

# **Template I**

## **Technical Requirements Approach**

**Including Response Template**

**Instructions for RFP Response**

**RFP #: 03410-128-14**

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## 1. Architecture and Policy Requirement

The Vendor must provide a narrative overview of how the System will meet the Care Management project requirements. The following questions pertaining to Technology and Application Architecture Requirements and Policy and must be answered by the Vendor.

**Instructions:** Describe the Vendor’s proposed approach in addressing the requirements for Product and Solutions categories, either by leveraging and modifying off-the-shelf technology components or building from the ground-up.

Please use these response sections to provide specific details of the proposed approach to meeting Vermont’s requirements in each area. Responses should, when necessary, reference requirements using the appropriate RFP Requirement Numbers from Template H - Non-Functional Requirements.

Responses in this section must be highly focused on the specific requirements and must not simply provide generic or marketing descriptions of technology or product capabilities. Also, include one (1) or more diagrams where necessary that detail the proposed design and the relationships between key technical components.

### 1.1 Usability

**Instructions:** Describe the design approach and the characteristics of the user interface for the System. The System must be designed to utilize a browser based or a Rich Internet Application that can provide feature rich applications that can be updated over the Wide Area Network and the Internet, and should deliver a consistent user experience to Vermont Citizens and AHS employees, contractors, and partners. The State has a preference for presenting a unified user interface through the Oracle WebCenter Portal to the State and its Service Provider partners. Describe how the different aspects of system functionality can be delivered within WebCenter with Single Sign On capabilities.

<Response>

### 1.2 Audit Compliance

**Instructions:** Describe the Vendor’s approach for the System to meet Audit and Compliance requirements.

<Response>

### 1.3 Service Level Requirements (SLRs) and Performance

**Instructions:** Describe the Vendor’s approach for the System to meet Service Level Requirements (SLRs) and Performance standards and how the SLA targets will be measured and reported. The approach must, at a minimum, provide details on how the System will meet or exceed the Performance Requirements set forth in the Template H – Non-Functional Requirements, Tab G3. SLRs and Performance.

<Response>

### 1.3.1 Performance Requirements

**Instructions:** Describe the ability of the Vendor’s System architecture to support:

- Internal State Workers, and external participants
- Mission-critical services/Service Level Agreements
- Ease of management
- Ability to upgrade (ease and compatibility)
- Virtualization and resource management
- Network Performance Requirements
- Meeting System response time requirements
- The System must provide data dashboard capabilities to facilitate real time graphical display of technology performance metrics with drill-down capability aligned with IT Operations User’s role and permissions

<Response>

### 1.3.2 System Availability

**Instructions:** The Vendor is responsible for delivering a cost-effective, high-availability environment that minimizes the frequency and impact of system failures, reduces downtime, and minimizes recovery time in the event of catastrophic failure. In this section, provide details on the Vendor’s approach to providing a highly available system.

<Response>

### 1.3.3 IT Component Capacity Planning

**Instructions:** In this section, provide details on the Vendor’s proposed approach to planning, sizing and controlling the system as IT Component Capacity needs change.

- Data Base Storage Capacity
- Real-time Integrated / Centralized Database
- Data Warehouse and Data Marts
- Knowledge Base
- Document Repository

<Response>

### 1.3.4 Performance Monitoring and Management

**Instructions:** Describe the Vendor’s proposed methodology for monitoring and reporting system performance, as well as the Vendor’s proposed approach to technology management. This includes the

methods for centrally managing system resources such as servers, backup, archiving, and recovery equipment, databases and applications. Address methods for auditing, tracing and scanning the system. Provide details on the use of specialized tools the Vendor will use to automate and track monitoring and management activities.

<Response>

## 1.4 Integration

The solution should include web services capabilities that will allow for it to function within a service-oriented architecture (SOA) environment. Services that are available to be exposed and consumed should be outlined in the solution's technical documentation.

**Instructions:** Describe the system integration approach between the Vendor's System, Interfaced Systems and any other proposed third party products. Describe the interoperability features and capabilities of the Vendor's System, and specifically describe how the System will leverage the State's deployments of Master Data Management / Master Person Index technologies (AHS – Siebel UCM, VITL - Medicity, DVHA – NextGen) to present a 360' view of patient clinical data to the users. The approach must, at a minimum, provide details on how the System will meet or exceed the Interoperability-Interface Requirements set forth in the Template H – Non-Functional Requirements, Tab T1. Interoperability-Interfaces and the representative list of specific interfaces included in Template H – Non-Functional Requirements, Tab G4. Interface List.

