Stage 2 Preliminary Assessment

2.1 General Information

Agency or State Entity Name:

Veterans Affairs, Department of

Organization Code:

8950

Proposal Name:

CalVet Electronic Health Record (CEHR)

Department of Technology Project Number: | 8950-059

2.2 Preliminary Submittal Information

Contact Information:

Contact First Name:	**Contact Last Name:**
Isaiah	Mall

Contact Email:	**Contact Phone Number:**
Isaiah.Mall@CalVet.ca.gov	(916) 653-2075

Preliminary Submission Date:

12/8/2017

Preliminary Project Approval Executive Transmittal:

S2AA 2.02 Preliminary
Assessment Transmittal.pdf
Adobe Acrobat Document
289 KB

2.3 Stage 2 Preliminary Assessment

2.3.1 Impact Assessment

	Yes	No
1. Has the Agency/state entity identified and committed subject matter experts from all business sponsors and key stakeholders?	●	○
2. Are all current baseline systems that will be impacted by this proposal documented and current (e.g., data classification and data exchange agreements, privacy impact assessments, design documents, data flow diagram, data dictionary, application code, architecture descriptions)?	●	○
3. Does the Agency/state entity anticipate needing support from the Department of Technology's Statewide Technology Procurement Division to conduct market research for this proposal (Market Survey, Request for Information)?	○	●
4. Does the Agency/state entity anticipate submitting a budget request to support the procurement activities of this proposal?	○	●

5. Could this proposal involve the development and/or purchase of systems to support activities included in Financial Information System for California (FI$CAL) (e.g., financial accounting, asset management, human resources, procurement/ordering, inventory management, facilities management)?   ○ ●

6. Does the Agency/state entity have a designated Chief Architect or Enterprise Architect to lead the development of baseline and alternative solutions architecture descriptions?   ● ○

7. Will the Agency/state entity's Information Security Officer be involved in the development and review of any security related requirements?   ● ○

8. Does the Agency/state anticipate performing a business-based procurement to have vendors propose a solution?   ○ ●

2.3.2 Business Complexity Assessment

Business Complexity: `2.0`   Business Complexity Zone: ○ High   ● Medium   ○ Low

Stage 2 Alternative Analysis

2.4 Submittal Information

Contact Information: (Use Contact Information from Preliminary Submittal Information ☑)

Contact First Name:
Isaiah

Contact Last Name:
Mall

Contact Email:
Isaiah.Mall@CalVet.ca.gov

Contact Phone Number:
(916) 653-2075

Submission Date:
2/28/2018

Submission Type:

○ New Submission   ○ Updated Submission (Post-Approval)

● Updated Submission (Pre-Approval)   ○ Withdraw Submission

Sections Updated (For Updated Submissions only) - (check all that apply)

☐ 2.1 General Information   ☐ 2.10.5 Assumptions and Constraints
☐ 2.2 Preliminary Submittal Information   ☐ 2.10.6 Implementation Approach
☐ 2.3 Stage 2 Preliminary Assessment   ☐ 2.10.7 Architecture Information
   ☐ 2.3.1 Impact Assessment   ☑ 2.11 Recommended Solution
   ☐ 2.3.2 Business Complexity Assessment   ☐ 2.11.1 Rationale for Selection
☐ 2.4 Submittal Information   ☐ 2.11.2 Technical/CA-PMM Initial Complexity Assessment
☐ 2.5 Baseline Processes and Systems   ☑ 2.11.3 Procurement and Staffing Strategy
   ☑ 2.5.1 Description   ☐ 2.11.4 Enterprise Architecture Alignment
   ☐ 2.5.2 Business Process Workflow   ☐ 2.11.5 Project Phases
   ☐ 2.5.3 Current Architecture Information   ☑ 2.11.6 High Level Proposed Project Schedule
   ☑ 2.5.4 Current Architecture Diagram   ☑ 2.11.7 Cost Summary
   ☐ 2.5.5 Security Categorization Impact Table   ☑ 2.12 Staffing Plan
☑ 2.6 Mid-Level Solution Requirements   ☑ 2.12.1 Administrative

☐ 2.7 Assumptions and Constraints	☑ 2.12.2 Business Program
☐ 2.8 Dependencies	☑ 2.12.3 Information Technology (IT)
☐ 2.9 Market Research	☑ 2.12.4 Testing
☐ 2.9.1 Market Research Methodologies/Timeframes	☑ 2.12.5 Data Conversion/Migration
☑ 2.9.2 Results of Market Research	☑ 2.12.6 Training and Organizational Change Management
☐ 2.10 Alternative Solutions	☑ 2.12.7 Resource Capacity/Skills/Knowledge for Stage 3 Solution Development
☐ 2.10.1 Solution Type	☑ 2.12.8 Project Management
☐ Recommended Solution	☐ 2.12.8.1 Project Management Maturity Assessment
☐ Alternative Solution	☐ 2.12.8.2 Project Management Planning
☐ 2.10.2 Name	☑ 2.12.9 Organization Charts
☐ 2.10.3 Description	☑ 2.13 Data Conversion/Migration
☑ 2.10.4 Benefit Analysis	☑ 2.14 Financial Analysis Worksheets

Summary of Changes:

Section 2.5.1 - Updated to reference the CalVet's EHR history, include PATS brief description and other systems in use. Added paragraph at end to detail the status of business process workflow and future activities.
Section 2.5.4 - Updated. Added Architecture Overview.
Section 2.6 - Updated Mid-Level Solution Requirements.
Section 2.9.1 - Updated to include other market research and time spent.
Section 2.9.2 - Updated to include other state agency market research and result of RFI market research, ACC only requirements were de-scoped.
Section 2.10.4 - Updated to reflect updated objectives from S1BA.
Section 2.10.4 - Updated Financial Benefit radio buttons to "Over 4 Years". Unable to disable radio buttons.
Section 2.11.3 - Added new activities.
Section 2.11.6 - Updated.
Section 2.11.7 - Updated cost with input from FAW Version 2.
Section 2.12.1 - Added. Previously exempted.
Section 2.12.2 - Added. Previously exempted.
Section 2.12.3 - Added. Previously exempted.
Section 2.12.4 - Added. Previously exempted.
Section 2.12.5 - Added. Previously exempted.
Section 2.12.6 - Added. Previously exempted.
Section 2.12.7 - Added. Previously exempted.
Section 2.13 - Rewrote to detail CalVet's data analysis activities to date and what will be covered in the future.
Section 2.14 - Version 2 attached.

Project Approval Executive Transmittal:

S2AA 2.04 Project Approval Executive Transmittal.pdf
Adobe Acrobat Document
497 KB

Condition(s) from Previous Stage(s):

Condition #	1.1
Condition Category	Governance
Condition Sub-Category	General
Condition	

	Provide an established data governance plan with well-defined roles and responsibilities prior to the approval of the S2AA.
Assessment	Mitigation
Agency/state Entity Response	Data governance plan is part of the CEHR Project Governance Plan.
Status	Completed
Condition #	1.2
Condition Category	Governance
Condition Sub-Category	General
Condition	Provide formally defined, documented and implemented data security policies, standards, controls, and procedures prior to approval of the S2AA.
Assessment	Mitigation
Agency/state Entity Response	To be addressed as part of the audit from Office of Statewide Health Improvement Initiatives (OSHII) and as part of Stage 3 Solution Development.
Status	In Progress

2.5 Baseline Processes and Systems

2.5.1 Description

The mission of the California Department of Veteran Affairs (CalVet) Veterans Homes is "to provide the state's aged or disabled veterans with rehabilitative, residential, and medical care and services in a home-like environment."

