DAVID Y. IGE GOVERNOR



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September 15, 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's Employer-Union Health Benefits Trust Fund Benefits Administration System project.

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

Sincerely,

Much

DOUGLAS MURDOCK Chief Information Officer State of Hawai'i

Attachment (1)

STATE OF HAWAII DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

Employer-Union Health Benefits Trust Fund Benefits Administration System (BAS)

AND

MONTHLY IV&V STATUS REPORT

July 24, 2020 | Version 1.0

REPORT FINALIZED

August 20, 2020



QUALITY.

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> CERTIFIED PUBLIC ACCOUNTANTS

> > An independent member of **bakertilly** INTERNATIONAL

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Acuity

Document History

DATE	DESCRIPTION	AUTHOR	VERSION
08/05/20	Monthly IV&V Status Report Draft created	Julia Okinaka	0.0
08/20/20	Monthly IV&V Status Report updated for minor formatting edits. No comments submitted in Appendix E.	Julia Okinaka	1.0

EXECUTIVE SUMMARY

BACKGROUND

The State of Hawaii (State), Employer-Union Health Benefits Trust Fund (EUTF) contracted Morneau Shepell Limited (Morneau Shepell) with their Ariel EAS technology solution for the Health Benefits Administration System Modernization Project (BAS Project) on June 1, 2020. EUTF also contracted Segal to provide project management, business process reengineering (BPR), organizational change management (OCM), and quality management. Segal's subcontractor, ICON Consulting (ICON), is responsible for data consulting and conversion.

The Office of Enterprise Technology Services (ETS) contracted Accuity LLP (Accuity) to provide Independent Verification and Validation (IV&V) services for the EUTF BAS Project. The goal of IV&V is to increase the probability of project success. The benefits of IV&V include identification of high-risk areas early and actionable recommendations.

The Initial Assessment Report covered project commencement through June 26, 2020. Monthly IV&V Status Reports will be issued to update and evaluate continual project progress and performance. Pre and Post Go-Live Implementation Milestone Reports will be issued prior to and after the deployment/completion of major project milestones.

The focus of our IV&V activities for this report included the completion of a two-month evaluation of project organization and management, and data conversion, the review of risk, cost, schedule and resource management, and the start of a two-month evaluation of requirements management. We will continue our review of requirements management through the next report period for a more in-depth assessment.

The IV&V Dashboard on the following two pages provides a quick visual and narrative snapshot of both the project status and project assessment as of July 24, 2020. Refer to Appendix A: IV&V Criticality and Severity Ratings for an explanation of the ratings.

PROJECT PLANNING

"Good fortune is what happens when opportunity meets with planning."