<Response>

## 1.5 Scalability and Extensibility

**Instructions:** Describe the Vendor's approach to Scalability and Extensibility of the System. The Vendor's approach, at a minimum, must take the following topics into consideration while providing the details of how the solution will meet or exceed the Scalability and Extensibility Requirements set forth in the Template H – Non-Functional Requirements, T2. Scalability & Extensibility.

- Ability to meet Future Growth
- Configurability
- Flexibility to keep up with changing Technology and Regulatory needs
- Ease of Maintenance
- Describe how the Vendor's system would scale for multiple business units with different missions. For example, if Department 'x' and Department 'y' both want to take advantage of automated case management, how would the Vendor's system handle increasing Users while maintaining responsiveness and insuring security, privacy, etc.

<Response>

## 1.6 Regulatory Policies, Audit Compliance and Security

**Instructions:** Describe the Vendor’s approach to harmonizing the Regulatory requirements, audit compliance and Security needs of the System. The Vendor’s approach, at a minimum, must take the following topics into consideration while providing the details of how the System will meet or exceed the Regulatory and Security Requirements set forth in the Template H – Non-Functional Requirements, T3. Regulatory & Security.

- Adhere to, harmonize, and enable the listed federal and local regulations
- Protect and secure the information assets within the System
- Enable Identity and Access Management
- State data may include personally identifiable information, tax information or HIPAA protected information. How does the Vendor ensure State data will be isolated and protected? Please explain the architecture and the related security model.
- Explain how the Vendor’s system might leverage an MS Office SharePoint Server (MOSS) environment

<Response>

### 1.6.1 Security Architecture and Design

**Instructions:** Describe the Vendor’s proposed approach to support technical controls and technology solutions that must be secured to ensure the overall security of the System, including:

- Provide security-related input into IT infrastructure, system and application design
- Leverage published industry standards and models to apply security best practices
- Support, enable and extend the security policy by providing specific security-related guidance to decision makers
- Contain the capability to provide user and site authentication
- Support VPN access
- Include the ability to recover from a failure of any single element
- Be easily serviceable
- Support the establishment and active management of data sensitivity levels
- Include application and system hardening processes

<Response>

### 1.6.2 Identity and Access Management (IAM)

**Instructions:** Describe the Vendor’s proposed approach to support IAM, including:

- Enable Vermont AHS to identify users in different contexts so that Vermont AHS policies and user preferences can be applied consistently

- Deliver an integrated login experience for users across Vermont AHS systems and channels
- Enable coherent audit trails and chain of custody records needed for security forensics and compliance requirements
- Support the proactive management of user access to Vermont AHS resources including de-provisioning when needed
- Enable Vermont AHS to consistently identify Participants so that customer service can be more effective
- Support the use of Microsoft Active Directory for identification and authorization

<Response>

### 1.6.3 Application Encryption

**Instructions:** Describe the Vendor’s proposed approach to support Application Encryption, including:

- Encryption of database columns and indexes for data at rest
- Encryption of flat files at rest and in motion
- Network encryption at the session layer (or lower) to secure communication streams that traverse un-trusted networks; and to provide encryption for sensitive data in motion across any network
- Field-level encryption so custom applications can secure pertinent information within a communication stream
- Key management for secure creation, storage, and retrieval of encryption keys

<Response>

### 1.6.4 Privacy and Consent

**Instructions:** Describe the Vendor’s proposed approach to support Privacy and Consent, including:

- Role-based access within the System must ensure that access to sensitive information will conform to the State’s policies
- The System must be able to identify and delineate between internal and external Users (users outside the Agency) and must give them different levels of visibility to System data. When displaying data, identification information tying the records back to specific Participants must be omitted where appropriate.