CalVet currently has eight Veterans Homes which are a system of live-in, residential care facilities offering a comprehensive plan of medical, dental, pharmacy, rehabilitation services and social activities within a homelike, small community environment. They provide services ranging from Domiciliary Care to Skilled Nursing Care. In addition to the eight Veterans Homes, CalVet also has a Headquarters (HQ) located in Sacramento.

Strategically, CalVet functionality can broken down into 1) Clinical functions performed at the Veterans Homes and, 2) Resident Administration and Financial activities performed at the Veterans Homes and HQ.

Clinical functionality can be broken down into Sub-functions of Assessments, Clinical Support Services such as Nursing and Rehabilitation Care, Health information Management, Order Management, Pharmacy Management and Scheduling.

Resident Administration and Financial Sub-functions are divided between Admissions, Discharges and Transfers (ADT), Resident Billing and Reimbursement, and Resident Finances provided at the Veterans Homes and HQ Financial operations delivered at headquarters.

Long Term Care (LTC) facilities, such as the ones run by CalVet, utilize an Electronic Health Record (EHR) technology to support their core business processes. All clinical and billing aspects of the Veterans Homes rely heavily on documentation. Documentation supports the work done

by the provider, the diagnoses (conditions) of the residents, the services submitted for billing, and reflects all aspects of the resident's care. In the late 1990's CalVet implemented MEDITECH software to support their EHR needs in their Yountville and Barstow veterans homes. Starting in 2009, and as additional Veterans Homes were built, CalVet implemented the ADL EHR software in their newly built Veterans Homes and replaced MEDITECH in Barstow. All Veterans Homes currently utilize ADL for resident administration and financial functions and also for clinical Minimum Data Source (MDS) reporting to Centers for Medicare and Medicaid Services (CMS). However, remaining business sub functions at each home are using differing variations of ADL and paper for resident charting. Additionally Yountville is still using the MEDITECH EHR for resident administration, care plans, clinical activities, order entry and scheduling.

Clinicians, registered nurses, ancillary staff, contracted providers, and support staff currently utilize multiple formats of documentation for clinical functionality associated to the residents chart. These can include any combination of the following:

- ADL
- MEDITECH
- Paper

Six (6) of the eight (8) Veterans Homes are utilizing a version of an Electronic Health Record (EHR) for some, if not all, of their resident charting. The two (2) newer Veterans Homes are not utilizing an EHR for charting and are currently resident charting on paper. All Veterans Homes have at least one (1) hard copy chart per resident on site.

From the perspective of Resident Administration and Financial functionality, all homes are currently using ADL and additionally a custom Pre-Admission Tracking System (PATS) created in-house. PATS is a CalVet custom application which was created to meet legislative reporting requirements on applicants to Veterans Homes. PATS holds basic applicant demographic information and maintains waiting and prioritization lists for each Veterans Home for resident applications prior to any Veterans Home admission.

In addition to the supported clinical and financial EHR functions detailed above, CalVet also uses FrameworkLTC for pharmacy services, GeriMenu for dietetics services and MS Dynamics for materials management, which will remain in place and will continue to be maintained as part of ongoing operations. It is CEHR project's goal to replace ADL and MEDITECH.

The present total annual operations costs for CalVet to maintain its current EHR solution using ADL and MEDITECH is approximately $1.7 million. A breakdown of these costs can be seen in the Financial Analysis Worksheet (FAW) for current operations.

CalVet is currently finalizing a complete set of As-Is business process workflows (Approximately 48) which will be used as input into Stage 3 Solution Development. The As-Is workflows will be augmented to include the recommended solution and will form the To-Be business process workflows. These workflows will be used as a foundation for Organizational Change Management (OCM) activities to be completed during the project by the winning vendor. Both the As-Is and To-Be business process workflows will be submitted with the Stage 3 Solution Development (Part A) deliverable.

2.5.2 Business Process Workflow

📎 File Attachment

2.5.3 Current Architecture Information

Business Function/Process(es)

C.1 Assessments

C.2 Clinical Support Services

C.3 Health Information Management

C.4 Order Management

C.5 Pharmacy Management

C.6 Scheduling

F.1 Admissions, Discharges and Transfers (ADT)

F.2 Resident Billing and Reimbursement

F.3 Resident Finances

F.4 HQ Financial

E.1 Materials Management and Procurement

R.1 Standards and Compliance

Application, System or Component:	
COTS, MOTS or Custom:	Commercial off-the-shelf (COTS)
Name/Primary Technology:	SQL Server and Delphi, C, JavaScript and .NET Framework

Runtime Environment

Cloud Computing Used?	◯ Yes ⦿ No
	If "Yes", Specify: Select...
Server/Device Function:	3-Tier Electronic Health Record application, serving Veteran Homes and Headquar...
Hardware:	VMware 5.5 Hosting and EMC Storage Fabric
Operating System:	Windows Server 2008 R2
System Software:	Microsoft SQL Server
	VMware/EMC
	Delphi, C, JavaScript and .NET
System Interfaces:	HL7 to FrameworkLTC and Talyst
Data Center Location:	Agency/State Data Center Operated by Agency/state entity

Security

Access: (check all that apply)	☐ Public ☑ Internal State Staff ☐ External State Staff
	☑ Other, specify: Auditors upon request
Type of Information: (check all that apply)	☑ Personal ☑ Health ☑ Tax ☑ Financial ☑ Legal ☑ Confidential

Protective Measures: (check all that apply)	☐ Other, specify: [ ]
	☑ Technical Security ☑ Identity Authorization and Authentication
	☑ Physical Security ☑ Backup and Recovery
	☐ Other, specify: [ ]

Data Management

Data Owner	**Name:**	California Veteran Homes
	Title:	Veterans Homes Administrators
	Business Program:	Homes Division
Data Custodian	**Name:**	Joy Rowan
	Title:	Chief, Application and Web Section
	Business Program:	CalVet Information Services Division

Application, System or Component:	MEDITECH
COTS, MOTS or Custom:	Modified off-the-shelf (MOTS)
Name/Primary Technology:	Magic (Proprietary Software and Operating System)

Runtime Environment

Cloud Computing Used?	◯ Yes ⦿ No
	If "Yes", Specify: Select...
Server/Device Function:	Database, Network Routers, Workstation
Hardware:	IBM x3650 Servers w/dual-core 2.0GHz processors, 2GB memory.
Operating System:	Magic OS REVP9.0.52 sitting on top of Window Server 2003 Standard SP1
System Software:	Magic - Integrated Health Care Information System (HCIS)
System Interfaces:	HL7 Interface Capability - not used at present
Data Center Location:	Agency/State Data Center Operated by Agency/state entity

Security

Access: (check all that apply)	☐ Public ☑ Internal State Staff ☐ External State Staff
	☑ Other, specify: Auditors upon request
Type of Information: (check all that apply)	☑ Personal ☑ Health ☑ Tax ☑ Financial ☑ Legal ☑ Confidential
	☐ Other, specify: [ ]
Protective Measures: (check all that apply)	☑ Technical Security ☑ Identity Authorization and Authentication
	☑ Physical Security ☑ Backup and Recovery
	☐ Other, specify: [ ]

Data Management

Data Owner	**Name:**	Yountville Veterans Home
	Title:	Yountville Veterans Home Administrator
	Business Program:	Homes Division
Data Custodian	**Name:**	Joy Rowan
	Title:	Chief, Application and Web Section

Business Program:	CalVet Information Services Division

Application, System or Component:	Paper
COTS, MOTS or Custom:	Select...
Name/Primary Technology:	N/A

Runtime Environment

Cloud Computing Used?	○ Yes ◉ No
	If "Yes", Specify: Select...
Server/Device Function:	N/A
Hardware:	N/A
Operating System:	N/A
System Software:	N/A
System Interfaces:	N/A
Data Center Location:	Select or type a Location...

