Independent Review

Electronic Health Record Solution

For the

State of Vermont
Agency of Human Services (AHS), Department of Mental Health (DMH) and
Department of Information and Innovation

Submitted to the
State of Vermont, Office of the CIO
By

Strategic Technology Services

4/21/2015

Attachments:

1. FINAL-REVIEW-DMH-EHR-STS_Risk_Register.pdf
2. FINAL-REVIEW-DMH-EHR-STS_Project_Cost_Detail.xlsx

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1. Executive Summary

Provide an introduction that includes a brief overview of the technology project and selected vendor(s).

Project Summary

1. This is a 7 year project totaling **$2.8M** and will involve:
    a. Design, Development and Implementation Services (DDI) of CPSI software: **July, 2015** through **March, 2016;**
    b. Maintenance and Operations (M&O) services provided by CPSI, whose software solution is being implemented.
2. The CPSI System, **Version 19**, is compliant with the ONC 2014 Edition criteria and was certified as a Complete EHR on July 3, 2013, by the Certification Commission for Health Information Technology (CCHIT®), an ONC-ACB, in accordance with the applicable hospital certification criteria adopted by the Secretary of Health and Human Services. The ONC 2014 Edition criteria support both Stage 1 and 2 meaningful use measures required to qualify eligible providers and hospitals for funding under the American Recovery and Reinvestment Act (ARRA).
3. Several software modules are proposed which fall into the following functional categories:
    a. Registration/ADT (Admit, Discharge, Transfer) and Patient Accounting:
        i. A/R, Insurance Billing, Accounts Management, Collections, Medicare/Medicaid Electronic Remittance
    b. Insurance Services:
        i. 270/271 Eligibility Checking Service
    c. Financial Applications:
        i. General Ledger, Budgeting, Fixed Assets, Accounts Payable, Payroll, Time and Attendance, Human Resources, Materials Management
    d. Health Information Services Applications:
        i. Health Information Management, Master Patient Index, CodeFinder Interface
    e. Clinical Applications:
        i. Specialty Lab Information System, Radiology Information System, Micromedex CareNotes - Patient Education, Formulary Wholesale Cost Update Interface, Pharmacy, Pharmacy Clinical Monitoring, Quality Improvement (Quality Assurance, Utilization Review, Risk Management, Infection Control, Physician Credentialing), Core Measures System/CMS Reporting
    f. Patient Care Applications:
        i. Order Entry/Results Reporting, Multi-Disciplinary Point of Care Documentation, Chartlink, Computerized Physician Order Entry, Medication Management, Physician Documentation
    g. Facility Applications:
        i. Executive Information, Electronic Forms, Enterprise Wide Scheduling, Patient Portal
    h. Information Management Applications:
        i. Ad Hoc Reporting, Auto-Fax with eDistribution, Archival Data Storage/Report Image
    i. Interface Management System:
        i. Bi-Directional Reference Lab Interface, Bi-Directional Blood Glucose Device Interface, Bi-Directional Pyxis Interface, Bi-Directional PACS Interface, PACS URL Interface, Bi-Directional Transcription Interface, VITL HIE Interfaces

j. System Software & Licenses:

i. 24 Hour Emergency Support, Client Access - 60 User License, Stedman's Medical Dictionary - 5 User License, Auto-Fax Configuration

4. Senior Business Leadership, Technical Leadership, and Subject Matter Leadership are aligned to complete solution implementation.

Vendor Profile

1. CPSI (Computer Programs and Systems, Inc.)

a. $201M annual revenue, $32M income, publicly traded, 1,378 employees (527 in software services and support, 458 in business management, consulting and managed IT services, 96 in information technology services and support, 200 in product development services, 49 in sales and marketing and 48 in administration), http://www.cpsi.com/, HQ: Mobile, AL, founded in 1979, a provider of electronic health records systems for more than 650 community, rural and critical access hospitals and their 12,000 providers. CPSI is dedicated to meeting the ever-changing needs of healthcare IT, while optimizing the quality of care for rural areas and communities in 46 states and the District of Columbia. CPSI provides a complete information and patient care system from business office to bedside, combined with comprehensive implementation, training and ongoing support from staff of approximately 1,400 healthcare and business professionals. CPSI's wholly owned subsidiary, TruBridge, LLC, focuses exclusively on providing business office, consulting and managed IT services to rural and community healthcare organizations, regardless of their primary IT vendors.

Per CPSI web site and annual report: "*The target market includes rural and community hospitals with 300 or fewer acute care beds, with primary focus within this defined target market on hospitals with 100 or fewer acute care beds. Software programming efforts in 2013 and continuing into 2014 have been and will continue to be focused on helping customers to achieve stage two of meaningful use of EHR, as the volume and complexity of changes required to reach stage two are considerable. The final rules regarding stage two of meaningful use of EHR were released in 2012, and hospitals were allowed to begin reporting their compliance with stage two requirements on October 1, 2013. Stage two increases data capture requirements and use of medical vocabularies, expands stage one functionality requirements, increases interoperability requirements and emphasizes greater patient engagement. To meet these new requirements, new data elements and functionalities have been created and tied to the existing data structure and system functionalities in a manner that is consistent with healthcare provider workflows. Updates associated with stage two of meaningful use of EHR were provided to CPSI customers with the release of* ***Version 19*** *of the CPSI system in July 2013 and was successfully installed in over 525 facilities, or more than 80 percent of CPSI client hospitals, at the end of 2013.*"

On 4/13/2015, CPSI (NASDAQ: CPSI), announced the formation of Evident, LLC, a wholly owned subsidiary of CPSI, rebranding the CPSI EHR software product to Evident Thrive. Evident will provide EHR solutions previously sold under the CPSI name as well as an expanded range of offerings targeted specifically at rural and community healthcare organizations. See http://www.businesswire.com/news/home/20150413005708/en/CPSI-Announces-Formation-Evident-LLC#.VS0ZZvnF-Sq for more detail.

1.1 Cost Summary

IT Activity Lifecycle:	7 Years
Total Lifecycle Costs:	$ 2.8M
Total Software Costs (one time):	$ 512K
Total Implementation Costs (one time):	$ 1.2M
Total M&O Costs:	$ 1.1M
New Annual Operating Costs:	New costs range from $158K to $162K annually over the life of the project compared to current operating costs of
Difference Between Current and New Operating Costs:	Annual increase of ~$137K of Operating Costs.
Funding Source(s) and Percentage Breakdown if Multiple Sources:	CMS Global Commitment Federal Dollars (54%), and State of Vermont Equipment Revolving Fund and DMH Operating Budget $46%. (See attached Cost Analysis spreadsheet) YEAR 1 (IMPLEMENTATION) is funded out of the State of Vermont Equipment Revolving fund as noted in the Cost Analysis spreadsheet. The Cost Analysis spreadsheet also shows that Equipment Revolving Fund being paid back over 5 years out of the DMH Operating Budget, including a .003 Administrative fee.

1.2 Disposition of Independent Review Deliverables

Deliverable	Highlights from the Review *Include explanations of any significant concerns*
Acquisition Cost Assessment	Costs seem reasonable and in line with comparable projects.
Technology Architecture Review	Application and Database Server runs under Red Hat Enterprise Linux 5.9, Database is PostgreSQL 9.4, RTF Server is Windows 2008 Standard or above, Apache version 2.2.3 is the web server, and data center runs these under VMWare 5.x. Client runs on Windows 7 or above, and Internet Explorer 10 or above for web applications (ChartLink, Electronic Forms (E-Forms), Electronic Signature (E-Sign) and Electronic File Management.
Implementation Plan Assessment	Consistent project management approach and methodology has yielded positive results on previous projects. Deliverables not originally tied to implementation plan but asked for during IR, so want to ensure those remain connected in contract.
Cost Analysis and Model for Benefit Analysis	Cost analysis provides accurate 7 year costs. No significant monetary benefits defined.
Impact Analysis on Net Operating Costs	Increase in Operating Costs. See attached Cost Analysis spreadsheet.

1.3 Identified High Impact &/or High Likelihood of Occurrence Risks

Risk Description	State's Planned Risk Response	Reviewer's Assessment of Planned Response
See Risk Register		

1.4 Other Key Issues

Recap any key issues or concerns identified in the body of the report.

1. No other issues identified.

1.5 Recommendation

Provide your independent review recommendation on whether or not to proceed with this technology project and vendor(s).

It is recommended the project proceed as specified in this report, based on the following:

1. Satisfactorily reviewing and mitigating the Risk Register items.
    a. *It is the opinion of the Independent Reviewer that the Risk Items have been satisfactorily mitigated, reducing risk of this project and thus, supporting the recommendation for the project to move forward.*
2. Adherence to the Certificate of Need established under 18 V.S.A. § 9351.
    a. *It is the opinion of the Independent Reviewer that the proposed project will achieve the outcomes specified in the Certificate of Need established under Title 18 (Health), Chapter (219: Health Information Technology And Telemedicine), Subchapter (1: Health Information Technology), Section 9351: (Health Information Technology Plan), which thus support the recommendation for the project to move forward. Conversely, not moving forward with this project will render the Certificate of Need incomplete, and may cause related enforcement action pursuant to 8 V.S.A. § 15, 18 V.S.A. § 9445, and any other applicable law.*
3. Achieving "Meaningful Use" attestation (Stages 1-3) as charted in the Federal HITECH ACT of 2009:
    a. Stage 1 (2012): Data capture and sharing
    b. Stage 2 (2014): Advance clinical processes
    c. Stage 3 (Anticipated 2016): Improved outcomes
        i. *It is known that the proposed solution meets Stages 1 and 2, and it is the opinion of the Independent Reviewer that Stage 3 will be met by the proposed solution in the near future, supporting the recommendation to move forward with this project.*
4. Adherence to 18 V.S.A. § 9352, requiring Interoperability with Vermont Health Information Exchange (VHIE) through Vermont Information Technology Leaders (VITL).
    a. *It is the opinion of the Independent Reviewer that the proposed project will achieve the outcome specified in this Title 18 (Health), Chapter (219: Health Information Technology And Telemedicine), Subchapter (1: Health Information Technology), Section 9352: (Vermont Information Technology Leaders), supporting the recommendation to move forward with this project.*

1.6 Certification

I hereby certify that this Independent Review Report represents a true, independent, unbiased and thorough assessment of this technology project/activity and proposed vendor(s).

E-SIGNED by David Gadway
on 2015-05-04 14:01:47 GMT

_____ _____

Signature **Date**

E-SIGNED by Richard Boes
on 2015-05-04 14:10:55 GMT

E-SIGNED by Philip Dessureau
on 2015-05-04 12:09:41 GMT

2. Scope of this Independent Review

Add or change this section as applicable.

2.1 In-Scope

The scope of this document is fulfilling the requirements of Vermont Statute, Title 3, Chapter 45, §2222(g):

The Secretary of Administration shall obtain independent expert review of any recommendation for any information technology initiated after July 1, 1996, as information technology activity is defined by subdivision (a)(10), when its total cost is $1,000,000 or greater or when required by the State Chief Information Officer.

The independent review report includes:

- An acquisition cost assessment
- A technology architecture review
- An implementation plan assessment (which includes a Risk Analysis)
- A cost analysis and model for benefit analysis; and
- An impact analysis on net operating costs for the Agency carrying out the activity

2.2 Out-of-Scope

If applicable, describe any limits of this review and any area of the project or proposal that you did not review.

A separate deliverable contracted as part of this Independent Review may be procurement negotiation advisory services, but documentation related to those services are not part of this report *at this time*.

3. Sources of Information

3.1 Independent Review Participants

List the individuals that participated in this Independent Review.