- Thomas Edison



PROJECT ASSESSMENT



2 OPEN FINDINGS

<u>3 OPEN RECOMMENDATIONS</u>

^{**}Pending finalization and approval

ASSESSMENT AREA & RATINGS SUMMARY

AS OF JULY 24, 2020

INITIAL	JUL	IV&V ASSESSMENT AREA	IV&V OBSERVATIONS
G	G	Overall	The overall project rating reflects positive momentum, team collaboration, and establishment of many key project management practices. The criticality rating for eight IV&V Assessment Categories are a solid green, and five are trending downward. The downward trending areas reflect the need for EUTF and Segal to establish some additional foundational project processes and clarify deliverables and timelines relevant for on-going project activities. Our assessment resulted in one positive finding and one risk. Project Schedule: The project is generally on schedule with Morneau Shepell's project schedule. Accuity is unable to
			assess progress in other areas of the project as Segal and ICON's project schedules are still pending, and a schedule reflecting EUTF's activities and resources is still needed (refer to finding 2020.07.PM02).
			Project Costs: Project contract costs invoiced to-date approximated \$414,000. Accuity is unable to validate the total project budget or assess cost variances as EUTF and Segal still need to develop a formal project budget and finalize contract payment schedules (refer to finding 2020.07.PM02).
			Quality: EUTF and Segal still need to establish quality management metrics (refer to finding 2020.07.PM02). Accuity will evaluate and report on quality when EUTF begins to collect metrics data.
G	G	Program Governance	Joint Steering Committee (JSC) meetings will begin in August 2020 and project updates will be provided to the EUTF Board of Trustees at the September 2020 Board Meeting. Morneau Shepell drafted some preliminary success metrics for EUTF consideration and further development. EUTF began collecting internal program metrics and data to incorporate into overall project goals and success metrics.
G	G	Project Management	The project team continues to work collaboratively and support a culture of open communication and continuous improvement amongst all parties. Morneau Shepell activities, deliverables, and project management processes are effectively monitored and reviewed by EUTF and Segal. Morneau Shepell made good progress in clarifying their deliverables and establishing project management processes. Segal and ICON submits regular status reports on project activities. IV&V was unable to adequately evaluate the activities and deliverables of Segal and ICON as plans, schedules, and processes are still under development.
G	G	Technology	Morneau Shepell and EUTF determined that the BAS solution would be hosted on Morneau Shepell's Microsoft Azure subscription with no additional maintenance fees to provide first line support. Data conversion activities are underway and experiencing some delays due to the complexity of the data, differences in data field sizes, and reliance on their current BAS vendor for assistance. The risk and issue of data conversion delays are being tracked and discussed by project stakeholders. EUTF is mitigating some of the risk by starting the next group of data conversion in parallel. EUTF is currently assessing Morneau Shepell's security controls before approving the first cycle of data conversion to be placed on Morneau's sandbox environment.

FINDINGS AND RECOMMENDATIONS BY ASSESSMENT AREA



OVERALL RATING

The overall rating is assigned based on the criticality ratings of the IV&V Assessment Categories and the severity ratings of any underlying findings (see Appendix A: IV&V Criticality and Severity Ratings). The tables below summarize the criticality ratings for each IV&V Assessment Category in each of the three major IV&V Assessment Areas. The criticality rating for eight IV&V Assessment Categories are green, and five are trending downward. As the project is still in the project initiation and planning phases, the downward trending areas reflects the need for approaches and processes to be formalized, documented and communicated in the respective categories.

AT-A-GLANCE

CULTURE of continuous IMPROVEMENT

POSITIVE momentum and TEAM COLLABORATION

DOCUMENT and COMMUNICATE key project processes

INITIAL	JUL	PROGRAM GOVERNANCE	INITIAL	J
G	G	Governance Effectiveness	G	
NA	G	Benefits Realization	G	
INITIAL	JUL	TECHNOLOGY	G	
INITIAL	JUL	TECHNOLOGY	6	
G	G	System Software, Hardware, and Integrations	G	
G	6	Data Conversion	G	
NA	3	Quality Management and Testing		
NA	NA	Configuration Management		
NA	G	Security	NA	Y
NA	NA	Deployment and Operations		

INITIAL	JUL	PROJECT MANAGEMENT
G	6	Project Organization and Management
G	G	Requirements Management
G	G	Cost, Schedule, and Resource Management
G	G	Risk Management
G	G	Communications Management
NA	G	Organizational Change Management (OCM)
NA	G	Business Process Reengineering (BPR)
NA	NA	Training and Knowledge Transfer



PROGRAM GOVERNANCE

Governance Effectiveness

Benefits Realization



PROGRAM GOVERNANCE

INITIAL	JUL	IV&V ASSESSMENT			FINDINGS			
		CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED		
G	G	Governance Effectiveness	Joint Steering Committee (JSC) meetings will begin in August 2020 and project updates will be provided to the EUTF Board of Trustees at the September 2020 Board Meeting.		0	0		
NA	G	Benefits Realization	Morneau Shepell's Project Charter, Scope and Management Plan included some preliminary success metrics for EUTF consideration and further development. The EUTF PM began collecting internal program metrics and data to incorporate into overall project goals and success metrics.	0	0	0		