Security

Access: (check all that apply)	☐ Public ☑ Internal State Staff ☐ External State Staff
	☑ Other, specify: Auditors upon request
Type of Information: (check all that apply)	☑ Personal ☑ Health ☑ Tax ☑ Financial ☑ Legal ☑ Confidential
	☐ Other, specify:
Protective Measures: (check all that apply)	☐ Technical Security ☑ Identity Authorization and Authentication
	☑ Physical Security ☑ Backup and Recovery
	☐ Other, specify:

Data Management

Data Owner	**Name:**	California Veteran Homes
	Title:	Veterans Homes Administrators
	Business Program:	Homes Division
Data Custodian	**Name:**	California Veteran Homes
	Title:	Veterans Homes Administrators
	Business Program:	Homes Division

2.5.4 Current Architecture Diagram

S2AA 2.5.4 Current Business
Usage and Architecture
Diagram.pdf
Adobe Acrobat Document
496 KB

2.5.5 Security Categorization Impact Table

S2AA 2 5 5 S   it

Categorization Impact Table.pdf
Adobe Acrobat Document
84.4 KB

SECURITY OBJECTIVE	SECURITY CATEGORIZATION IMPACT TABLE SUMMARY		
	LOW	MODERATE	HIGH
Confidentiality	○	◉	○
Integrity	○	◉	○
Availability	○	◉	○

2.6 Mid-Level Solution Requirements

S2AA 2.06 Mid-level Solution Requirements.xlsm
Microsoft Excel Macro-Enabled Worksheet
327 KB

Requirements:

2.7 Assumptions and Constraints

Assumptions/Constraints	Description/Potential Impact
Assumption: Project will receive the requested funding from the General Fund within CalVet.	The project funding will be approved and remain available throughout the project from the General Fund as stated in S1BA Section 1.3.2 Impact Assessment.
Assumption: Project will continue to be the highest priority for CalVet.	Management will maintain the project as high priority throughout the System Development Life Cycle (SDLC). If there is a higher priority project it could compete for project resources having an impact on schedule.
Assumption: Project will have sufficient interest from qualified vendors for EHR Project bidding.	If there is not sufficient interest from qualified vendors for the CEHR Project the project timeline could be aversely impacted and the recommended solution potentially being updated.
Assumption: Key stakeholders will be engaged in the project.	Stakeholders must be identified, informed, provide input, make decisions, etc. to ensure project success. CalVet has engaged an initial set of stakeholders. As the project progresses, the stakeholder register must be updated.
Assumption: The department envisions and supports an enterprise-wide administrative and clinical solution.	The department has set the target of implementing an automated solution that will centralize and standardize the administrative and clinical processes.
Assumption: Interim use of legacy application and processes.	The legacy application and processes will continue to support business needs until deemed no longer

	necessary. During the project lifecycle, CalVet will continue to use and maintain the legacy application and processes as needed. Production transition will be mutually agreed upon between CalVet and vendor.
Assumption: Project resources will be available with the required skills when needed.	CalVet project management will provide staff, with the required skills, and program resources as they are needed. Availability of Subject Matter Experts (SMEs) are critical to project success.
Assumption: CalVet providers will support and utilize this solution.	Transition to the new solution will likely result in increased workload for the providers initially, however in the long term will result in increased efficiency. Providers will need to be engaged and informed in advance to allow for sufficient planning time, and for some providers to participate in testing and training.
Assumption: Scope and capacity of this project is for eight Veterans Homes and Sacramento HQ.	No new Home is anticipated.
Assumption: The solution will have the flexibility to accommodate several different business workflows based on level of care and business needs.	The solution must accommodate business flows for different level of care programs within the department (SNF, DOM, RCFE, ICF) and their respective business needs.
Assumption: Solution documentation and deliverables will be necessary.	Solution documentation will be included in the vendor deliverables.
Assumption: Solution training will be part of vendor's responsibility.	Solution training will be included in the scope of the CEHR project and will be the vendor's responsibility.
Assumption: The Project will adhere to a formal project management methodology and project schedule, and proactive risk, issue, and change management strategies will be employed.	The Project will adhere to a formal project management methodology and project schedule, and proactive risk, issue, and change management strategies will be employed. A rigorous change management program is developed and in place to manage resistance to change and to encourage CalVet staff and other stakeholders to participate and adopt the new system and processes.
Assumption: CEHR project will follow Waterfall system development lifecycle (SDLC) methodology for improved efficiency and quality of product and services.	The SDLC process will provide structure and discipline, CalVet will build secure solution based on Service Oriented Architecture (SOA).
Assumption: Key vendor personnel are onsite and available for the duration of the contract.	Key vendor personnel will be required to be onsite and available for the duration of the project as will be required in the executed contract.
Assumption: The job classification and salary used in the attached Financial Analysis Worksheets (FAW) are current.	The job classification and salary in the FAW may differ due to staffing changes.

2.8 Dependencies

Element	Description
Solution procurement.	The project execution depends on the

	successful completion of the solution procurement process.
Future integration with FI$CAL System for Accounting functionality.	Implementation of FI$CAL, a new State Accounting System is currently in progress. The CEHR project must consider the dependency (potential interface/ integration impacts) on the accounting functions that support the financial processes.

2.9 Market Research

2.9.1 Market Research Methodologies/Timeframes

Methodologies used to perform market research (check all that apply):

☑ Request for Information (RFI)　　　☑ Trade shows

☐ Internet Research　　　　　　　　☐ Published Literature

☑ Vendor Forums/Presentation　　　☐ Leveraged Agreements

☑ Collaboration with other Agencies/state entities or governmental entities　　☐ Other, specify:

Time spent conducting market research:	<u>Over 1 Year</u>
Date market research was started:	12/1/2015
Date all market research was completed:	7/31/2017

2.9.2 Results of Market Research

In December 2015, CalVet initiated a general study of Electronic Health Record (EHR) technologies being utilized by other state entities. As part of this research, based on Department of Technology's (CDT) recommendation, CalVet explored the California Correctional Health Care Services (CCHCS) EHR Project. The CalVet Secretary, Director of Long Term Care, Agency Information Officer, select home administrators, care providers and administrative staff visited the Folsom Prison to see the system in action. The group determined the CCHCS' Cerner-based system was more of an outpatient care system, as opposed to inpatient, and lacked key financial (accounting, billing, reimbursement) functionality required by Long Term Care (LTC) facilities operated by CalVet.

In early 2016, CalVet expanded its research by exploring Skilled Nursing Facilities in the Sacramento region. Specifically, CalVet was interested in EHR systems in use at facilities similar to CalVet Veteran Homes which had attained a five-star rating by the Centers for Medicare & Medicaid Services (CMS). CalVet found that these homes were generally using Long Term Care (LTC) EHRs such as MatrixCare and PointClickCare.