Name	Employer and Title	Participation Topic(s)
Cheryl Burcham	SOV; EHR Project Manager	Primary Point of contact for IR, Discussed Project Management Approach, Coordinate meeting schedules with project participants
Phillip Dessureau	SOV; DII Oversight Project Manager	Project Management Oversight
Jeff Rothenberg	SOV; VPCH Chief Executive Officer, Project Executive Sponsor	Role in Agency, Role on project, Success criteria, Concerns/Risks, Project Schedule, Staffing
Jaskanwar Batra	SOV; DMH Medical Director (Functional SME)	Role in Agency, Role on project, Success criteria, Concerns/Risks, Project Schedule, Staffing
Paul Dupre	SOV; DMH Commissioner	Role in Agency, Role on project, Success criteria, Concerns/Risks, Project Schedule, Staffing
Frank Reed	SOV; DMH Deputy Commissioner	Role in Agency, Role on project, Success criteria, Concerns/Risks, Project Schedule, Staffing
Heidi Gee	SOV; VPCH Hospital Operations Chief, Project Executive Sponsor, Operational/Functional SME	Role in Agency, Role on project, Success criteria, Concerns/Risks
Kathy Bushey	SOV; VPCH Associate Director of Nursing, Project Executive Sponsor, Functional SME	Role in Agency, Role on project, Success criteria, Concerns/Risks
Tyler Blouin	SOV; DMH Chief Research & Statistics, Statistics/Reporting Guidelines SME	Role in Agency, Role on project, Success criteria, Concerns/Risks
Keith Goslant	SOV; DMH Mental Health Analyst, Overall historical perspective – legacy system SME	Role in Agency, Role on project, Success criteria, Concerns/Risks
Cathy Deyo	SOV; DMH Operations Manager (Finance)	Role in Agency, Role on project, Success criteria, Concerns/Risks, Funding Sources and Uses
Shannon Thompson	SOV; DMH Finance Director	Role in Agency, Role on project, Success criteria, Concerns/Risks, Funding Sources and Uses
Chris Laflam	SOV; VPCH Change Management Analyst, Workflows/Operational SME	Role in Agency, Role on project, Success criteria, Concerns/Risks
Brian Isham	SOV; IT, Non-functional requirements, SME	Technical Standards, Architecture
Brenda Hudson	SOV; IT, Non-functional requirements, SME	Technical Standards, Architecture
Jack Green	SOV; AHS Security Officer	Solution review relative to security criteria

Name	Employer and Title	Participation Topic(s)
Scott Perry	SOV; DMH Policy and Quality Manager, SME	Role in Agency, Role on project, Success criteria, Concerns/Risks
Mike Gagnon	Vermont Information Technology Leaders (VITL) Chief Technology Officer	Interoperability
Lamar Cowart	Computer Programs & Systems, Inc.; Vice President of Software Services	Roles, responsibilities, pricing model, comparable projects, how VT pricing compares to comparable projects, ability to meet functional requirements (out of box, 3rd party, or through development), technical architecture, PM approach, Training approach, Implementation approach, Testing Approach, Conversion Approach, Deployment Approach, Risk Management Approach, Any 3rd Party Products: descriptions, pricing, and where/how used
Tricia Borrego	Computer Programs & Systems, Inc.; Director of Client Services Implementation	Ditto
Henry Waggoner	Computer Programs & Systems, Inc.; Director of IT Managed Services	Ditto
Lynne Clifton	Computer Programs & Systems, Inc.; Director of Quality Assurance	Ditto
Sean Wentworth	Computer Programs & Systems, Inc.; Director of Application Development	Ditto
Janna Stevens	Computer Programs & Systems, Inc.; Corporate Development Compliance Officer	Ditto
Jason Phillips	Computer Programs & Systems, Inc.; Network and Security Manager	Ditto
John Immel	Computer Programs & Systems, Inc.; Infrastructure Services Manager	Ditto
CJ Milto	Computer Programs & Systems, Inc.; Systems Management Manager	Ditto
Brad Lewis	Computer Programs & Systems, Inc.; Service Specialist	Ditto
John Holladay	Computer Programs & Systems, Inc.; Sales Manager	Ditto

3.2 Independent Review Documentation

Complete the chart below to list the documentation utilized to compile this independent review.

Document Name	Description	Source
RFP_VPCH_EHR_Final_v5 0_04172014.pdf), including Templates A-L (i.e. VPCH EHR Template A -… .pdf), related addendums (i.e. ADDENDUM 1 DMH Vt Psychiatric Hospital EHR.pdf)	Originating EHR RFP	Project SharePoint Site
EHR RFP_Vendor_QandA_6-16-14final V2resp.pdf	Vendor Q&A Document	Project SharePoint Site
VPCH EHR ABC Form v2 0-1-21-15__final_02_3_2015___v2 (3)Esigned.pdf	IT ABC and Cost Analysis Form	Cheryl Burnham, Brian Isham
VPCH Tech Proposal 08-29-14.pdf and all originating documents that comprised the proposal (Functional Requirements, Non-Functional Requirements, Technical Requirements Approach, Implementation Requirements Approach, etc.)	Computer Programs and Systems, Inc. (CPSI) Proposal	CPSI
VPCH EHR Template L- Cost WorkBook.xls	CPSI detailed cost proposal	CPSI

4. Project Information

4.1 Historical Background

Provide any relevant background that has resulted in this project.

SUMMARY

The state of Vermont has been charged to "have an EHR in place" as a key requirement for the Certificate of Need established under **18 V.S.A. § 9351** for rebuilding of a new State hospital and integrate physical, behavioral, pharmacy, dietary, billing and lab functions in a single system; functions not currently in place at VPCH. The current perspective of the Legislature is that VPCH's EHR must include features and functions to help facilitate the attainment of "Meaningful Use" attestation (Stages 1-3) as charted in the **Federal HITECH ACT of 2009**, and must have interoperability with Vermont Health Information Exchange (VHIE) through Vermont Information Technology Leaders **(VITL), 18 V.S.A. § 9352**.

DMH envisions an EHR software solution that will meet not only the current needs of the Department but also to provide the framework for easy modifications to system process and procedures so that the Department can react to the requirements placed on it by internal and external sources such as the Joint Commission and the Centers of Medicare and Medicaid Services.

As the State Mental Health Authority, the Department of Mental Health (DMH) is responsible for overseeing Vermont's mental-health system. DMH designates and contracts with a network of ten private not-for-profit Designated Agency (DA) community providers for the provision of mental health services to children and adults that are timely, clinically effective, and cost-efficient. DMH also contracts with one statewide, private-not-for-profit Specialized Services Agency (SSA) for mental health services for children (Northeastern Family Institute).

DAs are located throughout the state and are responsible for serving a specific "catchment area" consisting of one to three counties. DAs employ nearly two thousand full time equivalent staff and serve over 26,000 Vermonters annually. DAs are required to serve adults with severe and persistent mental illness (SPMI) and children with serious emotional disturbances (SED). DMH funds also support other DA adult and children's mental health programs and emergency services.

DMH also designates five not-for-profit community hospitals to provide involuntary psychiatric inpatient care to adults. Brattleboro Retreat is the only designated hospital that also serves children.

DMH is also responsible for operating the Vermont State Hospital (VPCH) for Vermonters whose mental health needs cannot be met by local designated hospitals. It is Vermont's most intensive and restrictive psychiatric inpatient program.

The Vermont Psychiatric Care Hospital (VPCH) is a twenty five bed Level I inpatient psychiatric unit located in Berlin, Vermont. VPCH is under the control and supervision of the Commissioner of the Department of Mental Health. VPCH is a professionally staffed facility providing care and treatment for individuals experiencing all levels of acute psychiatric illness.

Care and treatment at VPCH is interdisciplinary and is based on respectful collaboration with each patient, their family, and other community-based relationship supports. VPCH is an important element in a continuum of care that is community-oriented and recovery-focused that provides treatment and residence in the least restrictive environment available, and where patient choice and preference are honored whenever possible. The Department of Mental Health has initiated a dynamic process of philosophical and pragmatic restructuring of roles, relationships and organizations within the State of Vermont mental health system and its healthcare

partner organizations. The VPCH represents one key link in the developing chain of a patient-centered, employee-respected, integrated-system-oriented care.

PsychConsult is the current application used by DMH. The current software is limited in its function and primarily used as the data repository for the inpatient population at VPCH. Admission staff at VPCH enters all VPCH's ADT (Admission, Discharge, & Transfer) and EIP (Emergency Involuntary Procedure) data in to PsychConsult, as well as Core Measures (defined & required data elements) for ORYX (measurements to support quality improvement efforts) reporting to NRI (National Resource Institute). DMH and the Vendor are expected to work together on the cut-over to the new solution.

AHS consists of the following Departments with their respective responsibilities:

- Department for Children and Families (DCF) – DCF provides a wide array of programs and services, including adoption and foster care, childcare, child development, child protection, child support, disability determination, and economic benefits such as: Reachup, Essential Person, General Assistance, 3SquaresVT, fuel assistance, energy assistance and health insurance.

- Vermont Department of Health (VDH) — VDH sets the State's public health priorities and works with DVHA to help realize public health goals within the population served by DVHA. VDH collaborates with DVHA on clinical initiatives to reduce medical costs in the State through the agency's Global Commitment to Health program waiver. These programs include Early Periodic Screening, Diagnosis, and Treatment (EPSDT) and dental care initiatives for children across the State.

- Department of Corrections (DOC) – The DOC is responsible for managing all adult prisons and community correctional sites. For incarcerated offenders, the Department is required and committed to provide basic and humane care. For offenders in the community, the Department is charged with ensuring compliance with conditions by providing or coordinating a variety of support services.

- Department of Disabilities, Aging and Independent Living (DAIL) — DAIL administers all community-based long-term care services for older Vermonters, individuals with developmental disabilities, traumatic brain injuries, physical disabilities, personal care/attendant services, high technology nursing, and other Medicaid services. DAIL works with DCF and DVHA to implement the Choices for Care Waiver program. The Developmental Disabilities Services (DDS) Program provides comprehensive wraparound services to approximately 2,500 Vermonters and their families who are touched by developmental disabilities.

- Department of Mental Health (DMH) — DMH is responsible for administering mental health services and programs for children and adults across the State. It ensures access to mental health services and works closely with DVHA and DAIL to coordinate care for individuals at risk.

- Department of Vermont Health Access (DVHA) – DVHA administers nearly all of the publicly funded health care programs for the State of Vermont. Funding of these programs is provided through Medicaid and is authorized under two (2) CMS approved 1115 Demonstration waivers. Several financing mechanisms are outside the 1115 Demonstration waivers and include information technology enhancements, Disproportionate Share Hospital (DSH) payments, and the State Children's Health Insurance Program (SCHIP) services. In addition, DVHA administers the State's health care reform efforts including health information technology (HIT) and health information exchange (HIE) activities in Vermont, the VCCI and the Blueprint for Health.

4.2 Project Goal

Explain why the project is being undertaken.

The Vermont Department of Mental Health (DMH) is procuring a vendor-hosted, Electronic Health Record (EHR) System. DMH is seeking responses for a fully integrated system from which care coordination efforts can be maximized, sustainability efforts can be realized, and quality improvement efforts can be driven.

The chosen EHR will be implemented to serve the **Vermont Psychiatric Care Hospital (VPCH)**. The implementation will be done in a manner that minimizes disruption to normal clinic operation.

The chosen EHR must fully integrate physical, behavioral, pharmacy, dietary, and lab functions in a single system. In addition, the chosen EHR must include features and functions to help facilitate the attainment of "Meaningful Use" Attestation (Stages 1-3), and must interoperate with **the Vermont Health Information Exchange (VHIE) through Vermont Information Technology Leaders (VITL).** These features and functions must be present in the initial EHR and should not require any additional hardware, software, or application development.

4.3 Project Scope

Describe the project scope and list the major deliverables. Add or delete lines as needed.

Through implementation of a comprehensive EHR system, DMH intends to achieve the following objectives:

- Integrate physical, behavioral, pharmacy, dietary and lab functionality into a single unified EHR solution.
- Streamline and standardize workflow to increase patient care and decrease errors.
- Implement quality improvement and operational efficiency programs made possible through data gathered through the system.
- Coordinate efficient and effective delivery of care to VPCH patients, their providers, and community partners by removing communication barriers, bridging gaps, and exchanging relevant and timely information.
- Maximize the integration of behavioral health care.
- Attest to all Meaningful Use requirements (Stages 1-3).
- Successfully configure and implement an EHR Solution that interoperates with the Vermont Health Information Exchange (VHIE) through VITL.
- Automate report generation.
- Conduct real-time patient analytics that include the ability to collect multiple sources of data (including demographic, pharmacy data, dietary and clinical/bio-medical data) to identify opportunities that DMH can take to improve quality outcomes.
- Partner with an EHR Solution provider who can provide 24 x 7 x 365 Solution support, service, and maintenance.
- Determine feasibility of migrating data from the old patient care system and perform such migration if deemed necessary.

The proposed solution must in alignment with the strategic vision of the State to:

- Be built using state-of-the-art technology which can be leveraged in the future;
- Be highly integrated, interoperable and flexible for use with internal and external systems, including state SOA infrastructure and the VHIE.

4.3.1 Major Deliverables

See Section 4.4.

4.4 Project Phases, Milestones and Schedule

Provide a list of the major project phases, milestones and high level schedule. You may elect to include it as an attachment to the report instead of within the body.

The Project Schedule table outlined below details the **Project Tasks** and **Associated Deliverables**. This was not provided as part of the original proposal. CPSI was asked to tie Deliverables to the Task Schedule as a component of this Independent Review. The table below is the result of that request.