Project Organization and Management

Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Tra<u>nsfer</u>

G	6	Project Organization and Management	improvement amongst all parties. Constructive feedback continues to be shared by EUTF and Segal with Morneau Shepell, and improvements to processes and activities are implemented quickly and effectively. Morneau Shepell activities, deliverables, and project management processes are effectively monitored and reviewed by EUTF and Segal. The status of Morneau Shepell activities and deliverables are also documented and tracked in Joint Weekly Status Reports and Segal status reports. ICON submits weekly status reports on their data mapping and conversion activities. IV&V is unable to adequately evaluate the activities and deliverables of Segal and ICON as plans, schedules, and processes are still under development. Morneau Shepell delivered a draft Project Charter, Scope and Management Plan which still needs to be reviewed and refined. The plan made good progress towards identifying their deliverables and establishing project management processes; however, it lacks specificity regarding clear project management processes, which may result in unclear expectations between the vendors and the State. As the plan is still in draft form and pending comments from EUTF and Segal, Accuity will review more thoroughly in the upcoming months.	2	2	0
G	G	Requirements Management	The Kick-off for the Discovery Sessions was held on July 2, 2020 providing an overview, proposed schedule, and requirement traceability process. Morneau Shepell is maintaining a central repository of all requirements, business rules, and testing in its Application Lifecycle Management (ALM) tool. Three of the six Discovery Sessions will be completed by the end of July with the goal of refining and clarifying requirements. IV&V will continue our review of requirements management through the next report period for a more in-depth assessment.	0	0	0

IV&V OBSERVATION

The project team continues to work collaboratively and

support a culture of open communication and continuous

PROJECT MANAGEMENT

IV&V ASSESSMENT

CATEGORY

(i

INITIAL

JUL



FINDINGS

OPEN CLOSED

NEW

				FINDINGS			
PROJECT MANAGEMENT	INITIAL	JUL	IV&V ASSESSMENT CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
Project Organization and Management Requirements Management Cost, Schedule, and Resource Management Risk Management Communications Management Organizational Change Management Business Process	G	•	Cost, Schedule, and Resource Management	Project contract costs invoiced to-date approximated \$414,000. Accuity is unable to validate the total project budget or assess cost variances as EUTF and Segal still need to develop a formal project budget and finalize contract payment schedules (refer to finding 2020.07.PM02). The project is generally on schedule with Morneau Shepell's project schedule. EUTF is working with Morneau Shepell to update their payment schedule based on their revised workplan. Morneau Shepell provided an initial project schedule on June 26, 2020 and submitted a revised schedule on July 27, 2020. Morneau Shepell plans on updating and uploading the schedule weekly to the Project SharePoint site. Accuity is unable to assess progress in other areas of the project as Segal and ICON's project schedules are still pending, and a schedule reflecting EUTF's activities and resources is still needed (refer to finding 2020.07.PM02). Segal's project dashboard, SmartSheet, will become a more effective project management tool as it tracks not only Morneau's activities, but also becomes a tool to manage all project activities, deliverables and resources.	0	0	0
Reengineering Training and Knowledge Transfer	G	G	Risk Management	Risks continue to be logged and discussed during weekly project meetings. An issues resolution process was included in Morneau Shepell's draft Project Charter, Scope and Management Plan. Additional high-level risks were identified in that Plan and will be added to the risk log, if approved by the EUTF Project Manager.	0	0	0
	G	G	Communications Management	Morneau Shepell's draft Project Charter, Scope and Management Plan included various communication activities including the communication goal, audience, method, frequency, and owner. Morneau Shepell clarified this month that they were responsible for project communications to internal project stakeholders, while OCM and external communications would be executed by EUTF and Segal.	0	0	0



		IV&V ASSESSMENT		FINDINGS			
PROJECT MANAGEMENT	INITIAL	JUL	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
Project Organization and Management Requirements Management Cost, Schedule, and Resource Management	NA	G	Organizational Change Management (OCM)	Segal gave an introduction presentation to EUTF employees on OCM, BPR, Training, and Testing on July 9, 2020. The presentation provided tools and techniques that EUTF SMEs could use during Discovery Sessions to identify and track process and system changes. These tools were placed on a project dashboard, SmartSheet. Segal also provided an OCM Roadmap and Workshop to EUTF supervisors to help them understand their role in OCM and identify OCM needs. Segal's responsibilities include the development of an OCM Plan, which is still in development.	0	0	0
Risk Management Communications Management Organizational Change Management Business Process Reengineering	NA	6	Business Process Reengineering (BPR)	BPR concepts were introduced during the presentation to EUTF employees on OCM, BPR, Training, and Testing. Informal BPR discussions have been initiated by EUTF as some SMEs came to Discovery Sessions prepared to discuss their current processes, workarounds they perform, and wish list items for the future BAS solution. These wish list items are being tracked on the SmartSheet dashboard. Segal's responsibilities include the development of a BPR Plan, which is still in development.	0	0	0
Training and Knowledge Transfer	NA	NA	Training and Knowledge Transfer	Training and Knowledge Transfer activities are not occurring at this stage of the project.	0	0	0