<Response>

### 1.6.5 Security Audit

**Instructions:** Describe the Vendor’s proposed approach to support an audit trail of all pertinent events, giving due consideration to storage space and performance constraints. Examples of these events include:

- System start-up and shutdown
- Successful and unsuccessful login attempts
- User actions to access files or applications (successful and unsuccessful)
- Actions taken by system administrators and security personnel
- All administrative actions performed on the System
- Permission changes
- Creation of users and objects
- Deletion and modification of system files
- Registry key / kernel changes
- Skipped or rejected alerts (to provide insight into Clinic practice)
- Changes, additions or deletions to data (including operational and security data) sets identified by management
- Out of normal System operations usage or user access

<Response>

### 1.6.6 Database Security

**Instructions:** Describe the Vendor’s proposed approach to ensure the confidentiality, integrity and availability (CIA) of the Database Management Systems responsible for managing data related to the proposed System.

<Response>

### 1.6.7 Software and Hardware Security

**Instructions:** Describe the Vendor’s proposed approach to development and implementation of security measures that will provide security and protection for the System, including:

- Server OS Security
- Client OS Security
- Mobile Devices Security
- Web Server Security
- Browser Security
- POS Terminal Security

<Response>

### 1.6.8 Data Backup

**Instructions:** Describe the Vendor’s proposed approach to support Data Backup, including:

- Database and application backup procedures must be updated to include backups for the System
- Full online data backups must occur, as well as offline backups using tape storage

<Response>

### 1.6.9 Disaster Recovery

**Instructions:** Describe the Vendor’s general approach to reestablishing operations in the event of a catastrophe, as well as its approach to providing Vermont AHS with a disaster recovery plan. Provide specifications on any hardware and software components utilized by the proposed security and disaster recovery solutions. Include the required components, configurations and procedures to enable a recovery.

<Response>

## 1.7 Business Intelligence, Analytics and Reporting

**Instructions:** Describe the Vendor’s proposed approach to support the Business Intelligence (BI) functions that should deliver a balanced set of capabilities to the internal State users across three (3) areas: information delivery, analysis, and development. Additionally, the description must include the reporting approach for both canned and ad-hoc reports and the ability of the proposed solution to provide dashboard capabilities to the State users.

<Response>

## 1.8 Health Services Enterprise (HSE) Platform Alignment

**Instructions:** As the State of Vermont moves towards integrated client-centric systems for Health and Human Services, it has established the Health Services Enterprise Platform which is being implemented on an Oracle "stack" (COTS infrastructure and Siebel Public Sector CRM Application) augmented with a few non-Oracle products. The State has a strong preference to use this investment to provide the basis of the technology architecture and is planning to standardize on these products going forward. Describe the Vendor’s approach for the System to align with the Health Services Enterprise (HSE) Platform providing the details of how the System will meet or exceed the HSE Platform Alignment Requirements set forth in the Template H – Non-Functional Requirements, T4. HSE Platform Alignment.

<Response>

## 1.9 System Administration and Support

The following questions pertaining to System Administration, Support and Maintenance must be answered.

### 1.9.1 System Administration

**Instructions:** Describe the System Administration tools and procedures that will be delivered for the ongoing support and maintenance, including customization of the Vendor's solution. Describe the proposed overall management framework, including proposed tools for:

- Application management and monitoring
- Web services management
- Systems management and monitoring
- Event management
- Identity and Access Management
- Network management and monitoring
- Performance monitoring
- Print Prioritization & Management
- Workload Management

Describe any proposed third-party off-the-shelf management tools and include detailed information regarding provider, product and version.

<Response>

### 1.9.2 Audit Trail

**Instructions:** Describe the audit trail capabilities of the Vendor's System.

<Response>

### 1.9.3 Data Archival

**Instructions:** Describe the processes used to archive and restore data from operational databases.

<Response>

### 1.9.4 Technical Documentation

**Instructions:** Describe the technical documentation that comes delivered with the Vendor's System.

<Response>

### 1.9.5 Technical Environments

**Instructions:** Vendors must describe the approach that will be taken to establish:

- Multiple environments (e.g., development, testing, training, and production)
- Procedures used to migrate software from one environment to another
- Steps needed to maintain the synchronization between environments

<Response>

### 1.10 General

**Instructions:** Describe the Vendor’s approach for the System to meet or exceed the General Requirements set forth in the Template H – Non-Functional Requirements, Tab G5. General.

## 2. Technical Standards

**Instructions:** Please describe the language environment(s), standards, relational databases, channels supported, hardware platforms supported, and other aspects of the technical direction for the solution. Please also discuss the timetable for migration of the solution to new technologies, product sets, or standards.