Date	Task	Deliverables
7/14-16	Site Evaluation and Patient Documentation Administrative Workshop at The Vermont Psychiatric Care Hospital (Manweeks 12) • Hardware Evaluation (Peripherals) • Financial Software • Enterprise Wide Scheduling • Payroll / Human Resources / Time & Attendance • Materials Management • Ancillary Applications • Pharmacy • Point of Care Applications	Project Kick-off Presentation Project Management Plan Project Work Plan, Work Breakdown Structure (WBS), and Schedule Requirements Analysis (Functional and Non-Functional) System Implementation Plan System Maintenance and Support Plan (includes verification of plan Preliminary Training Plan Initial System Design and Functional Specification Plan
7/24	Deadline for Key Financial Data Elements	
7/28-30	Site Evaluation at The Vermont Psychiatric Care Hospital (Manweeks 1) Inpatient Physician Applications	Requirements Analysis (Functional and Non-Functional)
8/3	Request for Clinical Information Deadline-Pharmacy	
8/3-7	Electronic Forms Workshop at CPSI Corporate Headquarters	
8/7	Request for Clinical Information Deadline-Ancillary Applications	
8/18-20	Inpatient Physician Administrator Workshop at CPSI Fairhope, AL Campus	
8/21	IT Production / HIS Server Network Preparation Complete	

8/24-28	IT Implementation Phase I – On-site Production / HIS Server Installation (Manweeks1)	
8/28	Request for Clinical Information Deadline-Inpatient Physician Applications	
8/31-9/4	System Orientation Seminar at CPSI Corporate Headquarters	
9/4	Transmission of Conversion data to HIS Server	Data Integration, Synchronization, and Interface Plan
9/7	Deadline to receive Patient Accounting Test File-Inclusive of AR/BD/History/MPI Accounts	
9/7	Request for Clinical Information Deadline-Point of Care Applications	Final Training Plan
9/7	Interface Validation Testing Period-Dates to be finalized dependent on interfaces identified during Site Evaluation Meetings & ordered following	Demonstration of Interfaces Demonstration of Interfaces-Acceptance
10/16	IT General Installation (Peripherals) Preparation Complete	Preliminary Testing Plan
10/19-23	IT Implementation Phase II - General Installation (Manweeks 1)	Demonstration of Prototype Demonstration of Test and Development Environments Demonstration of Test and Development Environments-Acceptance Application and User Test Scenarios and Test Case Plan (where applicable) Documented Evidence of Successful Solution Testing Final System Design and Functional Specification Document Verification of System Maintenance and Support Plan Demonstration of Prototype – Acceptance Deployment Plan
10/20-22	Financial Pre-Implementation Meeting via WebEx Online Presentation	
10/26-30	Pre-Implementation Training at The Vermont Psychiatric Care Hospital (Manweeks 12) • Financial Software • Enterprise Wide Scheduling	Training Manuals, End-User Guides, and Materials Initial Service Desk (Helpdesk) Plan

	• Ancillary Applications • Point of Care Applications • Pharmacy	Verify and Confirm Plan for System Maintenance and Support Security Policy and Plan Demonstration of Staging and Training Environments Demonstration of Staging and Training Environments-Acceptance Disaster Recovery Plan and Verification Completed Detailed Functional and Technical Specifications Traceability Demonstration of Production and DR Environments Demonstration of Production and DR Environments-Acceptance
10/31-11/1	System Implementation – Live Pre-Registration /Hardware Checks /Order Entry (Manweeks 12) • Financial Software • Ancillary Applications • Point of Care Applications • Pharmacy	Verification of Service Desk (Helpdesk) Operational Completed Detailed Functional and Technical Specifications Traceability
11/1	Deadline to receive Patient Accounting Live File-Inclusive of AR/BD/History/MPI Accounts	
11/2-6	System Implementation - Live Week (Manweeks 27) • Financial Software • Enterprise Wide Scheduling • Time and Attendance • Materials Management • Ancillary Applications • Pharmacy • Point of Care Applications • Patient Portal • Inpatient Physician Applications o ChartLink	Go-Live!
11/9-13	System Implementation - Support Week (Manweeks 19) • Financial Software • Materials Management • Ancillary Applications • Pharmacy • Point of Care Applications	
11/16-20	System Implementation - Support Week (Manweeks 9) • Financial Software • Parallel Payroll • Ancillary Applications • Point of Care Applications	
11/23-25	System Implementation - Support Week (Manweeks 3) • Financial Software	

	• Live Payroll • Human Resources	
11/23-25	System Implementation – Month End Procedures (Manweeks 1)-**Materials Management**	
12/1-3	Pre-Implementation Visit at hospital name (Manweeks 1)-Inpatient Physician Applications	
12/7-11	System Implementation - Month End Procedures (Manweeks 2)-**Financial Software**	
12/14-18	CPSI On-Site – Software Follow Up 1 (Manweeks 2) • Financial Software o Departmental Procedure Review o APC Review o Insurance Procedures Review & Tickler o Collections Review (including Letters & Tickler) o System Management Review o Report Image System (Spooling Procedures) o Downtime Procedures	Performance SLA Reports (to be delivered monthly after "Go-Live".) System Incident Reports – M&O Adaptive Maintenance Reports System Enhancement Reports
1/5-7	Pre-Implementation Training at The Vermont Psychiatric Care Hospital (Manweeks 2) - Inpatient Physician Applications	
1/11-15	System Implementation – Live Week (Manweeks 2)-Inpatient Physician Applications	
1/18-22	System Implementation – Support Week (Manweeks 2)-Inpatient Physician Applications	
1/18-22	CPSI On-Site – Software Follow Up 2 (Manweeks 8) • Financial Software o Departmental Procedure Review o Accounts Management o Business Office Tables o Executive Information • Materials Management (Jan 20-21) • Ancillary Applications • Point of Care Applications • Pharmacy	Performance SLA Reports (to be delivered monthly after "Go-Live".) Adaptive Maintenance Reports System Incident Reports – M&O System Enhancement Reports
TBD	Executive Seminar at CPSI Fairhope, AL Campus	
TBD	Financial Management Seminar at CPSI Fairhope, AL Campus	
3/8-10	CPSI On-Site – Software Follow Up (Manweeks 1) - Inpatient Physician Applications	
3/14-18	CPSI On-Site – Software Follow Up 3 (Manweeks 1) • Financial Software o Departmental Procedural Review o Email/Word Processing/Bulletin Board o On-Call Schedule o Check Reconciliation o Insurance Journals o Printed Reports Review o Executive Statistics & Operating Indicators	Performance SLA Reports (to be delivered monthly after "Go-Live".) Final System Acceptance

5. Acquisition Cost Assessment

List all acquisition costs in the table below (i.e. the comprehensive list of the one-time costs to acquire the proposed system/service). Do not include any costs that reoccur during the system/service lifecycle. Add or delete lines as appropriate. Based on your assessment of Acquisition Costs, please answer the questions listed below in this section.

The following chart represents the Acquisition Costs over a 7 year period.

Acquisition Costs	Cost	Comments
Hardware Costs	$25K	Anticipated for laptops, printers, peripherals
Software Costs	$512K	
Implementation Services	$440K	
Maintenance and Operations	$1.1M	Includes Hosting, DR, Contingency, Software Maintenance and Support
Internal Costs	$660K	Staffing, Training/Travel, etc.
Other	$83K	EPMO Services
Total Acquisition Costs	**~$2.8M**	

5.1 Cost Validation

Describe how you validated the Acquisition Costs.

The Acquisition Costs were validated through the following methods:

1. The Acquisition Costs were first validated through discussions with Vendor regarding how the Vermont project scope compared with other projects Vendor has undertaken which are similar in scope to the Vermont project. Their response follows in grey background below:

   Below (in no particular order), are the one-time initial costs of five (5) projects. This price would be directly comparable to cell B17 of the excel tab titled "1. Total Cost Summary"

   a. *$1,522,784*
   b. *$1,127,450*
   c. *$1,088,390*
   d. *$999,096*
   e. *$1,249,938*

   These cost examples compare to DMH cost of $951K, which is comprised of software ($439K less $313K discount) plus services ($825K). DMH costs, as you can see, compare favorably.

   However, CPSI did not provide M&O cost comparisons. When asked, CPSI provided the following response:

   "CPSI traditionally does not share other project costs and feels that the initial costs listed gives the State enough information to address the competitive price concerns."

2. Additionally, the proposed pricing of the selected vendor was compared to other bids received, and those are: $2.0M by the selected vendor, and $1.7, $4.1, and $13.7M by the other 3 vendors.

3. Other costs were validated through readily available market data, which prove competitive pricing, including analysis of:

a. Professional Services Rates: Range from $150/hour for technical services to $175/hour for training services, which fall in line with industry averages.
b. Hosting Rates: $400 month for Test Server, $1200/month for production server, including full failover, backup, redundant data sites.

5.2 Cost Comparison

How do the above Acquisition Costs compare with others who have purchased similar solutions (i.e., is the State paying more, less or about the same)?

1. Vermont costs are comparable in terms of DDI and M&O, given the underlying professional service rates and effort necessary to implement.

2. Vermont costs are comparable in terms of overall solution costs when compared to other comparable projects.

3. Vermont costs are comparable in terms of overall solution costs when compared to other vendor bids.

5.3 Cost Assessment

Are the Acquisition Costs valid and appropriate in your professional opinion? List any concerns or issues with the costs.

It is the opinion of the report writer that the Acquisition Costs as outlined in the associated costing spreadsheet are appropriate, given the cost comparison conducted above.

Additional Comments on Acquisition Costs:

None.

6. Technology Architecture Review

After performing an independent technology architecture review of the proposed solution, please respond to the following.

See **ATTACHMENT 4** for a summary of the proposed solution's underlying technology/toolset.

1. **State's IT Strategic Plan:** Describe how the proposed solution aligns with the State's IT Strategic Plan (http://dii.vermont.gov/sites/dii/files/pdfs/DII-Strategic-Plan-FY2014-2019.pdf).
    a. The State's 2015-2019 IT Strategic Plan contains 4 major goals and uses 8 key principles in designing and prioritizing work.
        i. 5 Major Goals:
            1. To operate IT effectively and efficiently.
            2. To enable Successful Projects.
            3. To enhance information security.
            4. To partner with State Agencies and Departments for Solutions.
        ii. 8 Key Principles:
            1. Leverage successes of others, learning best practices from outside Vermont.
            2. Leverage shared services and cloud-based IT, taking advantage of IT economies of scale.
            3. Adapt the Vermont workforce to the evolving needs of state government.
            4. Apply enterprise architecture principles to drive digital transformation based on business needs.
            5. Couple IT with business process optimization, to improve overall productivity and customer service.
            6. Optimize IT investments via sound Project Management.
            7. Manage data commensurate with risk.
            8. Incorporate metrics to measure outcomes.

    b. The following describes how this project exploits these principles:
        i. Leverage successes of others, learning best practices from outside Vermont.
            1. *In the last 5 years CPSI has successfully implemented several projects similar to the Scope of Work DMH is requesting. Specifically, Version 19 of the CPSI system was successfully installed in over 525 facilities, or more than 80 percent of CPSI client hospitals, at the end of 2013.*
        ii. Leverage shared services and cloud-based IT, taking advantage of IT economies of scale.
            1. *This solution is vendor hosted.*
        iii. Adapt the Vermont workforce to the evolving needs of state government.
            1. *The proposed solution facilitates and supports the business needs articulated in the RFP.*
        iv. Apply enterprise architecture principles to drive digital transformation based on business needs.

1. *The platform upon which the proposed solution is based is modern IT framework and enterprise-class architecture.*

v. Couple IT with business process optimization, to improve overall productivity and customer service.
   1. *The Vermont project team is comprised of a blend of business and technical staff, with the very intent of not only implementing the solution, but improving business processes.*

vi. Optimize IT investments via sound Project Management.
   1. *Both DMH (50% FTE) and CPSI are proposing a Project Manager to manage the project. Both people have had success with similar projects.*

vii. Manage data commensurate with risk.
   1. *The software is required to be very granular in terms of information security and access to data. Much of the data in this application is extremely sensitive. The data security assessment completed by Jack Green points to those requirements being met through the software.*

viii. Incorporate metrics to measure outcomes.
   1. *There are specific quality-related measures VPCH strives to achieve, and the software is expected to facilitate meeting those measures.*

2. Service Level(s): What is the desired service level for the proposed solution and is the technical architecture appropriate to meet it?

Yes, the technical architecture in the proposed solution will meet the desired Service Level Requirements (SLRs). Vendor answered in the AFFIRMATIVE and with Core functionality (indicated by L=Leverage) for ALL SLRs outlined in the **RFP TEMPLATE H – NON-FUNCTIONAL REQUIREMENTS**, tab G3: SLRs and PERFORMANCE, and which is provided below.

RFP Req #	Requirement Description	Vendor Response: Y or N	Vendor Response: L, T or D
G3.1	The System response time during operations will be 5 seconds or less for 95 percent of the Real Time, search, and lookup queries (does not include ad hoc queries and analytics). Maximum response time will not exceed 15 seconds except for agreed to exclusions. Response time is defined as the time elapsed after depressing an ENTER key (or clicking on a button that submits the screen for processing) until a response is received back on the same screen	Y	L
G3.5	The System will achieve performance for interactive transactions other than the reporting-related transactions above, conforming to the minimum acceptable performance standard of a 1 second average response time, for 95% of interactions	Y	L
G3.6	The components of the Solution under vendor control as delivered into production shall be available at a level agreed in the contract (the contracted target level of availability) this will be chosen from one of the three availability levels 99.9%, 99.95% or 99.99%	Y	L

G3.7	The System will be architected with no single point of failure, supporting a high-availability enterprise	Y	L
G3.8	The System's hours of operations will be 24 hours per day, 7 days per week, and 365 days a year	Y	L
G3.10	The System will be designed to support the planned Vermont systems and any anticipated expansion in scope of connectivity	Y	L
G3.11	The System Administration staffing requirements and workload should be minimally impacted with expanded system usage	Y	L
G3.12	The System must be built so that there is a near linear relationship between each additional server added, and the additional load that can be accommodated (load vs. capacity added), up to specified limit	Y	L
G3.13	The System's Recovery Time Objective (RTO) will be within 1 hours. In case of a disaster that effects the VPCH's operations, the entire service will be restored within 1 hours	Y	L
G3.14	The System's Recovery Point Objective (RPO) will be no more than 0.5 hour of data loss. In case of a disaster that effects the Care Management operations, 0.5 hour of data inputs to the system (but no more) may be lost and need to be re-entered	Y	L
G3.15	The System will use fully redundant network and hardware. Hardware components (such as processor and memory) should have built-in redundancy to allow a second component to take over in the event of a failure in the primary component. Similarly, redundant paths should also exist for networks	Y	L
G3.16	The System will leverage virtualization to expedite disaster recovery. Virtualization enables system owners to quickly reconfigure system platforms without having to acquire additional hardware	Y	L
G3.17	The System will have the ability to support either a Production and hot (real time replication) disaster recovery design or a multi host site Production design that would allow one site to seamlessly be offline and the other site would maintain service without interruption	Y	L
G3.18	The System will include a disaster recovery plan and provide contingency plans for client lookup capabilities and online collaboration in the event of a disaster	Y	L
G3.19	The System will provide the ability to recover from data loss due to end user error and end application error	Y	L
G3.20	The System will provide the ability to perform archival/incremental backups and the ability to perform open/closed database backups	Y	L
G3.21	The System will provide tools for managing an environment that supports both high availability and disaster recovery	Y	L