Project Organization and Management

Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Transfer

FINDING #: 2020.07.PM01 STATUS: OPEN

TITLE: PROJECT CULTURE OF COLLABORATION AND CONTINUOUS IMPROVEMENT

Finding: POSITIVE - The project team continues to work collaboratively and support a culture of open communication and continuous improvement amongst all parties.

TYPE: POSITIVE

Industry Standards and Best Practices: N/A

Analysis: The project team members have:

- Encouraged EUTF SMEs to openly discuss areas of confusion and request for improvements to working sessions.
- Listened to feedback from project team members and timely implemented improvements to project processes (e.g., including incorporating solution demonstrations and introducing project team members).
- Openly discussed possible solutions to address areas of concern.
- Continue to proactively ask for feedback after meetings and working sessions.
- Openly discussed project risks and issues with all project team members.

This approach has helped team members to build a high level of comfort with each other and has contributed to a smoother execution of the planning phase of the project.

Recommendation: N/A for positive findings.

Project Organization and Management

Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Transfer



TITLE: UNCLEAR PROJECT DELIVERABLES, SCHEDULE, AND PROCESSES FOR SEGAL

Finding: Segal's contract contains responsibilities and deliverables beyond oversight of Morneau Shepell, including OCM, BPR, and quality management. Segal's project deliverables, schedule and processes have yet to be formally documented and scheduled, which could impact the execution of Segal, ICON and EUTF responsibilities and activities.

Industry Standards and Best Practices: PMI PMBOK describes the best practices for project planning, schedule, cost, quality, and resource management.

Analysis: Segal was contracted to provide various project management, OCM, BPR, data conversion, and quality management services for EUTF. Segal is effectively monitoring and reviewing Morneau Shepell activities and deliverables but does not yet have a schedule for ICON's and their own independent deliverables for this project. Segal established a dashboard and regularly submits reports to EUTF; however, thus far, these reports focus mainly on Morneau Shepell and do not include sufficient updates regarding Segal and ICON's own activities, progress, and risks. Additionally, Segal's processes in the areas of schedule, resource, cost, and quality management are still being developed and documented.

Segal's deliverables include a BPR and OCM plan. Segal prepared a presentation, developed a tracking tool, and held a workshop to explain their BPR and OCM methodology, however we are not aware of whether a formally documented plan or schedule of BPR and OCM tasks and resources has been prepared and delivered to EUTF for review. Further discussion of purpose and expectations for this deliverable is still needed.

ICON is responsible for data cleansing and data conversion activities. The project team identified two risks and one issue and are experiencing some delays related to data conversion. Clarifying ICON deliverables, schedule, processes, and reporting may help to prevent further issues and delays.

Possible root causes or contributing factors are an aggressive project pace and competing priorities. Both the Segal Project Manager and the EUTF Project Manager are extremely hard-working and may not have adequate time to participate in on-going Discovery Sessions and perform all of the required project management tasks. EUTF and Segal will need to work together to establish appropriate project management processes and clarify the priority of deliverables and schedules.

Although this finding is reported under the Project Organization and Management IV&V Assessment Category, this finding also impacts the criticality ratings for the Cost, Schedule, and Resource Management; OCM; BPR; Data Conversion; and Quality Management and Testing categories.