<Response>

## 3. Software and Hardware Components

Under any categories of IT service, the Contract may include the acquisition of hardware and/or commercial off-the-shelf (COTS) software to support the project. All hardware/software purchases must be compatible with Statewide and applicable Agency/Department IT architecture policies and standards and be approved in accordance with State bulletins and statutes. While a Vendor may propose to provide hardware and software as part of its proposal, the State reserves the right to procure hardware and software from other sources when it is in the best interest of the State to do so.

The following questions pertaining to Software and Hardware components must be answered. Please refer to the reference documents in the Procurement Library for additional details.

### 3.1 Proposed Packaged Software Technical Specifications

**Instructions:** Please list all the specifications of the proposed Packaged Software in the table below.

**Respondents are not to change any of the pre-filled cells in the following table. Any changes to the pre-filled cells in the following table could lead to the disqualification of a respondent.**

**Table 1 Proposed Packaged Software**

SOFTWARE ITEM #	SOFTWARE ITEM	ENVIRONMENT (E.G., DEVELOPMENT, TEST, TRAINING, PRODUCTION)	MANUFACTURER	LICENSE TYPE (E.G., ENTERPRISE, PER USER, PER SERVER)	BRAND NAME	MODULE NAME	VERSION NUMBER	UTILITY/SYSTEMS MGMT SOFTWARE, DBMS, DATA WAREHOUSE, OTHER	DETAILED DESCRIPTION (E.G., FUNCTIONALITY, PURPOSE)	OS	EARLIEST PROPOSED PURCHASE DATE
1	Item 1										
2	Item 2										
3	Item 3										

<The Vendor may insert additional rows as required>

If the Solution will include software to be licensed from the Vendor, Vendors shall include software licensing requirements and anticipated volume. Vendor shall propose the licensing options available and to recommend the advantages of those various options. For example, licensing options may include:

- Named user
- Per server
- Per work team
- Concurrent User
- Enterprise (unrestricted)

### 3.2 Proposed Hardware Technical Specifications

**Instructions:** Please list all the specifications of the proposed Hardware in the table below.

**Respondents are not to change any of the pre-filled cells in the following table.**

**Table 2 Proposed Hardware**

HARDWARE ITEM #	HARDWARE ITEM	ENVIRONMENT (E.G., DEVELOPMENT, TEST, TRAINING, PRODUCTION)	MANUFACTURER	DETAILED DESCRIPTION (E.G., NUMBER OF PROCESSORS, AMOUNT AND TYPE OF STORAGE AND MEMORY, TYPE OF NETWORK CARD)	OPERATING SYSTEM	EARLIEST PROPOSED PURCHASE DATE
1	Item 1					
2	Item 2					
3	Item 3					

<The Vendor may insert additional rows as required>

### 3.2.1 Server Architecture

**Instructions:** Describe the supported OS platforms and Server Configurations for the Vendor’s System. Include minimum recommended specifications to support the System in all required environments (e.g., development, testing, training, and production)

<Response>

### 3.2.2 Client Architecture

**Instructions:** Describe the Client (desktop) Architecture for the Vendor’s System. Include minimum recommended specifications (e.g., RAM, video RAM, disk space, processor speed) to support the System, as well virtualized configurations to improve manageability and reduce operational costs.

<Response>

### 3.2.3 Data Storage Architecture

**Instructions:** Provide details on the Data Storage software and hardware components the Vendor proposes to use in its System.

<Response>

### 3.2.4 Tools

**Instructions:** Describe the details on the tools and utilities used to design, build, test, deploy, report, monitor, and operate the System and its components.

<Response>

### 3.2.5 Peripheral Architecture

**Instructions:** Describe the architecture of other devices such as printers, electronic signature pads, smart card reader/writer and attached disks, which are necessary or recommended for the Vendor’s System. Include minimum and recommended specifications to support the System.

<Response>

### 3.2.6 Network Architecture

**Instructions:** Describe the Vendor’s System approach to network topology and hardware required to achieve this architecture (e.g., load balancing utilizing hardware and software based load balancers ahead of the web servers, Virtual Private Networks (VPNs), creation of DMZs by firewalls).

<Response>

## 4. Technical Requirements Assumptions

Document the assumptions related to the Technical Requirements in Table 3.

**Table 3** Technical Requirement Assumptions

ITEM #	REFERENCE (Section, Page, Paragraph)	DESCRIPTION	RATIONALE
1.			
2.			
3.			

<Vendor may add rows as appropriate>