G3.22	The System will include the capability to maintain all data according to state defined records retention guidelines (i.e. record schedule). General schedules can be found at: http://vermont-archives.org/records/schedules/general/. Specific retention disposition orders can be found at: http://vermont-archives.org/records/schedules/orders/. In general, document retentions range from 3 to 10 years. In addition to the above, note that health record data must be retained for a minimum of 7 years after Case closure.	Y	L
G3.23	The System will include the capability to maintain all images and electronic documents according to state defined document retention guidelines (i.e. record schedule). General schedules can be found at: http://vermont-archives.org/records/schedules/general/. Specific retention disposition orders can be found at: http://vermont-archives.org/records/schedules/orders/. In general, document retentions range from 3 to 10 years.	Y	L
G3.24	The System will provide on-line access of all active cases and up to 12 months for closed cases	Y	L
G3.25	All software developed and delivered by the Vendor must be free of viruses, malware, backdoors	Y	L
G3.26	The service provider's Help Desk Mean Time to Restore Severity Level 1 will take no longer than 4 clock hours.	Y	L
G3.27	The service provider's Help Desk Mean Time to Restore Severity Level 2 will take no longer than 8 clock hours.	Y	L
G3.28	The service provider's Help Desk Mean Time to Restore Severity Level 3 will take no longer than 24 hours (calendar day).	Y	L
G3.29	All priority 3 or higher defects (testing defects) resulting from software development activities shall be resolved by the Vendor prior to the software being delivered for User Acceptance Testing and prior to deployment to production	Y	L
G3.30	The Vendor must respond to priority 1 test defects within 1 hour	Y	L
G3.31	The Vendor must resolve priority 2 test defects within 4 clock hours	Y	L
G3.32	The Vendor must respond to priority 3 test defects within 8 hours	Y	L
G3.33	The Vendor must respond to priority 4 test defects within 5 days	Y	L
G3.34	The Vendor must report on all priority 5 test defects with each reporting phase	Y	L

Additionally, the chart below shows Service Levels that have a requested "Service Credit" desired by Vermont. The right-most column shows Vendor response to the question of Service Credit Assessment, should the Service Level not be met. *The vendor was non-responsive to this section, and there is a related item noted in the Risk Register to address this through contract negotiations.*

SERVICE LEVEL REQUIRMENT NAME	SERVICE LEVEL REQUIREMENT DESCRIPTION	MEASUREMENT OF NONCOMPLIANCE	FREQUENCY OF MEASUREMENT	VENDOR ASSESSMENT OF LIQUIDATED DAMAGES (LD)
Virus Contamination	All software developed and delivered by the Vendor must be free of viruses.	Each virus that is included in software developed and delivered by the Vendor.	Monthly after deployment	[**$ 1500 or 15%**] per virus
On-line Availability	The components of the Solution under Vendor control as delivered into production shall be available at a level agreed to in the Contract (the contracted target level of availability). This will be chosen from one (1) of the three (3) availability levels shown in Table 4 Levels of Availability of the future EHR**.	Each tenth of percentage point less than the contracted level of availability.	Monthly after deployment	[**$1500 or 15%**] for each percentage point below the contracted level of availability for the month
Response Time for Real Time Transactions	The System response time during operations will be 5 seconds or less for 95 percent of the search and lookup queries (does not include ad hoc queries and analytics). Maximum response time will not exceed 5 seconds except for agreed to exclusions. Response time is defined as the time elapsed after depressing an ENTER key (or clicking on a button that submits the screen for processing) until a response is received back on the same screen.	Each .5 second that the monthly average response time exceeds the maximum response time.	Monthly after deployment	[**$1500 or 15%**] per 0.5 seconds that the monthly average response time exceeds the maximum response time. For purposes of this SLR and the following response time SLRs, seconds will be rounded up to the nearest 0.5 of a second.

SERVICE LEVEL REQUIRMENT NAME	SERVICE LEVEL REQUIREMENT DESCRIPTION	MEASUREMENT OF NONCOMPLIANCE	FREQUENCY OF MEASUREMENT	VENDOR ASSESSMENT OF LIQUIDATED DAMAGES (LD)
Application Response Times	The System will achieve performance for interactive transactions other than the reporting-related transactions above, conforming to the minimum acceptable performance standard of an average of a 1 second response time, for 95% of interactions.	Each .5 second that the monthly average response time exceeds the maximum response time.	Monthly after deployment	[**$1500 or 15%**] per 0.5 seconds that the monthly average response time exceeds the maximum response time.
Help Desk Mean Time to Restore Severity Level 1: Emergency	The service provider must resolve Severity Level 1 requests within 4 hour.	Each hour beyond the requirement for resolving Severity Level 1 requests.	Monthly after deployment	[**$1500 or 15%**] per hour beyond the 1 hour time requirement.
Help Desk Mean Time to Restore Severity Level 2: Urgent	The service provider must resolve Severity Level 2 requests within 8 hours.	Each hour beyond the requirement for resolving Severity Level 2 requests.	Monthly after deployment	[**$1500 or 15%**] per hour beyond the required 4 hour time requirements.
Help Desk Mean Time to Restore Severity Level 3: Important	The service provider must resolve Severity Level 3 requests within 24 hours (calendar).	Each calendar day beyond the requirement for resolving Severity Level 3 requests.	Monthly after deployment	[**$500 or maximum of 15%**] per calendar day beyond the required 2 calendar days.
Quality of Code Delivered to UAT	All priority 3 or higher defects (testing defects) resulting from software development activities shall be resolved by the Vendor prior to the software being delivered for User Acceptance Testing (UAT) and prior to deployment to production.	Each priority 3 or higher defect that is uncovered in UAT.	Monthly after start of the UAT phase	[**$1500 or 15%**] per priority 3 or higher defect discovered in User Acceptance Testing.
UAT Defect Resolution Times: Response to *Priority 1 test defect	The Vendor must respond to priority 1 test defects within 1 hour.	Each instance that a response is not provided within the required timeframe for each test defect.	Monthly after start of the UAT phase	[**$1500 or 15%**] per instance of failure to meet response timeframe for each test defect.

SERVICE LEVEL REQUIRMENT NAME	SERVICE LEVEL REQUIREMENT DESCRIPTION	MEASUREMENT OF NONCOMPLIANCE	FREQUENCY OF MEASUREMENT	VENDOR ASSESSMENT OF LIQUIDATED DAMAGES (LD)
UAT Defect Resolution Times: Response to *Priority 2 test defect	The Vendor must respond to priority 2 test defects within 4 hours.	Each instance that a response is not provided within the required timeframe for each test defect.	Monthly after start of the UAT phase	[**$1500 or 15%**] per instance of failure to meet response timeframe for each test defect.
UAT Defect Resolution Times: Response to *Priority 3 test defect	The Vendor must respond to priority 3 test defects within 8 hours.	Each instance that a response is not provided within the required timeframe for each test defect.	Monthly after start of the UAT phase	[**$1500 or 15%**]] per instance of failure to meet response timeframe for each test defect.
UAT Defect Resolution Times: Response to *Priority 4 test defect	The Vendor must respond to priority 4 test defects within 4 days.	Each instance that a response is not provided within the required timeframe for each test defect.	Monthly after start of the UAT phase	[**$1500 or 15%**]] per instance of failure to meet response timeframe for each test defect.
UAT Defect Resolution Times: Response to *Priority 5 test defect	The Vendor must respond to priority 5 test defects with each reporting phase (timeframe to be determined with State).	Each instance that a response is not provided within the required timeframe for each test report.	Monthly after start of the UAT phase	[**$1500 or 15%**] per instance of failure to meet response timeframe for each test defect.
Disaster Recovery RTO	The System's Recovery Time Objective (RTO) will be within 1 hour. In case of a disaster that affects the Care Management operations, the entire service will be restored within 4 hours.	For each 10 minutes longer than the 1 hour it takes to restore the entire service.	Annual review of any disaster incidents.	[**$1500 or 15%**] per each 10 minutes or part of 10 minutes over the RTO.
Disaster Recovery RPO	The System's Recovery Point Objective (RPO) will be no more than 0.5 hour of data loss. In case of a disaster that affects the Care Management operations, 0.5 hour of data inputs to the System (but no more) may be lost and needs to be re-entered.	For each 10 minutes more than 0.5 hour of data loss.	Annual review of any disaster incidents	[**$1500 or 15%**] per each 10 minutes or part of 10 minutes over the RPO.

SERVICE LEVEL REQUIRMENT NAME	SERVICE LEVEL REQUIREMENT DESCRIPTION	MEASUREMENT OF NONCOMPLIANCE	FREQUENCY OF MEASUREMENT	VENDOR ASSESSMENT OF LIQUIDATED DAMAGES (LD)
Record Retention	The System will include the capability to maintain all data according to State-defined records retention guidelines (i.e. record schedule). General schedules can be found at: http://vermont-archives.org/records/schedules/general/. Specific retention disposition orders can be found at: http://vermont-archives.org/records/schedules/orders/. In general, record retentions range from 3 to 10 years.	Each record instance the System fails to achieve compliance with the agreed schedule for the class or type of records.	Annual review of record retention.	[**$1500 or 15%**] per record instance out of compliance with the defined retention schedule.
Document Retention	The System will include the capability to maintain all images and electronic documents according to State-defined document retention guidelines (i.e. record schedule). General schedules can be found at: http://vermont-archives.org/records/schedules/general/. Specific retention disposition orders can be found at: http://vermont-archives.org/records/schedules/orders/. In general, document retentions range from 3 to 10 years.	Each document instance the System fails to achieve compliance with the agreed schedule for the class or type of documents.	Annual review of document retention.	[**$1500 or 15%**] per document instance out of compliance with the defined retention schedule.

Additionally, the table below shows possible levels of availability that Vermont expects the Vendor to propose at differing price levels, and which will be decided at Contracting.

AVAILABILITY %	DOWNTIME PER YEAR	DOWNTIME PER MONTH	DOWNTIME PER WEEK
99.9% (“three nines”)	8.76 hrs	43.2 min	10.1 min
99.95%	4.38 hrs	21.56 min	5.04 min
99.99% (“four nines)	52.56 min	4.32 min	1.01 min

The pricing submitted by Vendor assumes support at the 99.99% (four nines) level.

3. **Sustainability:** Comment on the sustainability of the solution's technical architecture (i.e., is it sustainable?).
    a. It appears that the technical architecture is sustainable, given the following considerations:
        i. It utilizes industry standard technology (Application and Database Server runs under Red Hat Enterprise Linux 5.9, Database is PostgreSQL 9.4, RTF Server is Windows 2008 Standard or above, Apache version 2.2.3 is the web server, and data center runs these under VMWare 5.x. Client runs on Windows 7 or above, and Internet Explorer 10 or above for web applications (ChartLink, Electronic Forms (E-Forms), Electronic Signature (E-Sign) and Electronic File Management).
        ii. It utilizes technology that is supported by State of Vermont EA staff, although in this case, the solution is hosted by the vendor.
        iii. It utilizes technology that many users are already trained in/familiar with.

4. **License Model:** What is the license model (e.g., perpetual license, etc.)?
    a. All software modules follow an Enterprise license except the following modules which are licensed by user count:
        i. AHA UBO4 Codes
        ii. Micromedex - Pt Education
        iii. Pharmacy Clinical Monitoring
        iv. Physician Portal
        v. CPOE
    b. The License Agreement and General Support Agreement were requested of the vendor for review, although Procurement Advisory Services are not part of this Scope of Work of the IR. As of this point in time, this has not been received.