Project Organization and Management

Requirements Management

Cost, Schedule, and Resource Management

Risk Management

Communications Management

Organizational Change Management

Business Process Reengineering

Training and Knowledge Transfer

FINDING #: 2020.07.PM02 STATUS: OPEN



TITLE: UNCLEAR PROJECT DELIVERABLES, SCHEDULE, AND PROCESSES FOR SEGAL (continued)

TYPE: **RISK**

Recommendations: 2020.07.PM02.R1: Clarify Segal and ICON deliverables.

- Clarify purpose, content, and expectations of each of the contracted deliverables.
- Consider whether contracted deliverables still make sense based on project needs.

2020.07.PM02.R2 – Develop a project schedule to manage Segal, ICON, and EUTF tasks.

• Provide the appropriate detail of tasks, durations, due dates, milestones, and deliverables for various parties.

2020.07.PM02.R3 – Develop and clarify Segal, ICON, and EUTF processes.

- Key processes include resource and schedule management, cost management, BPR, OCM, quality management, data cleansing, and data conversion.
- Consider including Segal, ICON, and EUTF's status and metrics in existing reports and dashboards.
- Consider including Segal, ICON, and EUTF status and activities in recurring project management meetings to promote even greater project cohesion.

TECHNOLOGY

System Software, Hardware, and Integrations

Data Conversion

Quality Management and Testing

Configuration Management

Security

Deployment and Operations

G

INITIAL JUL		IV&V ASSESSMENT		FINDINGS				
	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED			
G	G	System Software, Hardware, and Integrations	Morneau Shepell and EUTF determined that the BAS solution would be hosted on Morneau Shepell's Microsoft Azure subscription with no additional maintenance fees to provide first line support. Data extraction and mapping was one of the initial key focus areas in June and July.	0	0	0		
G	G	Data Conversion	In July, the data conversion team members continued to discuss and clarify data extract layouts, data records, data mapping, integrity, security, and conversion. Data conversion activities are underway and experiencing some delays due to the complexity of the data, differences in data field sizes, and reliance on their current BAS vendor for assistance. The risk and issue of data conversion delays is being tracked and discussed by project stakeholders. EUTF completed their first data extract for Group 1. EUTF is mitigating some of the risk by starting the data extract process for Group 2 in parallel. Morneau Shepell plans on submitting their draft Data Migration Strategy and Plan by the end of July 2020. ICON's Initial Project Plan to provide data consulting and conversion services is still in development.	0	0	0		
NA	6	Quality Management and Testing	Segal's responsibilities include the development of quality standards and a Quality Plan, which are still in development. As part of quality management of project deliverables, Segal reviews Morneau Shepell's deliverables. Testing activities are not occurring at this stage of the project. Morneau Shepell is responsible for developing a testing strategy and plan and test cases to cover unit, system, regression, integration, parallel, user acceptance, volume, and stress testing.	0	0	0		



	INITIAL	JUL	IV&V ASSESSMENT	IV&V OBSERVATION	FINDINGS		
TECHNOLOGY	INITIAL	JUL	CATEGORY	IV&V OBSERVATION	NEW	OPEN	CLOSED
System Software, Hardware, and Integrations Data Conversion	NA	NA	Configuration Management	The proposed solution is aimed at maximizing the out-of-the- box Ariel EAS features to meet EUTF requirements, with the least amount of customizations. Morneau Shepell provided a high-level Release and Configuration Management process overview as part of its response to the EUTF BAS RFP. IV&V to evaluate when the Change Control Plan and detailed configuration management documentation is available.	0	0	0
Quality Management and Testing Configuration Management Security Deployment and	NA	G	Security	EUTF's Information Systems Chief is taking appropriate steps to inquire about Morneau Shepell's security controls and practices, including having them complete a cloud security assessment questionnaire. EUTF is currently assessing Morneau Shepell's security controls before approving the first cycle of data conversion to be placed on Morneau's sandbox environment.	0	0	0
Operations	NA	NA	Deployment and Operations	Deployment activities are not occurring at this stage of the project.	0	0	0

Appendix A: IV&V Criticality and Severity Ratings

IV&V CRITICALITY AND SEVERITY RATINGS

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

The criticality ratings are assessed based on consideration of the severity ratings of each related risk and issue within the

Criticality Rating

TERMS

RISK An event that has not happened yet.