In 2017, CalVet was informed regarding the Department of State Hospital's (DSH) similar initiative for an EHR. CalVet learned that in going through the state's new four-stated Project Approval Lifecycle (PAL), DSH was trailing slightly behind CalVet. CalVet shared key project and market research documents with DSH. The two projects continue to check in with each other periodically towards continued collaboration.

In addition, between 2016 and 2017, the Director of Long Term Care, CalVet Veteran Home Administrators, Directors of Nursing and other key staff attended industry trade shows to further explore LTC EHRs commercially available as off the shelf products. Such trade shows are organized annually by organizations such as the California Association of Health Facilities (CAHF) and are extremely relevant to the mission and work of CalVet Veteran Homes. LTC EHRs that stood out at these trade shows were MatrixCare, PointClickCare and NetSmart.

In parallel to efforts described above, CalVet continues to closely follow the EHR evolution efforts at the US Department of Defense and the US Department of Veterans Affairs.

Following these efforts and as part of the stage 2 alternatives analysis CEHR Project elicited capabilities of vendors in the current marketplace by completing a Request for Information (RFI), made available for public consumption on January 31st 2017 . The RFI detailed background information on CalVet and its Veterans Homes, the project's objectives and summarized the benefits expected to be realized by CalVet implementing a new EHR. The RFI included a questionnaire to be filled out and a matrix, detailing the CEHR projects mid-level requirements which potential vendors were instructed to indicate if their product(s) met and to detail how their product would meet it.

Respondents were given two weeks from release of the RFI to submit questions. CalVet issued responses to all questions one week later. The final date of respondent submission was February 27th 2017.

In all, seven potential suppliers responded to the event. CalVet compiled the received responses into an RFI response matrix. The matrix mapped the vendor's capability response to each mid-level requirement for comparative purposes. Questionnaire responses including project costs, ongoing costs and projected implementation timelines were compiled into a summarized statistical matrix.

A copy of the RFI Market Research Vendor Response statistics is included with this S2AA as supporting documentation.

Of the seven vendors responding to the RFI, six detailed how their solution would address CalVet's mid-level requirements. The remaining seventh vendor did not supply a solution and was simply offering supportive consulting services.

To better understand the solutions being offered, CalVet invited the six vendors to demonstrate their products to the CEHR project team on site at the CalVet HQ in Sacramento and were given available dates to choose from. All six vendors accepted the invitation and demonstrations were scheduled accordingly. The demonstration itself consisted of a 3 hour product presentation followed by lunch and then a 2 hour Q&A session which the vendor had the option to extend if so desired for an additional 2 hours. Demonstration started on April 25th and concluded on July 12th. During the demonstrations CalVet got a deeper understanding of the capabilities of vendor EHR solutions in the market place and also validated the vendor's responded capabilities against the mid-level requirements. At this point, it revealed one of the vendor solutions was not ADA (Americans with Disabilities Act) compliant (Federal Regulations section 508 / California Government Code 11135. Due to this regulatory non-compliance this vendor was then excluded from further RFI event activities.

CalVet project team then invited the remaining 5 vendors to provide a 2 hour on-site vendor demonstration at both the Chula Vista and Yountville Veterans Homes for staff to get a better "hands-on" feel of potential products. All vendors accepted, and the "hands-on" sessions were held at Chula Vista on July 24th & 25th and Yountville on July 26th & 27th.

During the demonstration process CEHR project team members including key stakeholders, business sponsors and subject matter experts also reconfirmed the current mid-level requirements and were given the opportunity to add, remove and modify requirements as a result of their further understanding of their business needs with respect to capabilities in the marketplace. This resulted in a number of requirements being added, updated and removed.

The demonstration process solidified the CEHR project teams understanding of their business needs and the capabilities currently offered in the marketplace. It also further enlightened the differing vendor EHR offerings: Long Term Care (LTC) only, Ambulatory Care Clinic (ACC) only and comprehensive EHR (both ACC and LTC) solutions and the costs associated with each.

This understanding of vendor capabilities and costs versus CalVet's business needs and funding tilted the direction to a proposed alternative which addresses the LTC business needs. As a result CalVet's requirements have been re-scoped to remove ACC only specific requirements.

2.10 Alternative Solutions

2.10.1 Solution Type

◉ Recommended   ◯ Alternative

2.10.2 Name

Long Term Care Electronic Health Record (LTC EHR)

2.10.3 Description

Engage an external vendor to configure and implement a Long-Term Care EHR software solution which will enable CalVet Veterans Homes and Headquarters to enter and maintain clinical and financial workflow data. This alternative would be the implementation of a COTS system in a SaaS environment, and would provide the ability to configure the solution to meet CalVet requirements.

Approach (check all that apply)

☐ Increase staff - new or existing capabilities

☑ Modify the existing business process or create a new business process

☐ Reduce the services or level of services provided

☑ Utilize new or increased contracted services

☐ Enhance the existing IT system

☐ Create a new IT system

☑ Perform a business-based procurement to have vendors propose a solution

☐ Other, specify:

2.10.4 Benefit Analysis

Benefits/Advantages
COTS/SaaS leverages a ready-made platform, which has already been provisioned, implemented, and tested by the SaaS provider. Any future modifications would require configurations only.
Solution would be an established product which has been tested and implemented in other long term care facilities.
Time to implement the solution should be minimal due to existing product specifications and therefore reducing project length.
Reduced maintenance costs due to SaaS provider leveraging a common environment where

costs are shared amongst customers such as for hardware and software licensing.

A completely paperless electronic health record.

Solution will meet regulatory compliance and provide increased information security.

Upon full implementation, CalVet will use standardized business processes.

Solution will provide up-to-date current technology solutions.

Disadvantages
Software source code and designs for hardware are usually proprietary and protected by copyright or patent.
Due to the solution being configurable only, flexibility of custom features may be limited.

Anticipated Time to Achieve Objectives After Project Go-Live

Objective Number	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
1.1	◉	○	○	○	○
2.1	◉	○	○	○	○
3.1	◉	○	○	○	○
4.1	◉	○	○	○	○
4.2	◉	○	○	○	○
5.1	◉	○	○	○	○

Anticipated Time to Achieve Financial Benefits After Project Go-Live

Financial Benefit	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
Increased Revenues	○	○	○	○	◉
Cost Savings	○	○	○	○	◉
Cost Avoidance	○	○	○	○	◉
Cost Recovery	○	○	○	○	◉

2.10.5 Assumptions and Constraints

Refer to section 2.7

2.10.6 Implementation Approach

Identify the type of existing IT system enhancement or new system proposed (check all that apply)**:**

☐ Enhance the current system

☐ Develop a new custom solution

☑ Purchase a Commercial off-the-Shelf (COTS) system

☐ Purchase or obtain a system from another government agency (Transfer)

☑ Subscribe to a Software as a Service (Saas) system

☐ Other, specify: [   ]

Identify cloud services to be leveraged (check all that apply)**:**

☐ Software as a Service (SaaS) provided by OTech

☑ Software as a Service (SaaS) provided by commercial vendor

☐ Platform as a Service (PaaS) provided by OTech

☐ Platform as a Service (PaaS) provided by commercial vendor

☐ Infrastructure as a Service (IaaS) provided by OTech

☐ Infrastructure as a Service (IaaS) provided by commercial vendor

☐ No cloud services will be leveraged by this alternative. Provide a description of why cloud services are not being leveraged:

[   ]

Identify who will modify the existing system or create the new system (check all that apply)

☑ Agency/state entity IT staff

☑ A vendor will be contracted

☐ Inter-agency agreement will be established with another governmental agency. Specify Agency name(s):

[   ]

☐ Other, specify:

[   ]

Identify the implementation strategy:

◉ All requirements will be addressed in this proposed project in a single implementation.