The chart below shows the software components comprising the solution and License Type:

Software Item	Manu-facturer	License Type (e.g., enterprise, per user, per server)	Brand Name	Module Name	Software Type
Registration/ADT	CPSI	Enterprise	CPSI	Registration/ADT	Application
AHA UBO4 Codes	American Hospital Assoc	Per User	American Hospital Assoc	AHA UBO4 Codes	Coding
E-File Mgmt	CPSI	Enterprise	CPSI	E-File Mgmt	Application
Clearing House Software	CPSI	Enterprise	CPSI	Electronic Billing	Application
Patient Acctg	CPSI	Enterprise	CPSI	Patient Acctg	Application
Digital Signature	CPSI	Enterprise	CPSI	Digital Signature	Application
Mcare E-Remittance	CPSI	Enterprise	CPSI	Mcare E-Remittance	Application
270/271 Eligibility	CPSI	Enterprise	CPSI	270/271 Eligibility	Application
General Ledger	CPSI	Enterprise	CPSI	General Ledger	Application
Budgeting	CPSI	Enterprise	CPSI	Budgeting	Application
Fixed Assets	CPSI	Enterprise	CPSI	Fixed Assets	Application
Accounts Payable	CPSI	Enterprise	CPSI	Accounts Payable	Application
Payroll w/Direct Deposit	CPSI	Enterprise	CPSI	Payroll w/Direct Deposit	Application

Time and Attendance	CPSI	Enterprise	CPSI	Time and Attendance	Application
Human Resources	CPSI	Enterprise	CPSI	Human Resources	Application
Materials Mgmt	CPSI	Enterprise	CPSI	Materials Mgmt	Application
Health Info Mgmt	CPSI	Enterprise	CPSI	Health Info Mgmt	Application
Master Pt Index	CPSI	Enterprise	CPSI	Master Pt Index	Application
CodeFinder Interface	CPSI	Enterprise	CPSI	CodeFinder Interface	Interface
Specialty Lab Info System	CPSI	Enterprise	CPSI	Specialty Lab Info System	Application
Radiology Info System	CPSI	Enterprise	CPSI	Radiology Info System	Application
Micromedex - Pt Education	TruVen	Per User	TruVen	Micromedex - Pt Education	Application
Pharmacy	CPSI	Enterprise	CPSI	Pharmacy	Application
Formulary Wholesale Update	CPSI	Enterprise	CPSI	Formulary Wholesale Update	Application
Pharmacy Clinical Monitoring	CPSI	Per User	CPSI	Pharmacy Clinical Monitoring	Application
Quality Improvement	CPSI	Enterprise	CPSI	Quality Improvement	Application
Core Measure	CPSI	Enterprise	CPSI	Core Measure	Application
Order Entry/Results Reporting	CPSI	Enterprise	CPSI	Order Entry/Results Reporting	Application
Point of Care Documentation	CPSI	Enterprise	CPSI	Point of Care Documentation	Application
Medication Management	CPSI	Enterprise	CPSI	Medication Management	Application
Executive Information	CPSI	Enterprise	CPSI	Executive Information	Application
Electronic Forms	CPSI	Enterprise	CPSI	Electronic Forms	Application
Enterprise Wide Scheduling	CPSI	Enterprise	CPSI	Enterprise Wide Scheduling	Application
Patient Portal	CPSI	Enterprise	CPSI	Patient Portal	Application
Ad-Hoc Reporting	CPSI	Enterprise	CPSI	Ad-Hoc Reporting	Application
Auto-Fax Distribution	CPSI	Enterprise	CPSI	Auto-Fax Distribution	Application
Archival Storage/Report Image	CPSI	Enterprise	CPSI	Archival Storage/Report Image	Application
Interface Managament System	CPSI	Enterprise	CPSI	Interface Managament System	Interface
Bi-di Reference Lab Interface	CPSI	Enterprise	CPSI	Bi-di Reference Lab Interface	Interface
Bi-di Blood Glucose Device Int	CPSI	Enterprise	CPSI	Bi-di Blood Glucose Device Int	Interface
Bi-di Pyxis Interface	CPSI	Enterprise	CPSI	Bi-di Pyxis Interface	Interface
Bi-di PACS Interface	CPSI	Enterprise	CPSI	Bi-di PACS Interface	Interface
PACS URL Interface	CPSI	Enterprise	CPSI	PACS URL Interface	Interface
Bi-di Transcription Interface	CPSI	Enterprise	CPSI	Bi-di Transcription Interface	Interface
VITL HIE Interface	CPSI	Enterprise	CPSI	VITL HIE Interface	Interface
24 Hour Emergency Support	CPSI	Enterprise	CPSI	24 Hour Emergency Support	Service

60 User Licenses (concurrent)	CPSI	Enterprise	CPSI	60 User Licenses (concurrent)	License
Stedman's Medical Dictionary	Stedman's	Enterprise	Stedman's	Stedman's Medical Dictionary	Application
Auto-Fax Configuration	CPSI	Enterprise	CPSI	Auto-Fax Configuration	Application
Physician Portal	CPSI	Per User	CPSI	Chartlink	Application
CPOE	CPSI	Per User	CPSI	CPOE	Application
Physician Documentation	CPSI	Enterprise	CPSI	Physician Documentation	Application

5. **Security:** Does the proposed solution have the appropriate level of security for the proposed activity it will perform (including any applicable State or Federal standards)? Please describe.

   In short, yes it does, for the most part (see the items on yellow below that are lacking). Jack Green, Chief Security Officer of AHS, using Shared Assessments model (www.sharedassessments.org) evaluated the following areas, and accepted CPSI security position in total, noting the following minor concerns highlighted in yellow:

   - Risk Management
   - Security Policy
   - Organizational Security
   - Asset Management
   - Human Resources Security
   - Physical and Environmental
   - Communications and Operations Management - No Vulnerability Assessments or Penetration Tests conducted
   - Access Control
   - Information Systems Application Development and Maintenance - unclear if OWASP a consideration
   - Incident Event and Communications Management
   - Business Continuity and Disaster Recovery - Weak on DR testing and planning
   - Compliance
   - Mobile - Mobile Devices in scope and unmanaged (meaning planned to be in use, but no Mobile Device Management)
   - Privacy
   - Software Security - Weak on SDLC
   - Cloud

   Mr. Green also asked for and reviewed favorably the most recent SOC1 Type II Audit results (from Grant Thornton, 7/1/13-6/30/14, which assessed CPSI Data Center Services and Program Change Management System), as well as HIPAA Security Policy (principles for protecting the confidentiality, integrity and availability of electronic protected health information (EPHI)) and HIPAA Privacy Policy (principles for the protection of individually-identifiable health information and requires safeguards to protect its confidentiality. Privacy requirements are applicable to all protected health information (PHI) whether oral, written or electronic.).

   This author reviewed and concurs with Mr. Green's findings. None of these findings cause significant security-related concerns.

Further, the vendor responded in the affirmative to all items in the "Regulatory and Security" section of the Non-Functional Requirements and those have been validated by the evaluation team. Details are outlined in the chart below.

Regulatory and Security Non-Functional Requirements and Vendor Response Chart:

RFP Req #	Requirement Description	Vendor Response: Y or N	Vendor Response: L, T or D
T3.1	The System will, at a minimum, provide a mechanism to comply with security requirements and safeguard requirements of the following Federal agencies / entities: - Health & Human Services (HHS) Center for Medicare & Medicaid Services (CMS) - Administration for Children & Families (ACF) - NIST 800-53r4, MARS-E and DOD 8500.2 - Federal Information Security Management Act (FISMA) of 2002 - Health Insurance Portability and Accountability Act (HIPAA) of 1996 - Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 - Privacy Act of 1974 - e-Government Act of 2002 - Patient Protection and Affordable Care Act of 2010, Section 1561 Recommendations - Vermont Statute 9 V.S.A. § 2440. Social security number protection (http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=09&Chapter=062&Section=02440) - Vermont Statute 9 V.S.A. § 2435. Notice of security breaches (http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=09&Chapter=062&Section=02435)	Y	L
T3.2	The Vendor will provide all their corresponding NIST 800-53 procedures and policies to the State security officer.	Y	L
T3.3	The System will be in compliance with all applicable State and Federal laws and regulations, including 42 CFR Part 2 and Health Insurance Privacy and Accountability Act (HIPAA) including privacy and client consent for release requirements	Y	L
T3.4	The System will follow HIPAA 278 standard for the electronic exchange of prior authorization information between Providers and AHS	Y	L
T3.6	The System will conform with the sub-parts of Section 508 of the Americans with Disabilities Act (ADA), and any other appropriate State or Federal disability legislation	Y	L
T3.8	The System will comply with all applicable State security policies and adhere to all legal, statutory, and regulatory requirements, as determined by Vermont leadership	Y	L
T3.9	The System will implement security controls in accordance with all Federal and State security policy and regulations	Y	L
T3.10	The System will comply with accessibility requirements described in 45 CFR 85 and with State of Vermont accessibility requirements located at http://dii.vermont.gov/Policy_Central and included in the set of policies and standards recently created for the Vermont Health Connect systems - in the procurement library - an equivilant set of policies and standards for the new Medicaid Operations systems including Care Management and MMIS will be created in the near future.	Y	L
T3.12	The System will comply with Vermont branding standards as defined by the state	Y	L

T3.14	The Vendor will adhere to the principle of “Fail Safe” to ensure that a system in a failed state does not reveal any sensitive information or leave any access controls open for attacks	Y	L
T3.15	The System will allow for controlled access to participant records. Users will be able to view participant data within the System at the State-defined levels of access based on user security privileges.	Y	L
T3.16	The System will maintain a level of security that is commensurate with the risk and magnitude of the harm that could result from the loss, misuse, disclosure, or modification of information	Y	L
T3.17	Information security will be built into the System from its inception rather than “bolted on” after the System has been implemented	Y	L
T3.18	The System will support security at the object level (e.g. Table, View, Index)	Y	L
T3.19	The System will support security at the row and column level	Y	L
T3.20	The System will support auditing at the object level (i.e. Table, Column)	Y	L
T3.21	The System will provide the ability for concurrent users to simultaneously view the same record, documentation and/or template	Y	L
T3.22	The System will provide protection to maintain the integrity of data during concurrent access	Y	L
T3.23	The software used to install and update the System, independent of the mode or method of conveyance, will be certified free of malevolent software (“malware”). Vendor may self-certify compliance with this standard through procedures that make use of commercial malware scanning software.	Y	L
T3.24	The System will be configurable to prevent corruption or loss of data already accepted into the System in the event of a System failure (e.g. integrating with a UPS, etc.)	Y	L
T3.25	The System will support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using Advanced Encryption Standard (AES) and an open protocol such as Transport Layer Security (TLS), Secure Sockets Layer (SSL), Internet Protocol Security (IPsec), XML encryptions, or Secure/Multipurpose Internet Mail Extensions(S/MIME) or their successors. This System will be subject to external Audit checks.	Y	L
T3.26	The System, when storing PHI on any device intended to be portable/removable (e.g. smartphones, portable computers, portable storage devices), will support use of a standards based encrypted format using AES or their successors	Y	L
T3.27	The System, prior to access to any PHI, will display a SoV-approved configurable warning or login banner (e.g. "The System should only be accessed by authorized users"). In the event that a System does not support pre-login capabilities, the System will display the banner immediately following authorization.	Y	L
T3.28	The Vendor will review and analyze the key risks to the important assets and functions provided by the System to certify that the CWE/SANS Top 25 Most Dangerous Software Errors (http://cwe.mitre.org/top25) have been mitigated and document the mitigation.	Y	L
T3.29	The Vendor will review the System and certify that the code and any new development meets or exceeds the OWASP Application Development Security Standards outlined on the www.OWASP.org site (currently https://www.owasp.org/images/4/4e/OWASP_ASVS_2009_Web_App_Std_Release.pdf) and document in writing that they have been met.	Y	L

Identity and Access Management			
T3.30	The System will support a form of user authentication	Y	L
T3.31	The System upon detection of inactivity of an interactive session will prevent further viewing and access to the System by that session by terminating the session, or by initiating a session lock that remains in effect until the user reestablishes access using appropriate identification and authentication procedures. The inactivity timeout will be configurable.	Y	L
T3.32	The System will enforce a limit of (configurable) consecutive invalid access attempts by a user. The System will protect against further, possibly malicious, user authentication attempts using an appropriate mechanism (e.g. locks the account/node until released by an administrator, locks the account/node for a configurable time period, or delays the next login prompt according to a configurable delay algorithm).	Y	L
T3.33	The System will provide the capability to prevent database administrators from seeing the data in databases they maintain	Y	L
T3.34	The System will support grouping users by Roles, functional departments or other organization to simplify security maintenance	Y	L
T3.35	The System will provide the ability to maintain a directory of all personnel who currently use or access the system/IVR/SQL database	Y	L
T3.36	The System will provide the ability to create and maintain a directory of external providers to facilitate communication and information exchange	Y	L
T3.38	The System will restrict access to summarized information according to organizational policy, scope of practice, and jurisdictional law	Y	L
T3.39	The System must be able to associate permissions with a user using one or more of the following access controls: 1) Role-Based Access Controls (RBAC; users are grouped by role and access rights assigned to these groups) 2) context-based (role-based with additional access rights assigned or restricted based on the context of the transaction such as time-of-day, workstation-location, emergency-mode, etc.)	Y	L
T3.40	The System will provide the ability to prevent specified user(s) or groups from accessing confidential information such as a SSN, medication information and other confidential data	Y	L
T3.41	The System will provide the ability to limit access to certain confidential information such as a patients SSN and other confidential data to providers directly involved in service of the patient, or providers involved in review of the service	Y	L
T3.42	When access to a user's account is restricted, the System will provide a means for appropriately authorized users to "break the glass" and obtain access for emergency situations, as defined by Vermont policy	Y	L
T3.43	When access to patient's confidential data is restricted but still the "break the glass" has occurred, the System will provide the ability to notify specified users and provide an audit trail for this access	Y	L
T3.44	The System will enforce the most restrictive set of rights/privileges or accesses needed by users/groups or processes acting on behalf of users, for the performance of specified tasks	Y	L
T3.45	The System will provide the ability for authorized administrators to assign restrictions or privileges to users or groups	Y	L
T3.46	The System will support removal of a user's privileges without deleting the user from the System to ensure history of user's identity and actions	Y	L
T3.47	The System will be able to support RBAC in compliance with the HL7 Permissions Catalog	Y	L