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



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

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

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

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

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



Severity Rating

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

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

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



TERMS

POSITIVE

Celebrates high performance or project successes.

PRELIMINARY CONCERN

Potential risk requiring further analysis.

Appendix B: Industry Standards and Best Practices

STANDARD	DESCRIPTION		
ADA	Americans with Disabilities Act		
ADKAR®	Prosci ADKAR: Awareness, Desire, Knowledge, Ability, and Reinforcement		
BABOK® v3 Business Analyst Body of Knowledge			
DAMA-DMBOK® v2 DAMA International's Guide to the Data Management Body of Knowledge			
HIPAA	Health Insurance Portability and Accountability Act of 1996		
MARS-E v2.0	CMS Minimum Acceptable Risk Standards for Exchanges – Exchange Reference Architecture Supplement		
MITA v3.0 Medicaid Information Technology Architecture			
PMBOK® v6 Project Management Institute (PMI) Project Management Body of Knowledge			
SWEBOK v3 Guide to the Software Engineering Body of Knowledge			
TOGAF® v9.2 The Open Group Architecture Framework Standard			
COBIT® 2019 Framework	Control Objectives for Information and Related Technologies Framework		
IEEE 828-2012 Institute of Electrical and Electronics Engineers (IEEE) Standard for Configuration Mana- Systems and Software Engineering			
IEEE 1062-2015	IEEE Recommended Practice for Software Acquisition		
IEEE 1012-2016	IEEE Standard for System, Software, and Hardware Verification and Validation		
IEEE 730-2014	IEEE Standard for Software Quality Assurance Processes		
ISO 9001:2015	International Organization for Standardization (ISO) Quality Management Systems – Requirements		
ISO/IEC 25010:2011	ISO/International Electrotechnical Commission (IEC) Systems and Software Engineering – Systems and Software Quality Requirements and Evaluation (SQuaRE) – System and Software Quality Models		
ISO/IEC 16085:2006	ISO/IEC Systems and Software Engineering – Life Cycle Processes – Risk Management		



STANDARD	DESCRIPTION		
IEEE 16326-2019	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Project Management		
IEEE 29148-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Processes – Requirements Engineering		
IEEE 15288-2015	ISO/IEC/IEEE International Standard – Systems and Software Engineering – System Life Cycle Processes		
IEEE 12207-2017	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Software Life Cycle Processes		
IEEE 24748-1-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 1: Guidelines for Life Cycle Management		
IEEE 24748-2-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Life Cycle Management – Part 2: Guidelines for the Application of ISO/IEC/IEEE 15288 (System Life Cycle Processes)		
IEEE 24748-3-2012	IEEE Guide: Adoption of ISO/IEC TR 24748-3:2011, Systems and Software Engineering – Life Cycle Management – Part 3: Guide to the Application of ISO/IEC 12207 (Software Life Cycle Processes)		
IEEE 14764-2006	ISO/IEC/IEEE International Standard for Software Engineering – Software Life Cycle Processes – Maintenance		
IEEE 15289-2019	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Content of Life Cycle Information Items (Documentation)		
IEEE 24765-2017	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Vocabulary		
IEEE 26511-2018	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Requirements for Managers of Information for Users of Systems, Software, and Services		
IEEE 23026-2015	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Engineering and Management of Websites for Systems, Software, and Services Information		
IEEE 42010-2011	ISO/IEC/IEEE International Standard – Systems and Software Engineering – Architecture Description		
IEEE 29119-1-2013	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 1: Concepts and Definitions		
IEEE 29119-2-2013	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 2: Test Processes		
IEEE 29119-3-2013	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 3: Test Documentation		
IEEE 29119-4-2015	ISO/IEC/IEEE International Standard – Software and Systems Engineering – Software Testing – Part 4: Test Techniques		