○ Requirements will be addressed in incremental implementations in this proposed project.

○ Some requirements will be addressed in this proposed project. The remaining requirements will be addressed at a later date.

Specify the year when remaining requirements will be addressed: [   ]

Identify if the technology for the proposed project will be mission critical and public facing:

☑ The technology implemented for this proposed project will be considered mission critical and public facing.

2.10.7 Architecture Information

Business Function/Process(es)

Refer to section 2.5 of this S2AA

Application, System or Component:	LTC EHR
COTS, MOTS or Custom:	Commercial off-the-shelf (COTS)
Name/Primary Technology:	Determined by vendor

Runtime Environment

Cloud Computing Used?	◉ Yes ○ No
	If "Yes", specify: Software as a Service (SaaS)
Server/Device Function:	Cloud SaaS

Hardware:	Cloud SaaS
Operating System:	Cloud SaaS
System Software:	Cloud SaaS
System Interfaces:	Standard Browser, HL7
Data Center Location:	Commercial Data Center

Security

Access:
(check all that apply)

☐ Public   ☑ Internal State Staff   ☐ External State Staff

☑ Other, specify: Auditors upon request

Type of Information:
(check all that apply)

☑ Personal ☑ Health ☑ Tax ☑ Financial ☑ Legal ☑ Confidential

☐ Other, specify:

Protective Measures:
(check all that apply)

☑ Technical Security   ☑ Identity Authorization and Authentication

☑ Physical Security   ☑ Backup and Recovery

☐ Other, specify:

Data Management

Data Owner	**Name:**	California Veteran Homes
	Title:	Veterans Home Administrator
	Business Program:	Homes Division
Data Custodian	**Name:**	Joy Rowan
	Title:	Chief, Application and Web Section
	Business Program:	CalVet Information Services Division

2.10.1 Solution Type

◯ Recommended   ⦿ Alternative

2.10.2 Name

Comprehensive EHR

2.10.3 Description

Engage an external vendor to configure and implement a comprehensive EHR software solution which will enable CalVet Veterans Homes and Headquarters to enter and maintain clinical and financial workflow data for both long term care and ambulatory care clinic. This alternative would be the implementation of a COTS system in a SaaS environment, and would provide the ability to configure the solution to meet CalVet requirements. This alternative offers an expanded set of services in addition to our current requirements allowing for future expansion of offered services.

Approach (check all that apply)

☐ Increase staff - new or existing capabilities

☑ Modify the existing business process or create a new business process

☐ Reduce the services or level of services provided

☑ Utilize new or increased contracted services

☐ Enhance the existing IT system

☐ Create a new IT system

☑ Perform a business-based procurement to have vendors propose a solution

☐ Other, specify:

_____

2.10.4 Benefit Analysis

Benefits/Advantages

COTS/SaaS leverages a ready-made platform, which has already been provisioned, implemented, and tested by the SaaS provider. Any future modifications would require configurations only.

Solution would be an established product which has been has already tested and implemented in the industry.

Time to implement the solution should be less than a custom development effort due to existing product specifications and therefore reducing project length.

Reduced maintenance costs due to SaaS provider leveraging a common environment where costs are shared amongst customers such as for hardware and software licensing.

A completely paperless electronic health record.

Solution will meet regulatory compliance and provide increased information security.

Upon full implementation, CalVet will use standardized business processes.

Solution will provide up-to-date current technology solutions.

Disadvantages

High level of project cost due to the increased set of services included.

Software source code and designs for hardware are usually proprietary and protected by copyright or patent.

Due to the solution being configurable only, flexibility of custom features may be limited.

Because of the enormity of a comprehensive EHR solution, the services offered may be of a more diluted nature offering less available options. More specialized functional solutions from different vendors may offer a better service for a lower cost.

Anticipated Time to Achieve Objectives After Project Go-Live

Objective Number	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
1.1	⦿	○	○	○	○

	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
2.1	●	○	○	○	○
3.1	●	○	○	○	○
4.1	●	○	○	○	○
4.2	●	○	○	○	○
5.1	●	○	○	○	○

Anticipated Time to Achieve Financial Benefits After Project Go-Live					
Financial Benefit	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
Increased Revenues	○	○	○	○	●
Cost Savings	○	○	○	○	●
Cost Avoidance	○	○	○	○	●
Cost Recovery	○	○	○	○	●

2.10.5 Assumptions and Constraints

Refer to section 2.7

2.10.6 Implementation Approach

Identify the type of existing IT system enhancement or new system proposed (check all that apply):

☐ Enhance the current system

☐ Develop a new custom solution

☑ Purchase a Commercial off-the-Shelf (COTS) system

☐ Purchase or obtain a system from another government agency (Transfer)

☑ Subscribe to a Software as a Service (Saas) system

☐ Other, specify:

Identify cloud services to be leveraged (check all that apply)**:**

☐ Software as a Service (SaaS) provided by OTech

☑ Software as a Service (SaaS) provided by commercial vendor

☐ Platform as a Service (PaaS) provided by OTech

☐ Platform as a Service (PaaS) provided by commercial vendor

☐ Infrastructure as a Service (IaaS) provided by OTech

☐ Infrastructure as a Service (IaaS) provided by commercial vendor

☐ No cloud services will be leveraged by this alternative. Provide a description of why cloud services are not being leveraged:

Identify who will modify the existing system or create the new system (check all that apply)

☑ Agency/state entity IT staff

☑ A vendor will be contracted

☐ Inter-agency agreement will be established with another governmental agency. Specify Agency name(s):

☐ Other, specify:

Identify the implementation strategy:

◉ All requirements will be addressed in this proposed project in a single implementation.

◯ Requirements will be addressed in incremental implementations in this proposed project.

◯ Some requirements will be addressed in this proposed project. The remaining requirements will be addressed at a later date.

Specify the year when remaining requirements will be addressed:

Identify if the technology for the proposed project will be mission critical and public facing:

☑ The technology implemented for this proposed project will be considered mission critical and public facing.

2.10.7 Architecture Information

Business Function/Process(es)

Refer to section 2.5 of this S2AA

Application, System or Component:	Comprehensive EHR
COTS, MOTS or Custom:	Commercial off-the-shelf (COTS)
Name/Primary Technology:	Determined by vendor

Runtime Environment

Cloud Computing Used?	◉ Yes ◯ No If "Yes", specify: Software as a Service (SaaS)
Server/Device Function:	Cloud SaaS
Hardware:	Cloud SaaS
Operating System:	Cloud SaaS
System Software:	Cloud SaaS
System Interfaces:	Standard Browser, HL7
Data Center Location:	Commercial Data Center

Security

Access: (check all that apply)	☐ Public ☑ Internal State Staff ☐ External State Staff ☑ Other, specify: Auditors upon request
Type of Information: (check all that apply)	☑ Personal ☑ Health ☑ Tax ☑ Financial ☑ Legal ☑ Confidential ☐ Other, specify:
Protective Measures: (check all that apply)	☑ Technical Security ☑ Identity Authorization and Authentication ☑ Physical Security ☑ Backup and Recovery ☐ Other, specify:

Data Management

Data Owner	**Name:**	California Veterans Homes
	Title:	Veterans Home Administrator
	Business Program:	Homes Division
Data Custodian	**Name:**	Joy Rowan
	Title:	Chief, Application and Web Section

Business Program:	CalVet Information Services Division

2.10.1 Solution Type

○ Recommended   ◉ Alternative

2.10.2 Name

Custom development in-house of a new EHR solution.