T3.48	The System will be capable of operating within an RBAC infrastructure conforming to ANSI INCITS 359-2004, American National Standard for Information Technology – Role Based Access Control	Y	L
T3.49	The System will provide more-advanced session management abilities such as prevention of duplicate logins, remote logout and location-specific session timeouts	Y	L
T3.50	The System will provide the ability to perform System administration functions such as reference table maintenance and adding / removing users from the system	Y	L
T3.51	The System will allow users access based on their roles irrespective of their geographical location	Y	L
T3.52	The System will provide the capability to integrate with existing authentication and authorization mechanisms	Y	L
T3.53	The System will provide the capability to create temporary and emergency accounts and terminate those accounts automatically after a user defined period of time	Y	L
T3.54	The System will provide the capability to override a role and restrict access to information by users or groups of users	Y	L
T3.55	The System will provide the capability to monitor events on the information system, detect attacks, and provide identification of unauthorized use of the system	Y	L
T3.56	The System will provide the capability to identify and report on inappropriate access to information in the system, based on user defined criteria	Y	L
T3.57	The System will enforce minimum password requirements compliant with State-provided security policies	Y	L
T3.58	The System will allow User to change his or her password at any time	Y	L
T3.59	The System will have mandatory security questions for the User to answer for ~~u~~sername and password validation in case of any user requested changes	Y	L
T3.60	The System will allow for online automated password reset	Y	L
T3.61	The Vendor will monitor, alert, and protect against web application attacks of internet-facing applications. Solution/hosting provider will install, configure, and manage a web application firewall on Vermont's internet-facing Solution/hosting provider ePHI Environments. Alerts and/or reports will be provided to Security officers at sepcified intervals	Y	L
T3.62	The Vendor will conduct and provide a risk assessment based upon NIST 800 - 30 guidance and methodology	Y	L
T3.63	The Vendor will conduct quarterly scans of Vermont's externally accessible web services in the Production Environment, and provide reports on the scans to VT Information Security officer / representative, including the severity of the vulnerabilities and remediation recommendations.	Y	L
T3.64	The Vendor will provide third-party conducted penetration tests on production releases of the externally accessible web application as requested by the change control board entity. The reports shall be provided to the security officer upon request.	Y	L
T3.65	The Vendor will not transmit or store any Personally Identifiable Information (PII) using publically available storage over the Internet or any wireless communication device, unless: 1) the PII is "de-identified" in accordance with 45 C.F.R § 164.514(b) (2); or 2) encrypted in accordance with applicable law, including the American Recovery and Reinvestment Act of 2009 and as required by policies and procedures established by VT Information Security Officer.	Y	L
T3.66	The Vendor will perform Security Impact Assessments prior to releasing solutions into production	Y	L

T3.67	The System will include the same security provisions for the development, system test, acceptance test and training environment as those used in the production environment	Y	L
T3.68	The Vendor will complete and supply to VT Information Security Officer all CMS Security required documentation to include but not limited to System Security Plan (SSP), Risk Assessment (RA), Contingency Plan (CP)	Y	L
T3.69	The Vendor must pass the Privacy/security and FTI data handling training provided by the State. FTI training is required regardless of the presence of absence of FTI data	Y	L
T3.70	The Vendor will ensure that all servers have hardened operating systems by eliminating any unnecessary system services, accounts, network services, and limited user access rights throughout all of the environments	Y	L
T3.71	The Vendor will review and monitor logs for forensic purposes and security Incidents, and any anomalous activities are incorporated into the Incident management process. In the event of a security incident, the Vendor will be responsible for collecting and retaining evidence related to the incident. A detailed report must be provided to the State Security Officer	Y	L
T3.72	The Vendor will ensure that high severity patches will be applied within seven (7) calendar days; Medium severity patches will be applied within fifteen (15) calendar days; and all others within thirty (30) calendar days. The Vendor will further ensure that required IT security notices and advisories are distributed to appropriate personnel	Y	L

Additionally, vendor responses follow in response to the specific security measures requested in the RFP:

Regulatory Policies, Audit Compliance and Security: Describe the Vendor's approach to harmonizing the Regulatory requirements, audit compliance and Security needs of the System:

The CPSI System tracks all access to the system including logins and application access. The system administrator can print out an audit trail report of application access with user, date, time, application accessed and patient account accessed. Tracking and reporting all disclosures involves the Chart Location module, Release of Information, and the AR Audit trail which reports who accessed a certain application and patient account as well as what was viewed on that account. All options have standard reports for further tracking. The CPSI System has been programmed to maintain audit trails for who accessed applications and information, patient accounts, and the fields accessed or changed on the system. CPSI has also incorporated secure electronic signature into Medical Records and CPOE. System security includes auto log off of users after a defined period of inactivity, password settings that include the ability to expire employee passwords at user-defined intervals. The CPSI System provides for the use of multiple layers of user definable passwords for each application module. To ensure access to only the information for which a specific employee is authorized, the system can be set to require employees to sign on with an individual identification and password or biometric authentication. With the use of the CPSI Time and Attendance application, the system is able to verify that the employee is on duty prior to granting access to specific areas of the system.

Security Architecture and Design: 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:

TruBridge provides space in our Services Organization Control (SOC) 1 Type II data center for your hardware, giving you high security and reliable power, cooling and HIPAA-compliant network connectivity.

Identity and Access Management (IAM):

The CPSI System provides for the use of multiple layers of user definable passwords for each application module. To ensure access to only the information for which a specific employee is authorized, the system can be set to require employees to sign on with an individual identification and password or biometric authentication. With the use of the CPSI Time and Attendance application, the system is able to verify that the employee is on duty prior to granting access to the other security levels.

Application Encryption:

CPSI's Clientware utilizes Windows Cypher to encrypt data at rest. In addition, CPSI Clientware has an option to use an SSL encrypted connection to the HIS server. Backups use a proprietary encryption process to encrypt all Linux HIS system backups.

Privacy and Consent

See IAM, plus: the system provides for the following access controls:

1. Users identification
2. Password - by workstation
   - by screen (departmental controlled)
   - by application
   - by data field access (switch controlled for critical fields)
3. Logging of security violations during sign on with user controlled capability to "lock out" after a certain number of failed attempts.

Security Audit (Audit Trail)

The CPSI System tracks all access to the system including logins and application access. The system administrator can print out an audit trail report of application access with user, date, time, application accessed and patient account accessed. Tracking and reporting all disclosures involves the Chart Location module, Release of Information, and the AR Audit trail which reports who accessed a certain application and patient account as well as what was viewed on that account. All options have standard reports for further tracking. The CPSI System has been programmed to maintain audit trails for who accessed applications and information, patient accounts, and the fields accessed or changed on the system. CPSI has also incorporated secure electronic signature into Medical Records and CPOE. System security includes auto log off of users after a defined period of inactivity, password settings that include the ability to expire employee passwords at user-defined intervals. The CPSI System provides for the use of multiple layers of user definable passwords for each application module. To ensure access to only the information for which a specific employee is authorized, the system can be set to require employees to sign on with an individual identification and password or biometric authentication. With the use of the CPSI Time and Attendance application, the system is able to verify that the employee is on duty prior to granting access to specific areas of the system.

Database Security

CPSI's Clientware utilizes Windows Cypher to encrypt data at rest. In addition, CPSI Clientware has an option to use an SSL encrypted connection to the HIS server. Backups use a proprietary encryption process to encrypt all Linux HIS system backups.

128-bit encryption is utilized in our web-enabled ChartLink application, ClientWare communication via VPN connection over the Internet, and wireless networking for Point of Care mobile communications. Additionally, 512-bit keys are used with both electronic signatures to ensure the validity of signed documents and secure signature for laser printed checks.

Software and Hardware Security

See Privacy and Consent, plus:

Biometrics: CPSI has integrated fingerprint biometrics into the employee sign-on process at individual workstations. When implemented, a keyboard with integrated fingerprint scanner is used in conjunction with the employee's login. After entering his or her login, the employee simply places his/her finger on the reader for quick scanning. The one-to-one fingerprint matching technology utilized by the CPSI system provides a lightning fast, sub-second review and authentication of the employee's identity. The process is fast and simple for employees while providing the facility with bullet-proof security. Once the employee's identity is verified, he/she may then access those areas of the system for which he/she is authorized as defined in his/her profile maintained in the System Security module.

Our Time and Attendance application also offers the option of using biometric authentication for system security. When implemented, a fingerprint scanner is used in conjunction with the employee's badge. After the employee's badge is scanned at a time entry/employee communications station, the employee simply places his/her finger on the reader for quick scanning.

Internet Security: CPSI utilizes SSL, HTTPS, Microsoft Native VPN, and Cisco software to provide secure communications over the Internet. CPSI supplied routers utilize 3DES. Authentication of user names and passwords is completed over secure encrypted tunnels.

Encryption: 128-bit encryption is utilized in our web-enabled ChartLink application, ClientWare communication via VPN connection over the Internet, and wireless networking for Point of Care mobile communications. Additionally, 512-bit keys are used with both electronic signatures to ensure the validity of signed documents and secure signature for laser printed checks.

Data Backup

Cloud HIS Backup Service: Cloud based service that facilitates the backup for cloud HIS clients including the ability to restore systems to a hosted HIS environment to strengthen DR strategies. This service is provided for all cloud hosted HIS systems.

Purpose: A sound DR strategy necessitates an efficient approach to data backup and recovery. This document is intended to provide reasonable assurance that our customer's data is being backed up and that recovery capability is tested.

Scope: The intended recipients of this policy are internal TruBridge organization employees as well as cloud hosted HIS customers.

Policy: TruBridge recognizes that the backup and maintenance of data for servers are critical to the viability and operations of the HIS environments. It is essential that certain basic standard practices be followed to ensure that hospital data files are backed up on a regular basis and ensure that the data being backed up is able to be restored successfully.

Procedure: A disk based backup solution is currently deployed in the datacenter corresponding to the HIS system location. TruBridge initiates a disk to disk backup daily to our disk based backup solution. The backup logs are checked daily to ensure that all data was successfully written to the backup server.

Proprietary CPSI backup software is used to facilitate a cloud backup. The Server and Storage team ensures that all backups are completed successfully and reviews the backup status on all servers daily. Logs are maintained to verify the successful and unsuccessful backup occurrences.

Disk to disk backups are written to tape on a monthly basis. A quarterly permanent storage tape is shipped to the hospital as an additional offsite storage solution strengthening the existing DR strategy.

Backups are restored on a monthly basis to ensure that the data being backed up is viable in the event of an actual DR situation. Logs are maintained to verify the successful and unsuccessful restorations.

6. **Disaster Recovery:** What is your assessment of the proposed solution's disaster recovery plan; do you think it is adequate? How might it be improved? Are there specific actions that you would recommend to improve the plan?
    a. Overall the plan is solid, and well laid out. Supported by two data centers subcontracted from QTS by TruBridge, a CPSI subsidiary, the data centers are in Atlanta, GA, and Richmond, VA. Data Centers are used in an Active-Passive mode and possess the following redundancy:
        a. Production systems are backed up daily to disk based storage located within the data center.
        b. TruBridge conducts monthly system restores to ensure the data being backed up is viable.
        c. Quarterly tape backups are provided to the customer for permanent storage and archival.
        d. Clients are relieved of the daily tape changing tasks while still maintaining compliance with HIPAA/HITECH requirements.
    b. SOV's DR RTO is 1 hour, and RPO is .5 hours, which are met CPSI per the chart below. Note that Disk 2 Disk recovery, which is not anticipated, is longer:

Event	**RTO**	**RPO**
Host Failure	5-10 min	0 min
Data Center Failure	1-2 hrs	15 mins
DR From D2D Backup	6-8 hrs	24 hrs

    c. Further, the vendor provided this response to DR request for information:
        a. Disaster Services: Redundant communication lines in conjunction with our back-up power generators would allow continued operation of hosted systems during a disaster event at CPSI; however, CPSI has a response plan in the event a disaster results in the disruption of our hosting services. Given the high cost of maintaining a second communication line between the hospital and an alternate disaster facility, CPSI's disaster plan instead provides for sending a technical representative with an application server to each hosted customer. The server would be installed at either the client hospital or, for clients with multiple facilities; a central location until CPSI's hosting services can be reestablished.
        b. Back-ups: CPSI's remote processing service includes the tape maintenance associated with the system's automatic nightly back-up. CPSI employs a seven day back-up rotation. The most current back-up tape is maintained at CPSI's technical facility. Back-up tapes from the prior six days are maintained at a secure off-site location. Back-up tapes are reviewed regularly to ensure that quality back-ups are being performed.

7. **Data Retention:** Describe the relevant data retention needs and how they will be satisfied for or by the proposed solution.
    a. ***The data backup/retention requirements are:*** 3-7 years, depending on the type of data.
    b. CPSI retains 4 weeks on disk, and quarterly to tape.