STANDARD	DESCRIPTION		
IEEE 1484.13.1-2012	IEEE Standard for Learning Technology – Conceptual Model for Resource Aggregation for Learning, Education, and Training		
ISO/IEC TR 20000- 11:2015	ISO/IEC Information Technology – Service Management – Part 11: Guidance on the Relationship Between ISO/IEC 20000-1:2011 and Service Management Frameworks: ITIL®		
ISO/IEC 27002:2013	Information Technology – Security Techniques – Code of Practice for Information Security Controls		
SAML v2.0	Security Assertion Markup Language v2.0		
SoaML v1.0.1	Service Oriented Architecture Modeling Language		
CMMI-DEV v1.3	Capability Maturity Model Integration for Development		
FIPS 199	Federal Information Processing Standard (FIPS) Publication 199, Standards for Security Categorization of Federal Information and Information Systems		
FIPS 200	FIPS Publication 200, Minimum Security Requirements for Federal Information and Information Systems		
NIST 800-53 Rev 4 National Institute of Standards and Technology (NIST) Security and Privacy Controls for Fed Information Systems and Organizations			
NIST Cybersecurity Framework v1.1	NIST Framework for Improving Critical Infrastructure Cybersecurity		
LSS	Lean Six Sigma		

Appendix C: IV&V Monthly Status

MAIN IV&V ACTIVITIES AND ACCOMPLISHMENTS

MAIN IV&V ACTIVITIES AND ACCOMPLISHMENTS

Provided PROSCI OCM tools and templates and sample initial assessment survey questions

Made informal recommendations on OCM approach and presentation

Provided cloud security assessment questionnaires to assist with evaluation of Sandbox Environment

Provided Agile Methodology presentation outline to assist with EUTF's understanding of the implementation approach

Provided examples of project success metrics

Reviewed EUTF BAS project documentation

Participated in EUTF BAS data conversion meetings and Discovery Sessions

Participated in EUTF BAS Project Management Meetings (Joint Weekly Project Team and Joint Bi-weekly PM Meetings)

Conducted meetings to review IV&V's June deliverables (IV&V Project Management Plan and Initial Assessment Report)

Finalized June deliverables and submitted Draft July 2020 Monthly IV&V Status Report

KEY UPCOMING IV&V DELIVERABLES

KEY IV&V DELIVERABLES	DRAFT DUE DATE	DRAFT SUBMITTED	FINAL SUBMITTED
July 2020 Monthly IV&V Status Report	08/05/20	08/05/20	-

PRIOR IV&V APPROVED DELIVERABLES

DELIVERABLE	AS OF DATE	APPROVED DATE
IV&V Project Management Plan (IVVP)	N/A	07/22/20
Initial Assessment Report	06/26/20	07/29/20



Appendix D: Interviews, Meetings, and Documents

INTERVIEWS

DATE	INTERVIEWEE
07/23/20	EUTF Assistant Administrator: Review July preliminary observations, obtain update on project activities

MEETINGS

DATE	MEETING DESCRIPTION		
06/29/20	EUTF - Joint Weekly Project Team Meeting		
07/02/20	EUTF – Phase 1 – Discovery Session Kick-off		
07/06/20	Joint Weekly Project Team Meeting		
07/06/20	OCM BPR Testing Training and Stakeholders		
07/07/20	EUTF – Joint Bi-Weekly PM Meeting		
07/08/20	EUTF BAS IV&V Project Deliverables Review		
07/09/20	Hawaii EUTF - Extract Format Review Session		
07/09/20	Ariel Implementation - Looking Forward (OCM, BPR, Training, and Testing)		
07/10/20	Hawaii EUTF - Extract Format Review Session		
07/10/20	Morneau Shepell/EUTF Hosting Discussion		
07/13/20	Planning Session 1 - Day 1		
07/13/20	EUTF - Joint Weekly Project Team Meeting		
07/14/20	Planning Session 1 - Day 2		



MEETINGS (CONTINUED)

DATE	MEETING DESCRIPTION		
07/15/20	Planning Session 1 - Day 3		
07/16/20	Planning Session 1 - Day 4		
07/20/20	EUTF - Joint Weekly Project Team Meeting		
07/21/20	Discovery Session 2 - Day 1		
07/21/20	EUTF - Joint Bi-Weekly PM Meeting		
07/22/20	Discovery Session 2 - Day 2		
07/23/20	Discovery Session 2 - Day 3		
07/23/20	OCM Roadmap and Workshop		
07/24/20	Data Conversion Status and Update		