2.10.3 Description

Engage internal resources to develop a new web-based EHR solution for California Veterans Homes and Headquarters. This alternative would be a custom development and implementation effort.

Approach (check all that apply)

☐ Increase staff - new or existing capabilities

☑ Modify the existing business process or create a new business process

☐ Reduce the services or level of services provided

☐ Utilize new or increased contracted services

☐ Enhance the existing IT system

☑ Create a new IT system

☐ Perform a business-based procurement to have vendors propose a solution

☐ Other, specify:

2.10.4 Benefit Analysis

Benefits/Advantages

Solution would allow for a phased implementation instead of a "Big Bang" approach therefore reducing project risk.

Solution would be flexible to meet changing business needs.

Custom development would allow for custom integration where necessary with other CalVet applications.

Subject Matter Experts at CalVet will have a better knowledge of CalVet, offering a more tailored solution to meet CalVet's specific needs.

Disadvantages

Time-consuming approach which would double or possibly triple the length of the project resulting in a much higher project cost.

Higher risk of delays due to resources being pulled by other high priority projects or having to keep up with changing regulations and trends in software and technology.

Solution would have a maintenance overhead since all software and hardware would be hosted at CalVet.

Solution would be hosted by CalVet and would not leverage SaaS. This does not align with CA Department of Technology's "Cloud First" policy .

Anticipated Time to Achieve Objectives After Project Go-Live					
Objective Number	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
1.1	○	○	◉	○	○
2.1	○	○	◉	○	○
3.1	○	○	◉	○	○
4.1	○	○	◉	○	○
4.2	○	○	◉	○	○
5.1	○	○	◉	○	○

Anticipated Time to Achieve Financial Benefits After Project Go-Live					
Financial Benefit	Within 1 Year	2 Years	3 Years	4 Years	Over 4 Years
Increased Revenues	○	○	○	○	◉
Cost Savings	○	○	○	○	◉
Cost Avoidance	○	○	○	○	◉
Cost Recovery	○	○	○	○	◉

2.10.5 Assumptions and Constraints

Department resources will be available and engaged in the project.
Leverage existing infrastructure used for the current hosted solution.
Leverage existing database used for the current hosted solution.

2.10.6 Implementation Approach

Identify the type of existing IT system enhancement or new system proposed (check all that apply)**:**

☐ Enhance the current system

☑ Develop a new custom solution

☐ Purchase a Commercial off-the-Shelf (COTS) system

☐ Purchase or obtain a system from another government agency (Transfer)

☐ Subscribe to a Software as a Service (Saas) system

☐ Other, specify:

Identify cloud services to be leveraged (check all that apply)**:**

☐ Software as a Service (SaaS) provided by OTech

☐ Software as a Service (SaaS) provided by commercial vendor

☐ Platform as a Service (PaaS) provided by OTech

☐ Platform as a Service (PaaS) provided by commercial vendor

☐ Infrastructure as a Service (IaaS) provided by OTech

☐ Infrastructure as a Service (IaaS) provided by commercial vendor

☑ No cloud services will be leveraged by this alternative. Provide a description of why cloud services are not being leveraged:

The solution being developed would be hosted on site by CalVet.

Identify who will modify the existing system or create the new system (check all that apply)

☑ Agency/state entity IT staff

☑ A vendor will be contracted

☐ Inter-agency agreement will be established with another governmental agency. Specify Agency name(s):

[ ]

☐ Other, specify:

[ ]

Identify the implementation strategy:

◉ All requirements will be addressed in this proposed project in a single implementation.

○ Requirements will be addressed in incremental implementations in this proposed project.

○ Some requirements will be addressed in this proposed project. The remaining requirements will be addressed at a later date.

Specify the year when remaining requirements will be addressed: [ ]

Identify if the technology for the proposed project will be mission critical and public facing:

☑ The technology implemented for this proposed project will be considered mission critical and public facing.

2.10.7 Architecture Information

Business Function/Process(es)

Refer to section 2.5 of this S2AA

Application, System or Component:	CalVet EHR
COTS, MOTS or Custom:	Custom Application
Name/Primary Technology:	[ ]

Runtime Environment

Cloud Computing Used?	○ Yes ◉ No If "Yes", specify: Select...
Server/Device Function:	3-Tier Electronic Health Record application, serving the Veterans Homes
Hardware:	VMware 5.5 Hosting
Operating System:	Windows Server 2012 R2
System Software:	Microsoft Internet Information Services (IIS), Microsoft SQL Server 2012
System Interfaces:	Web based, HL7
Data Center Location:	Agency/State Data Center Operated by Agency/state entity

Security

Access: (check all that apply)	☐ Public ☑ Internal State Staff ☐ External State Staff ☑ Other, specify: Auditors upon request
Type of Information: (check all that apply)	☑ Personal ☑ Health ☑ Tax ☑ Financial ☑ Legal ☑ Confidential ☐ Other, specify: [ ]
Protective Measures: (check all that apply)	☑ Technical Security ☑ Identity Authorization and Authentication ☑ Physical Security ☑ Backup and Recovery

	Other, specify:		

Data Management

Data Owner	**Name:**	California Veterans Homes
	Title:	Veterans Home Administrator
	Business Program:	Homes Division
Data Custodian	**Name:**	Joy Rowan
	Title:	Chief, Application and Web Section
	Business Program:	CalVet Information Services Division

2.11 Recommended Solution

2.11.1 Rationale for Selection

Recommended solution is to have a vendor implement a COTS Long Term Care EHR solution in a SaaS environment. This alternative was chosen because it was considered to be the best value and meets CalVet's strategic business goal as stated in the Stage 1 Business Analysis of providing premier long term care with fiscal efficiencies and also objectives stated. In addition the selection aligns with the direction of CA Dept. of Technology and CalVet to use Cloud services whenever possible. The disadvantages listed for this alternative whereby the vendor solutions software would be proprietary and potentially less flexible to incorporating custom features was not reason to exclude this alternative since CalVet is detailing all its required EHR features in its requirements which the vendor must meet.

Recommended solution was equated against the cost of implementing a COTS comprehensive EHR solution and was found to be approximately one third of the cost. The solution was also weighed against the alternative to build a custom in house solution and was judged to be the lowest risk for meeting scope, schedule, and budget for the project.