8. **Service Level Agreement:** What is your assessment of the service level agreement provisions that the proposed vendor will provide? Are they appropriate and adequate in your judgment?
    a. In short, the Service Level Agreements described below are sound:

SYSTEM RESPONSE SERVICE LEVEL

a. Response Time shall mean the interval between the moment a system user enters a request for a response from the system and the instant in which the first byte of the response is displayed back to the user. The service level objective for Response Time shall be a maximum average of two (2) seconds in designated "peak hours" for a two (2) hour period. So long as Customer maintains remote communications via a connection provided by TruBridge at a minimum bandwidth of 30 kilobytes per second per concurrent user session, TruBridge guarantees that the response time for workstations that meet TruBridge's minimum specifications and are connected to the System as configured in Exhibit A via the specified connection and utilizing a one hundred megabit local area network connection on a gigabit Ethernet network backbone, shall not exceed a maximum average of two (2) seconds as measured in designated "peak hours" for a two (2) hour period (the "Response Time Service Level"). Upon notification from Customer that TruBridge has failed to meet the specified Response Time Service Level and subject to validation of the same by TruBridge, TruBridge will add additional equipment and/or software to ensure the condition is met, at no cost to the Customer. TruBridge shall not be held responsible for response time in cases where system operations are effected by events beyond TruBridge's reasonable control. The Response Time Service Level shall not apply to any file generation transactions, database generation transactions, report generation transactions, Electronic Form display transactions and/or document/image transfer transactions.
b. It is mutually understood that software enhancements to be provided to Customer under the General Support Agreement between Customer and Computer Programs and Systems, Inc. (CPSI) may affect the Response Time of any given workstation. CPSI reserves the right to review its minimum standards for workstations on an annual basis and will provide Customer with any updates to such minimum standards. Workstations that no longer meet CPSI minimum workstation standards shall not be eligible for inclusion in the Response Time Service Level.
c. Customer further understands that software enhancements to be provided to Customer under the General Support Agreement between Customer and CPSI may affect the connectivity resources necessary to achieve efficient communication between a local workstation and a remote hosted System server. TruBridge reserves the right to review its minimum bandwidth standard on an annual basis and will provide Customer with any resulting updates to such minimum standard. Upon receipt of a revised minimum bandwidth standard, Customer shall secure any necessary increase in total bandwidth to accommodate all of Customer's workstations that will operate concurrently. In the event Customer elects to not increase its connectivity bandwidth, TruBridge shall not be responsible for Response Time Service Level when the total bandwidth required for the number of workstations accessing the System concurrently exceeds Customer's total available bandwidth.

SYSTEM AVAILABILITY – SERVICE LEVEL AGREEMENT

a. System Availability shall mean the percentage of time that the TruBridge Server Resources (Operating System, Server and Storage Subsystems) are available for use by intended end-users, less any Scheduled Downtime permitted under this Agreement. The service level objective for System Availability is for ninety-nine and nine tenths percent (99.9%) availability over any twelve (12) month period. An Unscheduled Outage shall mean an event of

unexpected System downtime excluding any System downtime associated with nightly file reorganizations, the loading of system enhancement releases or patches, support required to remedy occurrences of any item listed under Section 2(A)(2) of Exhibit A to the General Support Agreement and/or the installation of any hardware upgrades ordered by Customer. The measurement of the duration of an Unscheduled Outage shall begin when a situation ticket is opened by TruBridge Support and shall end when TruBridge Support makes its first attempt to notify Customer that the System is available for use. TruBridge guarantees that the cumulative duration of Unscheduled Outages experienced over any twelve (12) month period beginning with the Effective Date of this Agreement shall be less than one tenth of one percent (.1%). Upon notification from Customer that TruBridge has failed to meet the specified service level objective for System Availability and subject to validation of the same by TruBridge, TruBridge shall credit Customer the prorated Subscription Fee for each day in which additional unscheduled downtime is experienced. TruBridge shall not be held responsible for System Availability in cases where System operations are effected by events beyond TruBridge's reasonable control.

SUPPORT – SERVICE LEVEL AGREEMENT:

a. The Standard Support Period is 7 am to 10 pm CST, Monday through Friday except holidays. CPSI recognizes the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Eve (1/2 day), and Christmas Day. CPSI provides support for routine and emergency situations during the Standard Support Period without any limitations. Routine situations would be any question about system operation or any reported non-emergency problem.
b. Emergency support is provided twenty-four hours a day, seven days a week including holidays. When a customer requests support and identifies the request as an emergency during the Standard Support Period, CPSI flags the request as such and prioritizes the request above any prior outstanding routine requests to facilitate a response from CPSI support representatives as quickly as practical. The system alerts the appropriate support representatives, as well as support management, to the emergency situation. Emergencies are generally defined as any condition that causes the central processing unit to be inoperable, or renders a departmental segment of the application software to be inoperable. This service is included as a component of the normal support and maintenance fee.

CPSI further defined **HOW** they provide support in the following section:

Single Source Total System Support is the CPSI approach in providing their clients the higher level of support that assures the long-range success of their system. One toll-free phone call puts the hospital in touch with the CPSI Support Staff, the single source for any aspect of system support - be it questions or problems with hardware, software, or even operations. This means the hospital can count on software kept current with the healthcare environment, remarkable hardware uptime, and proven operational procedures to guarantee the System is used to the maximum of its capabilities providing the maximum benefit to the hospital.

Single Source Total System Support provides the hospital with:

- A single point of contact, no "finger-pointing" between different support vendors
- Unlimited access to support – not a preset number of hours or calls
- Critical spare components maintained on-site
- Guaranteed response times
- Guaranteed minimum downtime
- Answers to software or operational questions via telephone and web support
- All future enhancements to the current standard version of the system

- Modifications performed on a timely basis to keep the system in accordance with changes in state or federal regulations
- Periodic on-site operational reviews
- A secure connection between the hospital's system and our technical facility for:
    - On-line software and technical support
    - On-line hardware diagnostics
- Replacement of any malfunctioning hardware component, up to and including the entire server itself
- Operating system updates and support
- Monthly backup tape review and verification

9. **System Integration:** Is the data export reporting capability of the proposed solution consumable by the State? What data is exchanged and what systems will the solution integrate/interface with*?* ***Please create a visual depiction*** and include as **Attachment 1** of this report. Will the solution be able to integrate with the State's Vision and financial systems (if applicable)?
    a. CPSI's **Interface Management System (IMS)** includes an output file to make information maintained on the CPSI System available to other systems. The product also includes the necessary input files for financial, transcription, result, and vital signs data to allow third party data to update the CPSI System. This simplified interface development decreases the development cycle while increasing the flexibility and the quality of the resulting interfaces. CPSI utilizes SSL, HTTPS, Microsoft Native VPN, and Cisco software to provide secure communications over the Internet. CPSI supplied routers utilize 3DES. Authentication of user names and passwords is completed over secure encrypted tunnels.
    b. Support file formats include HL7, XML, or flat file.
    c. Transport methods depends on partner (VPN, HTTPS, SOAP).
    d. The single most important integration is with Vermont Health Information Exchange. See the risk register for item(s) of note.
    e. The following interfaces are required, per the Non-Functional Requirements, all of which are confirmed to be supported by CPSI.

RFP Req #	Requirement Description	Vendor Response: Y or N	Vendor Response: L, T or D
G4.1	The System will interface with the statewide HIE system supported by VITL to obtain details of interactions with and services provided to patients's by the provider in real-time	Y	L
G4.2	The System will draw census data (including Emergency Department Visits and In-patient Stays) from a number of hospital systems on a mixture of weekly and daily schedules and will interface to receive this information in real-time in the future. Hospital systems include, but are not limited to: Fletcher-Allen, Copley, Central VT, Northwestern Med Center, NVRH, Bennington, and Rutland.	Y	L
G4.3	The System will obtain lab results, ADT, radiology Reports, Immunization and patient summaries in real-time from the statewide HIE system supported by VITL.	Y	L

Additional Comments on Architecture:

<u>Vendor commits to providing the following environments:</u>

1. Production
2. Test
3. Training

7. Assessment of Implementation Plan

7.1 Implementation Readiness

After assessing the Implementation Plan, please comment on each of the following.

1. **The reality of the implementation timetable**
    a. The overall proposal contemplates a 7 year period, comprised of a 9 month implementation schedule followed by 6 years of maintenance and operations.
    b. Given other project experiences by Vendor, the 9 month implementation period seems very achievable. In fact, other implementations CPSI has completed similar in scope to SOV are shorter in duration, but CPSI indicated they are meeting DMH's request for a 9 month duration.

2. **Training of users in preparation for the implementation**
    a. CPSI provided the following description to their Approach to Training, but it did not describe HOW they conducted training. When asked HOW they deliver training, the following was provided:
        i. CPSI trains everybody vs. train the trainer. They start with Registrations (2-3 classes) and work through each business process, touching on each area in a logical order makes most sense to the client. In short, they do a "day in the life" of each subject, and this is done 1-2 weeks before GO LIVE.
        ii. Most training is done in a classroom environment, from a Laptop using client conversion data.
        iii. Just before GO LIVE, one-on-one training is completed, on the floor, in the respective departments.
    b. The remainder of the approach to training is outlined below, and was provided in the Proposal, which seems sufficient:
        i. Roughly 95% of the actual training occurs on-site at the hospital. There are some workshops tied to I/T, nursing, laboratory, pharmacy and PACS at our corporate office to further define the configuration of the system for the specific needs of the hospital. The majority of employee education will take place in the form of hands-on training. CPSI representatives will be on-site working side-by-side with hospital personnel in the day-to-day operation of the system. The dual benefit of this approach ensures that each individual receives as much attention as they need in a real-world environment and, as they will be actually processing live data, they do not have duplicate their efforts by running two parallel systems saving time and allowing hospital employees to focus on learning the system. To prepare clients for the migration to the CPSI System, CPSI requests that some key employees come to our corporate office in Mobile, AL for orientation and workshops that will take place prior to the implementation.
        ii. CPSI will provide additional requested training at no cost to the hospital. Additional training may be provided either at our technical facility in Mobile, Alabama or at the client's facility. While there is no charge for the training, we do ask that requesting facilities reimburse the out-of-pocket travel expenses of support representatives when the requested training is to be provided in the client's facility.
        iii. An optional test server may be purchased by the facility to allow testing of the "fix" or upgrade before placing in the live environment. It this is the case, the facility will be responsible for testing the "fix" or upgrade before requesting live system placement.
        iv. CPSI provides training at the user conference meetings as well as on our website. Online web classes may be found on in the user areas of our website. Classes usually include release note classes and re-fresher courses of CPSI applications. Camtasia training is also available on our website. Online power point presentations are available for review at the

user's own pace via Camtasia. In addition to our user conference meetings, regional meeting may be established by a group of facilities and if requested additional training may be provided.

v. *Each software release includes release notes that detail the system enhancements. Release notes are maintained in electronic form on the live system and may be accessed and printed at any time. Application manuals are updated with each release and are made available to all of our clients on our web site.*

c. The Non-Functional requirements called for Vendor to respond to specific Training-related requirements. The Vendor answered in the AFFIRMATIVE for all, except for the following, which Vermont accepts:

i. *The Vendor will provide (customized as required) training manuals for all classroom training they provide. CPSI does not provide customized training manuals.*

3. Readiness of impacted divisions/ departments to participate in this solution/project

a. The team is in place and ready for this project. The team has the governance structure, skill set, time allocation, and experience to undertake a project of this scope.

4. Adequacy of design, conversion, and implementation plans

a. The Design, Conversion, and Implementation plans are proven and adequate. CPSI has successfully implemented several solutions similar in scope to this project.

b. The **Design/Development** plan is summarized as follows:

i. CPSI primarily uses Waterfall methodology, but is introducing Agile slowly into their processes. They following roughly 3-4 month iterations, 1 for life cycle for system, 1 for product being developed

ii. Cycles include: Development to Release Candidate; Release Candidate to General Availability, General Availability to Sunset, Sunset to End of Life; CPSI has specific rules about what can make it into each development revision

iii. There are 3 work streams: 1 Sunset; 1 General Availability; 1 Development

c. The **Conversion** plan contemplates converting data from many sources, including:

Financial Applications:

i. General Ledger
   1. Chart of Accounts
   2. Account Balances (Monthly Activity)
   3. Balance Sheet Format
   4. Profit/Loss Statement Formats

ii. Patient Accounting (A/R and Bad Debt)
   1. Patient Demographic and Guarantor Info
   2. Outstanding Primary Insurance
   3. Beginning Balance (as of cut-off date)

iii. Payroll
   1. Employee Masters
   2. Year to Date Employee Balances
   3. Quarter to Date Employee Balances
   4. Master Charge List
   5. Item Master

iv. Accounts Payable
   1. Vendor Masters

v. Business Office Tables
   1. Department Table

2. Room List
3. Physician List
4. Insurance Company Table
5. Service Code Table
6. System Operation Table

Clinical Applications:

vi. Order Entry
    1. Order Formats
    2. Help Screens
    3. Item Conversion for Charges
    4. Standing/Group Orders

vii. Laboratory
    1. Normal Ranges
    2. Reflex Criteria
    3. Calculations
    4. Report Formats
    5. Quality Control Definitions

viii. Radiology
    1. Patient Preparation Information
    2. Transcription Headers
    3. Transcription Normals
    4. Quality Control Definitions
    5. Mammography Tables and Definitions
    6. Recall Letters and Notifications

ix. Respiratory Therapy
    1. ABG Formats
    2. Transcription Formats
    3. Transcription Headers

x. Physical Therapy
    1. Transcription Headers
    2. Transcription Formats

xi. Pharmacy
    1. Vendor Item Conversion and Upload
    2. Order Definitions
    3. Calculations
    4. Enterprise Wide Scheduling
    5. Caller ID/Locations
    6. Fax Tables
    7. Instructions
    8. Tasks
    9. Conflict Codes

xii. Cardiopulmonary
    1. ABG Formats
    2. Transcription Formats
    3. Transcription Headers

xiii. OR Management
    1. Preference Cards
    2. Procedure List
    3. Instructions

4. Locations
5. Equipment/Instruments
6. Anesthesiologist Tables/Types
7. Physicians
8. Reason Codes
9. Point of Care
10. Chart Types
11. Initial Interview
12. Physical Assessment
13. Nursing Activities
14. MedAct (Electronic Kardex)
15. Configuration of Site Specific Preferences
16. Report Formats

xiv. CPSI will also convert the hospital Master Patient Index on the condition that it can be obtained electronically from the present computer system.