DOCUMENTS

TYPE	DOCUMENT		
Request for Proposal	State of Hawaii EUTF BAS RFP No. RFP-20-002 for Health Benefits Administration System (Release Date 11/27/19)		
Morneau Shepell Proposal	Final Response Morneau Shepell Limited to State of Hawaii EUTF RFP-20-002 – Master (Dated 01/24/20)		
Morneau Shepell Proposal	EUTF BAS RFP 20-002- Morneau Shepell BAFO Response Implementation Plan - FINAL		
Morneau Shepell Proposal	EUTF BAS RFP 20-002- Morneau Shepell BAFO Response to BAS Oral Presentation Demo Question Requests - FINAL		
Request for Proposal	State of Hawaii EUTF BAS RFP No. RFP-20-001 for Project Management and Consulting Services (Release Date 09/25/19)		

DOCUMENTS (CONTINUED)

ТҮРЕ	DOCUMENT		
Segal Proposal	BAFO for RFP No. RFP-20-001 for Project Management and Consulting Services (Effective 03/16/20)		
Request for Proposal	State of Hawaii ETS RFP-19-010 EUTF BAS IV&V		
Accuity Proposal	Accuity LLP EUTF IVV Proposal RFP-19-010 FINAL		
Contract	Morneau Shepell Limited Contract (effective 06/01/20)		
Contract	Segal Company Contract (effective 06/01/20)		
Contract	Accuity Contract (effective 06/01/20)		
Project Management	Hawaii EUTF Morneau Shepell Project Kick-Off – FINAL (06/04/20)		
Project Management	EUTF – Weekly Project Team Status – 2020-06-29		
Project Management	EUTF – Weekly Project Team Status – 2020-07-07		
Project Management	EUTF – Joint PM Meeting Agenda– 2020-07-06		
Project Management	EUTF – Weekly Project Team Status – 2020-07-13		
Risk and Issues	EUTF – RAID Log		
Schedule	Hawaii (EUTF) – BAS Work Plan (2020-06-26)		
Data Conversion	Data Conversion Kick-off Agenda		
Data Conversion	EUTF – MS Data Conversion Kick-off		
Data Conversion	EUTF Employee Conversion Layout		
Data Conversion	Data Flow and Process of MS Data Extracts		
Meeting Minutes	EUTF – Weekly Project Team Status with Minutes – 2020-06-29		
Meeting Minutes	EUTF – Weekly Project Team Status with Minutes – 2020-07-06		
Meeting Minutes	EUTF – Joint PM Meeting Minutes – 2020-07-07		
Meeting Minutes	EUTF – Weekly Project Team Status with Minutes – 2020-07-20		



DOCUMENTS (CONTINUED)

ТҮРЕ	DOCUMENT			
Meeting Minutes	EUTF – Joint PM Meeting Minutes – 2020-07-21			
Discovery Session	EUTF – Discovery Session 1 - Agenda			
Discovery Session	EUTF – Discovery Session 2 - Agenda			
Discovery Session	EUTF – RFP Requirements			
Discovery Session	EUTF – Phase 1 & 2 Process Overview PowerPoint			
Deliverable	Project Charter, Scope, and Management Plan			
Deliverable	Project Plan Review 20200629			
Deliverable	Project Plan Review 20200706-CC			
Deliverable	EUTF – BAS DED			
Deliverable	Deliverable Expectation Document Draft – Project Plan			
Deliverable	EUTF – BAS DED – Project Plan			
Deliverable	Deliverable Acceptance Document – Project Plan			
Implementation	MS – BAS Implementation Approach			



Appendix E: Comment Log on Draft Report



Appendix E: Comment Log on Draft Report

EUTF B	EUTF BAS Project: IV&V Document Comment Log				
CERTIFIED PUBLIC ACCOUNTANTS					
ID #	Page #	Comment	Commenter's Organization	Accuity Resolution	
1		No EUTF or ETS comments.			
2					
3					
4					
5					
6					
7					
8					
9					
10					

QUALITY.

INTEGRITY.

INSIGHT.

Acuityup

CERTIFIED PUBLIC ACCOUNTANTS

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