📎 File Attachment

2.11.2 Technical/Initial CA-PMM Complexity Assessment

Complexity	**Complexity Zone**
Technical Complexity Score: 2.1	◯ Zone I Low Criticality/Risk
	⦿ Zone II/III Medium Criticality/Risk
	◯ Zone IV High Criticality/Risk

2.11.3 Procurement and Staffing Strategy

Activity

Solicitation Development

Responsible (check all that apply)	☑ Agency/State Entity Staff	☑ ITPOD Staff
	☐ DGS Staff	☐ CA-PMO Staff
	☑ STPD Staff	☐ Contractor
	☐ Other, specify:	

When Needed (check all that apply)	☑ Stage 3 Solution Development ☑ Stage 4 Project Readiness and Approval ☐ After project is approved (after Stage 4 Project Readiness and Approval)	
Cost Estimate Verification (check all that apply)	☐ Market research conducted (MR) ☑ Cost estimate provided (CE) ☐ Department of Technology CE ☐ DGS CE ☐ Request For Information conducted (RFI) ☐ Comparable vendor services have been used on previous contracts (CV) ☐ Leveraged Procurement Agreement (LPA)	

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	Contract Type
Request for Offer/Master Service Agreement (RFO/MSA)	Fixed Price (FP)
If "Other," specify:	If "Other," specify:

Activity

Requirements Elicitation

Responsible (check all that apply)	☐ Agency/State Entity Staff	☐ ITPOD Staff
	☐ DGS Staff	☐ CA-PMO Staff
	☐ STPD Staff	☑ Contractor
	☐ Other, specify: 	

When Needed (check all that apply)	☑ Stage 3 Solution Development ☑ Stage 4 Project Readiness and Approval ☐ After project is approved (after Stage 4 Project Readiness and Approval)	
Cost Estimate Verification (check all that apply)	☑ Market research conducted (MR) ☑ Cost estimate provided (CE) ☑ Department of Technology CE ☐ DGS CE ☑ Request For Information conducted (RFI) ☐ Comparable vendor services have been used on previous contracts (CV) ☑ Leveraged Procurement Agreement (LPA)	

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	Contract Type
Request for Offer/Master Service Agreement (RFO/MSA)	Fixed Price (FP)
If "Other," specify:	If "Other," specify:

Activity

Conduct Procurement

Responsible (check all that apply)	☑ Agency/State Entity Staff	☑ ITPOD Staff
	☐ DGS Staff	☐ CA-PMO Staff

	☑ STPD Staff	☐ Contractor
	☐ Other, specify:	

When Needed
(check all that apply)

☑ Stage 3 Solution Development
☑ Stage 4 Project Readiness and Approval
☑ After project is approved (after Stage 4 Project Readiness and Approval)

Cost Estimate Verification
(check all that apply)

☑ Market research conducted (MR)
☑ Cost estimate provided (CE)
☐ Department of Technology CE
☐ DGS CE
☑ Request For Information conducted (RFI)
☐ Comparable vendor services have been used on previous contracts (CV)
☑ Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	**Contract Type**
Select…	Select…
If "Other," specify:	If "Other," specify:

Activity

Project Oversight

Responsible
(check all that apply)

☑ Agency/State Entity Staff	☑ ITPOD Staff
☐ DGS Staff	☐ CA-PMO Staff
☐ STPD Staff	☐ Contractor

☐ Other, specify:

When Needed
(check all that apply)

☑ Stage 3 Solution Development
☑ Stage 4 Project Readiness and Approval
☑ After project is approved (after Stage 4 Project Readiness and Approval)

Cost Estimate Verification
(check all that apply)

☐ Market research conducted (MR)
☐ Cost estimate provided (CE)
☑ Department of Technology CE
☐ DGS CE
☐ Request For Information conducted (RFI)
☐ Comparable vendor services have been used on previous contracts (CV)
☐ Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity

Procurement Vehicle	**Contract Type**
Select…	Select…
If "Other," specify:	If "Other," specify:

Activity

Independent Verification and Validation (IV&V)

Responsible (check all that apply)	☐ Agency/State Entity Staff	☐ ITPOD Staff
	☐ DGS Staff	☐ CA-PMO Staff
	☐ STPD Staff	☑ Contractor
	☐ Other, specify:	

When Needed (check all that apply)	☐ Stage 3 Solution Development
	☐ Stage 4 Project Readiness and Approval
	☑ After project is approved (after Stage 4 Project Readiness and Approval)

Cost Estimate Verification (check all that apply)	☐ Market research conducted (MR)
	☑ Cost estimate provided (CE)
	☐ Department of Technology CE
	☐ DGS CE
	☐ Request For Information conducted (RFI)
	☐ Comparable vendor services have been used on previous contracts (CV)
	☑ Leveraged Procurement Agreement (LPA)

Complete Only if Contractor Responsible for Activity	
Procurement Vehicle	**Contract Type**
Request for Offer/Master Service Agreement (RFO/MSA)	Fixed Price (FP)
If "Other," specify:	If "Other," specify:

	Yes	No
Will any of the activities identified above result in a competitive or non-competitive solicitation that will be over the Agency/state entity's DGS delegated purchasing authority?	◉	○

2.11.4 Enterprise Architecture Alignment

In adherence to statewide policy and in response to business demands for modern, reliable, secure and innovative solutions, CalVet's target enterprise architecture seeks to leverage cloud computing. Cloud computing continues to be the technology of choice for meeting these growing demands through on-demand, self-service computing, in a pay-as-you-use model. The CEHR Project and recommended solution conform with this overall direction with a mandatory requirement for Software as a Service (SaaS) in the cloud.

Information Technology Capability Table		
Information Technology Capability	**Existing Enterprise Capability to be Leveraged**	**New Enterprise Capability Needed**
Public or Internal Portal/Website	◉	○
Public or Internal Mobile Application	○	○
Enterprise Service Bus	○	○
Identity and Access Management	○	◉
Enterprise Content Management (including document scanning and eForms capabilities)	◉	○
Business Intelligence and Data Warehousing	◉	○
Master Data Management	◉	○
Big Data Analytics	◉	○

2.11.5 Project Phases

Phase

Plan

Description

Project planning.

Phase Deliverable

Project Management Plan and project documents

Phase

Design

Description

Design the architecture.

Phase Deliverable

Business Process Model
Business Design Document
Technical Design Document
Requirement Traceability Matrix (RTM)

Phase

Build

Description

Build the product.

Phase Deliverable

Configuration Report
Data Dictionary
Data Mapping
Data Quality Issue Log

Phase

Test

Description

Test the product including validation/ certification.

Phase Deliverable

Test Plan
Test Cases
Defects Report
Risk and Issue Log

Phase

Go Live

Description

Implement the product.

Phase Deliverable

Operations Readiness Assessment (ORA)
Conversion Validation Report
Disaster Recovery Plan

Phase

Maintenance & Operations

Description

The phase where product is maintained and updated.

Phase Deliverable

M&O Transition Plan
Post Implementation Evaluation Report (PIER)
Lessons Learned

2.11.6 High Level Proposed Project Schedule

Project Planning Start Date: 1/1/2017		**Project Start Date:** 1/1/2019	
Project Planning End Date: 12/31/2018		**Project End Date:** 6/30/2020	

Activity Name	Start Date	End Date
Stage 3 Solution Development	3/19/2018	6/30/2018
Stage 4 Project Readiness and Approval	7/1/2018	11/30/2018
Solicitation Award	12/1/2018	12/31/2018
Design	1/1/2019	12/31/2019
Development	2/1/2019	12/31/2019
Data Conversion	2/1/2019	12/31/2019
Data Migration	3/1/2019	2/29/2020
Testing	2/1/2019	1/31/2020
Training	11/1/2019	6/30/2020
Go Live	1/6/2020	6/30/2020
Maintenance and Operations	7/1/2020	12/31/2020

2.11.7 Cost Summary

Total Proposed Planning Cost:	$3,623,571
Total Proposed Project Cost:	$10,447,220
Average Proposed Operations Cost:	$1,659,679

2.12 Staffing Plan

2.12.1 Administrative

CEHR Project remains the highest priority project in CalVet's portfolio. As indicated in the 2018-20 Strategic Plan, the Project Sponsor who is CalVet Secretary, and project team members are fully committed to this project.

