31/2020

**Location:** Virtual Meeting

**Attendees:**

- Project Team Members
- Stakeholders

**Agenda:**

1. **Project Overview:**
   - Brief update on project status.
   - Overview of recent updates.

2. **Milestones:**
   - Review of key milestones achieved.
   - Discussion of upcoming milestones.

3. **Risk Management:**
   - Identification and mitigation of project risks.
   - Review of risk management plans.

4. **Quality Assurance:**
   - Review of quality assurance activities.
   - Discussion of quality assurance tools and techniques.

5. **Stakeholder Engagement:**
   - Communication and feedback mechanisms.
   - Engagement strategies.

6. **Next Steps:**
   - Action items and follow-up activities.

**Outcomes:**

- The project team has made progress on the identified issues and is on track to deliver the functionality as planned.
- The team has identified several areas for improvement and has developed a plan to address them.

**Next Steps:**

- Continue to monitor the project progress and adjust the plan as necessary.
- Ensure that the identified improvements are implemented and that the project continues to meet the quality standards.

---

## Project Summary

**Date:** 06/30/2020

**Location:** Virtual Meeting

**Attendees:**

- Project Team Members
- Stakeholders

**Agenda:**

1. **Project Overview:**
   - Brief update on project status.
   - Overview of recent updates.

2. **Milestones:**
   - Review of key milestones achieved.
   - Discussion of upcoming milestones.

3. **Risk Management:**
   - Identification and mitigation of project risks.
   - Review of risk management plans.

4. **Quality Assurance:**
   - Review of quality assurance activities.
   - Discussion of quality assurance tools and techniques.

5. **Stakeholder Engagement:**
   - Communication and feedback mechanisms.
   - Engagement strategies.

6. **Next Steps:**
   - Action items and follow-up activities.

**Outcomes:**

- The project team has made progress on the identified issues and is on track to deliver the functionality as planned.
- The team has identified several areas for improvement and has developed a plan to address them.

**Next Steps:**

- Continue to monitor the project progress and adjust the plan as necessary.
- Ensure that the identified improvements are implemented and that the project continues to meet the quality standards.

---

## Project Summary

**Date:** 07/31/2020

**Location:** Virtual Meeting

**Attendees:**

- Project Team Members
- Stakeholders

**Agenda:**

1. **Project Overview:**
   - Brief update on project status.
   - Overview of recent updates.

2. **Milestones:**
   - Review of key milestones achieved.
   - Discussion of upcoming milestones.

3. **Risk Management:**
   - Identification and mitigation of project risks.
   - Review of risk management plans.

4. **Quality Assurance:**
   - Review of quality assurance activities.
   - Discussion of quality assurance tools and techniques.

5. **Stakeholder Engagement:**
   - Communication and feedback mechanisms.
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6. **Next Steps:**
   - Action items and follow-up activities.

**Outcomes:**

- The project team has made progress on the identified issues and is on track to deliver the functionality as planned.
- The team has identified several areas for improvement and has developed a plan to address them.

**Next Steps:**

- Continue to monitor the project progress and adjust the plan as necessary.
- Ensure that the identified improvements are implemented and that the project continues to meet the quality standards.
The lack of consistent budgeting activities may project any variance in budget allocation due to deployment activities. 

- Due to the project not being adequately defined, user stories have not been adequately prioritized, and the lack of consistent deployment activities may result in the project backlog continuing to grow. The backlog of defects, requests, and user stories in the project may continue to grow, and some of the items listed in the backlog are old, and some may be removed to ensure that testing and deployment activities are not wasted.

- The lack of consistent definition of 'Done' may project any variance in budget allocation due to deployment activities. 

- The backlog of defects, requests, and user stories in the project may continue to grow, and some of the items listed in the backlog are old, and some may be removed to ensure that testing and deployment activities are not wasted.
The BHA Technical Team plays a role that is critical to project success. Currently, the responsible organization with the BHA Technical Team has expanded beyond their collective available bandwidth. BHA's state RSM hasaddressed this bandwidth issue, which creates increased collaboration with key BHA managers, and in some instances, critical changes in the project execution.

The BHA Technical Team leads the project and is responsible for all technical infrastructure and tooling, the project's design, its overall project effort, and project coordination. To date, the project has not experienced significant issues stemming from bandwidth constraints. The BHA Technical Team has conducted research on expanding the bandwidth of the Technical Team, however, this effort has been held back due to budgetary constraints. Additionally, for an as-yet-unidentified reason, the BHA Technical Team does not have any responsibility for the project's Finance and Legal staff.

The project has a planned migration of all existing BHA staff to remote work. As of June 2020, the project's Technical Team is a critical part of the project's architecture and is looking to be a major contributor to the project going forward. To identify this opportunity, the BHA Technical Team is looking to expand the project's bandwidth in order to achieve the project's Phase 2 objectives.

The COVID-19 pandemic and the lack of a defined Product Roadmap that provides sufficient information to determine what functionalities, features, and/or enhancements will be targeted to be built and released in the upcoming releases (as per the current Product Roadmap) have reduced the bandwidth available. Currently, the Technical Team is working on a plan to address this concern.

The BHA Technical Team leads the project and plays a role that is critical to project success. Currently, the Technical Team is looking to expand the project's bandwidth in order to achieve the project's Phase 2 objectives. To identify this opportunity, the BHA Technical Team is looking to expand the project's bandwidth in order to achieve the project's Phase 2 objectives.

The BHA Technical Team leads the project and is responsible for all technical infrastructure and tooling, the project's design, its overall project effort, and project coordination. The project's Technical Team is a critical part of the project and is looking to be a major contributor to the project going forward. To identify this opportunity, the BHA Technical Team is looking to expand the project's bandwidth in order to achieve the project's Phase 2 objectives.

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The BHA Technical Team leads the project and is responsible for all technical infrastructure and tooling, the project's design, its overall project effort, and project coordination. The project's Technical Team is a critical part of the project and is looking to be a major contributor to the project going forward. To identify this opportunity, the BHA Technical Team is looking to expand the project's bandwidth in order to achieve the project's Phase 2 objectives.
The lack of design reviews for complex user stories has resulted in the promotion of incomplete solutions into production. There were a couple incidents during May where the code promoted to production did not fully meet all requirements of associated user stories for CAMHD Progress Notes. The components that were developed and implemented were functional, however, the effort was complicated by additional requirements being added during development. IV&V recommends (and DOH has commenced) conducting technical design reviews for complex user stories prior to development to ensure designs are complete and all requirements associated with the design are met. IV&V will continue to monitor this activity for large user stories moving forward. If all requirements within a functional design are not met, users could experience the inability to complete required processes, resulting in incomplete data collection and potential issues in service delivery.