Policy & Admin Support team within the Information Services Division (ISD) has staff experienced in IT contract procurement.

ISD Project Management team has resources assigned to provide project management support services.

Assistant Deputy Secretary of the CalVet Budget Division is the Budgets Subject Matter Expert (SME) on the CEHR Project.

Please refer to the CEHR Project organizational chart for cross-divisional project team.

2.12.2 Business Program

All business disciplines are represented on this project. As reflected on the FAW Alternative 1 Project Cost, existing Clinical, Financial and Administrative staff within the Veterans Homes and Sacramento Head Quarter are re-directed to the project.

Business subject matter experts (SME) have been working with stakeholders to document As-Is business processes, To-Be business processes will follow after. This allows dedicated knowledge gathering with uninterrupted program operations at the Veterans Homes and HQ.

Please also refer to the project Staff Resources Management Plan for details.

2.12.3 Information Technology (IT)

CalVet Agency Information Officer (AIO), CEHR Project Technical Lead, Project Manager and technical staff are knowledgeable with the Electronic Health Record technology.

Chief Information Security Officer and CalVet HIPAA Program Manager are CEHR Project team members.

Since CEHR Project is replacing Meditech and ADL, technical resources currently supporting those applications are redirected to the CEHR Project.

2.12.4 Testing

Business SME/staff identified on the CEHR Project organizational chart are expected to be part of user acceptance testing. Staff are expected to test respective functions.

As reflected in the FAW, CalVet will look to the Independent Validation & Verification contractor as well, to provide an independent perspective for review, meetings and evaluations, and validates adequacy and appropriateness of testing.

2.12.5 Data Conversion/Migration

Data conversion/migration discussion started while CEHR Project is working on S2AA. Business analysts and business SME had extensive data analysis effort. Please refer to the data analysis attachments in the

S2AA for details.

ISD technical resources will work in conjunction with solution vendor on data conversion and data migration strategies. Business staff will support source-to-target testing and data mapping validation.

2.12.6 Training and Organizational Change Management

Due to the nature of the business operations, and lessons learned from prior projects, train-the-trainers approach will not satisfy the CEHR Project training needs. Project expects solution vendor to provide onsite, phase-approach training at each home and HQ. CalVet anticipates minimal customer impact or business disruption with the implementation of the CEHR Project.

CalVet uses a governance structure to support organizational change management (OCM) as it relates to the implementation of new technology and business processes. Weekly project meetings communicate project updates and openly discuss potential risk/issue.

All project SME's have been actively involved in the data analysis effort, As-Is business processes and mid-level requirements. Everyone involved is aware of how the objectives of this project will propel the organization closer to the 2018-20 strategy plan.

2.12.7 Resource Capacity/Skills/Knowledge for Stage 3 Solution Development

CalVet does not anticipate requesting additional resources for Stage 3 Solution Development. As stated in the approved S1BA, CalVet has various staff who have had experience with planning projects of a similar nature. All staff mentioned in the FAW will participate in the remainder of the planning phases and throughout the project duration. The implementation effort leverages the support of an Executive Project Sponsor and the Executive Steering Committee for decision making relative to critical change requests and risks/issues which cannot be resolved at lower levels of the project team structure.

Procurement team has extensive experience with the CEHR Project procurement methodologies identified in the Recommended Solution. Please refer to the project contract management plan for details.

Along with the controlling agencies, all project member identified on the organizational chart will support the Stage 3 effort. CalVet intends to collaborate with all agencies to progress along the PAL process.

2.12.8 Project Management
2.12.8.1 Project Management Risk Assessment

Project Management Risk Score: 1

Attach file:

2.12.8.1 Project Management Risk Assessment.xlsx
Microsoft Excel Worksheet
26.1 KB

2.12.8.2 Project Management Planning

Are the following project management plans or project artifacts complete, approved by the designated Agency/state entity authority, and available for Department of Technology review?

| Project Charter | **Yes** | Complete, Approved and Available. |

Scope Management Plan	**<u>Yes</u>**	Complete, Approved and Available.
Risk Management Plan	**<u>Yes</u>**	Complete, Approved and Available.
Issue and Action Item Management Plan	**<u>Yes</u>**	Complete, Approved and Available.
Communication Management Plan	**<u>Yes</u>**	Complete, Approved and Available.
Schedule Management Plan	**<u>Yes</u>**	Complete, Approved and Available.
Human Resource Management Plan	**<u>Not Applicable</u>**	HR Management Plan is in accordance with CalVet HR policy.
Staff Management Plan	**<u>No</u>**	In progress.
Stakeholder Management Plan	**<u>Not Applicable</u>**	Please see Staff Management Plan.
Governance Plan	**<u>Yes</u>**	Completed, approved and available.

2.12.9 Organization Charts

2.12.9.1 CEHR Project
Organization Chart.pdf
Adobe Acrobat Document
205 KB

2.13 Data Conversion/Migration

Identify the status of each of the following data conversion/migration activities:

Data Conversion/Migration Planning	<u>Completed</u>
Data Conversion/Migration Requirements	<u>Completed</u>
Current Environment Analysis	<u>Completed</u>
Data Profiling	<u>Completed</u>
Data Quality Assessment	<u>Completed</u>
Data Quality Business Rules	<u>Completed</u>
Data Dictionaries	<u>Completed</u>
Data Cleansing and Correction	<u>Completed</u>

During Stage 2 Alternatives Analysis, the CEHR Project conducted an extensive current environment data analysis to determine critical data sources related to existing business

processes. The analysis further captured if the data is required to be migrated into the new Electronic Health Record (EHR) solution along with the impact of not doing so and potential migration strategy as applicable. The analysis covered all current business processes within the domain of the CalVet EHR solution at the eight CalVet Veterans Homes and Headquarters (HQ) in Sacramento.

The Data Analysis Summary and Details attached to this section provide details and results of this effort for the CEHR Project Stage 2 Alternatives Analysis. All currently identified data is in production use and data cleansing and correction activities are not anticipated.

At this present stage conversion activities are noted above as complete for what can be accomplished by CalVet at this stage in the project life cycle. Data conversion cannot be further completed until the data architecture is known. To know this, procurement must be completed and the solution selected. Data conversion requirements and planning will be further articulated within Stage 3 Solution Development. However final planning, conversion and migration of data will be a responsibility of the vendor.

CEHR - Data Analysis.pdf
Adobe Acrobat Document
493 KB

CEHR - Data Analysis
Summary.pdf
Adobe Acrobat Document
259 KB

2.14 Financial Analysis Worksheets

S2AA 2.14 Financial Analysis
Worksheets v2.xlsx
Microsoft Excel Worksheet
3.62 MB

Department of Technology Use Only

Preliminary Assessment – Department of Technology Use Only

Original "New Submission" Date	12/8/2017
Form Received Date	2/28/2018
Form Accepted Date	2/28/2018
Form Status	Completed
Form Status Date	5/17/2018

Main Form - Department of Technology Use Only

Original "New Submission" Date	12/8/2017

Form Received Date	2/28/2018
Form Accepted Date	2/28/2018
Form Status	Completed
Form Status Date	5/17/2018
Form Disposition	Approved
Form Disposition Date	5/17/2018