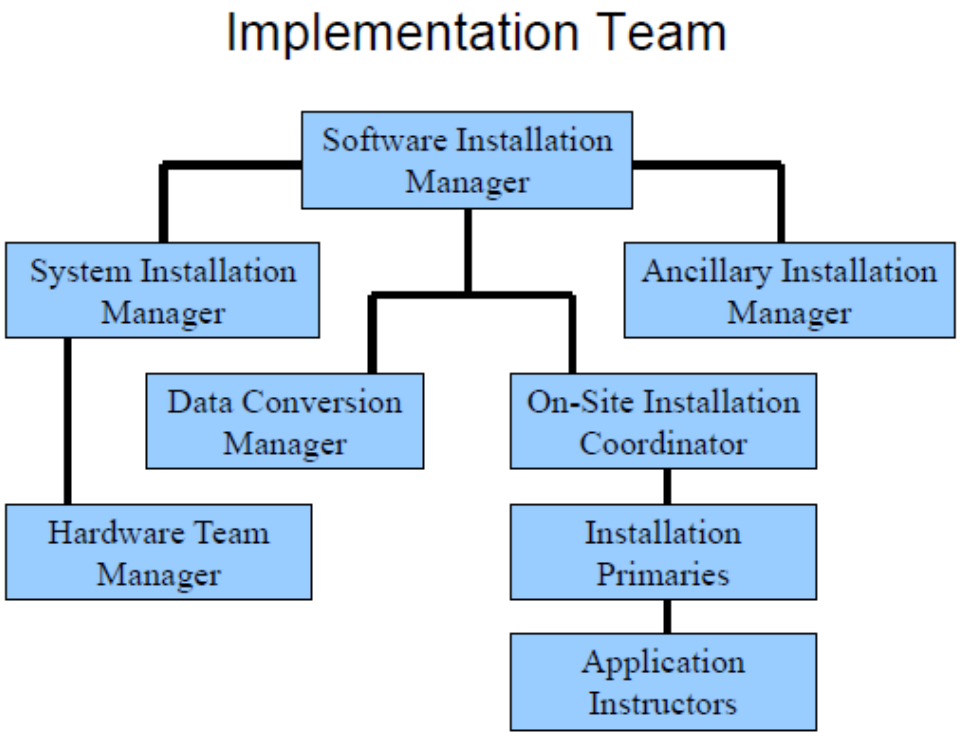
d. The approach to **Implementation** is described below, and appears sound and adequate:
   i. The normal implementation time for the average hospital for the base financial applications is 4 to 5 weeks, with periodic follow-up visits over the next 6 months to help ensure system performance and identify any areas requiring additional training.
   ii. The big bang approach has become more of the standard for CPSI. More and more hospitals do not want to take years to phase in applications. Phasing in applications typically requires the inefficiency of establishing interim interfaces. CPSI's proven conversion and implementation approach is a great fit for the big bang approach.
   iii. Implementation will begin as soon as a contract has been signed. At this time an installation team is assigned which contacts the hospital with introductions. Soon after that a site evaluation will be conducted on-site at the hospital to begin the conversion process. The actual time from the beginning of the implementation to "go-live" is dependent upon the scope of applications being purchased and the timeline desired by the hospital.

5. Adequacy of support for design/conversion/implementation activities

a. The project appears adequately staffed and skilled to carry out the design/development, conversion, and implementation activities.

6. Adequacy of agency and partner staff resources to provide management of the project and related contracts (i.e. vendor management capabilities)

a. Vermont has assigned Cheryl Burcham as Project Manager at 50%.
b. CPSI has yet to name a Project Manager.
c. CPSI does not use PMI Project Management Methodology, instead relying on their own internal, proprietary methodology, which has proven to be successful. This is summarized below:
   i. A customized Implementation and Training plan including specific dates, deadlines, and milestones will be produced and provided to the hospital as a result of this meeting. CPSI's comprehensive approach to system installation and training frees hospital employees to focus on learning the new system.
d. The proposed Project Organization chart provided by CPSI follows:



7. Adequacy of testing plan/approach

a. Vermont is engaged in and committed to Vendor approach to application testing
b. CPSI describes their testing process as follows, and this approach has delivered positive results with similarly scoped projects:
    i. CPSI Testing Process: Any change is first tested by the developer, and is termed a Unit Tests or Base Tests. The QA team conducts regression, integration and acceptance testing to ensure the requirements are met properly. The changes are then bundled into an update packed and "shipped" into customer environment (hosted or external). It is the customer choice as to whether to use change management and install at their own pace, otherwise, the software is automatically updated.
        1. For VT, changes will go into TEST Environment; Can use Change Management to deploy to TEST or LIVE environment.
        2. The Change Management Tool is a CPSI proprietary tool
        3. Version Control: Use Apache Subversion
    ii. Acceptance Testing:
        1. Upon software installation for each phase, Licensee may immediately begin acceptance testing. Such testing is to be completed within 60 days as of the date of software installation.
        2. In the event of system malfunction or failure during acceptance testing, Licensor shall be notified in writing immediately and will use continuous efforts to remedy such malfunction or failure at no cost to the Licensee.
        3. Should the system not perform during this acceptance testing as described in the above specifications, Licensor agrees to refund to the Licensee the full fee for the equipment and software being tested upon the return of said equipment and software to the Licensor. The fees for the conversion and installation/training are not refundable. This right of refund expires 90 days after the date of software installation.

8. General acceptance/readiness of staff

a. Staff appear ready, well-prepared, and willing to adopt the solution.

Additional Comments on Implementation Plan:

Vendor has successfully completed other implementations for the following organizations in the past 3 years:

REF #	PROJECT NAME	CUSTOMER NAME	CUSTOMER CONTACT	PROJECT DURATION
1	CPSI EHR	Franklin County	Grady Swann	4 months
2	CPSI EHR	Children's Home of Pittsburg	Josh Amrhein	3 months
3	CPSI EHR	Sheridan Community Hospital	Randy Flechsig	6 months
4	CPSI EHR	Petersburg Medical Center	Jill Dormer	8 months
5	CPSI EHR	Southern Palmetto Hospital	Jessica Jones	4 months

All Functional Requirements outlined in the RFP are successfully met by the vendor, except the item below, which DMH waived the requirement for:

C1.4	The System shall have the capability to extract, upload and populate data into the appropriate section of a patient record using Optical Character Recognition and/or Optical Mark Recognition

All Non-Functional Requirements outlined in the RFP are successfully met by the vendor, except the items below, which DMH expects to address during contract negotiation:

I1.4	The Vendor will develop a Project Charter.	CPSI is very open to discussing a charter. Please note that the scope, objectives, and participants in the implementation will be clearly defined and discussed throughout the project This will be handled in contract negotiations.
I5.17	The Vendor will deliver to the State a requirements traceability matrix for all delivered functionality, showing all testing activities tracing to delivered functionality, and all delivered functionality tracing to requirements in the requirements repository	This will be discussed in contract negotiations. The State has a compelling need to ensure that business requirements are being meet.
O1.16	The Vendor will provide a Transition-Out Plan at minimum six months prior to production support contract expiration. The Plan must contain transition task descriptions for the transitioning services over to another Vendor or Vermont, an organization chart, and job descriptions for all support staff.	This will need to be discussed during contract negotiations. This requirement is significant.

7.2 Risk Assessment & Risk Register

*After performing a Risk assessment in conjunction with the Business, please create a **Risk Register** as an **Attachment 2** to this report that includes the following:*

1) ***Source of Risk**: Project, Proposed Solution, Vendor or Other*
2) ***Risk Description**: Provide a description of what the risk entails*
3) ***Risk ratings to indicate**: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)*
4) ***State's Planned Risk Strategy**: Avoid, Mitigate, Transfer or Accept*
5) ***State's Planned Risk Response**: Describe what the State plans to do (if anything) to address the risk*
6) ***Timing of Risk Response**: Describe the planned timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)*
7) ***Reviewer's Assessment of State's Planned Response**: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.*

See **Attachment 2.**

Additional Comments on Risks:

None.

8. Cost Benefit Analysis

This section involves four tasks:

1) *Perform an independent Cost Benefit Analysis.*

2) ***Create a Lifecycle Cost Benefit Analysis spreadsheet*** *as an* ***Attachment 3*** *to this report. A sample format is provided.*

a) The cost component of the cost/benefit analysis will include all one-time acquisition costs, on-going operational costs (licensing, maintenance, refresh, etc.) plus internal costs of staffing and "other costs". "Other costs" include the cost of personnel or contractors required for this solution, enhancements/upgrades planned for the lifecycle, consumables, costs associated with system interfaces, and any costs of upgrading the current environment to accept the proposed solution (new facilities, etc.).

b) The benefit side of the cost/benefit will include: 1. Intangible items for which an actual cost cannot be attributed. 2. Tangible savings/benefit such as actual savings in personnel, contractors or operating expense associated with existing methods of accomplishing the work which will be performed by the proposed solution. Tangible benefits also include additional revenue which may result from the proposed solution.

c) The cost benefit analysis will be for the IT activity's lifecycle.

d) The format will be a column spreadsheet with one column for each year in the lifecycle. The rows will contain the itemized costs with totals followed by the itemized benefits with totals.

e) Identify the source of funds (federal, state, one-time vs. ongoing). For example, implementation may be covered by federal dollars but operations will be paid by State funds.

3) *Perform an analysis of the IT ABC form (Business Case/Cost Analysis) completed by the Business.*

4) *Respond to the questions/items listed below.*

1. **Analysis Description:** Provide a narrative summary of the cost benefit analysis conducted: The approach used was to gather all costs associated with project for a 7 year period, identify revenue sources for the project, and identify tangible benefits that might also be used as revenue sources or expense reductions.

    a. COST COMPONENT: See the detailed spreadsheet referenced in **Attachment 3** to gain an understanding of:
        i. Source of Funds
        ii. Use of Funds
        iii. Change in Operating Costs

    b. BENEFIT COMPONENT:
        i. See the Tangible and Intangible Benefits described below.

2. **Assumptions:** List any assumptions made in your analysis.
    a. It is known by DMH that this project will produce **no significant** monetary cost savings through this project and in fact, is expected to cost more each year.
    b. It is understood by DMH that all the benefits derived through this project are non-monetary.
    c. Staff reductions are not expected or contemplated through the implementation of this solution.
    d. There is no revenue recovery available.

3. **Funding:** Provide the funding source(s). If multiple sources, indicate the percentage of each source for both Acquisition Costs and on-going Operational costs over the duration of the system/service lifecycle.

    a. Three primary source of funds include:
        i. Federal Funds: Centers for Medicaid and Medicare (CMS), specifically, Global Commitment dollars.
            1. Global commitment is an agreement between the state's Agency of Human Services (AHS) and (CMS) on how to spend Medicaid dollars, and are comprised of a federal share and a state share, which is currently at 46.1% State portion, and 53.9% Federal portion.
        ii. State of Vermont Equipment Revolving Fund: "Seed" money to initiate the project.

iii. DMH Operating Budget: Payback the State of Vermont Equipment Revolving Fund plus pay M&O expenses.

b. See the detailed spreadsheet referenced in **Attachment 3** for actual dollar amounts**.**

4. **Tangible Benefits:** Provide a list and description of the tangible benefits of this project. Tangible benefits include specific dollar value that can be measured (examples include a reduction in expenses or reducing inventory, with supporting details).
    a. There are no significant monetary tangible benefits identified.
    b. Although the existing paper-based processes are described as time consuming, there is no expectation of a reduction in the time it takes to conduct equivalent work flow in the new system. It is anticipated that the time to complete paperwork in the current process will be replaced by an equivalent amount of time to collect/enter data in the new system, resulting in no time savings. Thus, there is no expectation of freeing up more time for patient care, nor deferring potential needs for additional care providers, thus no future cost savings/monetary benefit.

5. **Intangible Benefits:** Provide a list and description of the intangible benefits of this project. Intangible benefits include cost avoidance, the value of benefits provided to other programs, the value of improved decision making, public benefit, and other factors that become known during the process of analysis. Intangible benefits must include a statement of the methodology or justification used to determine the value of the intangible benefit.
    a. System that fully meets statutory/regulatory requirements:
        i. Certificate of Need established under 18 V.S.A. § 9351;
        ii. "Meaningful Use" attestation (Stages 1-3) as charted in the Federal HITECH ACT of 2009;
        iii. Interoperability with Vermont Health Information Exchange (VHIE) through Vermont Information Technology Leader (VITL), 18V.S.A. § 9352.
    b. Electronically bill Medicare Part A (doing Part B now through Connex).
    c. Access electronic charts immediately, in the office or remotely, without reaching through files.
    d. Visual representation of patient's health progress with graphs and pictures.
    e. Ability to send prescriptions to pharmacies electronically vs. handwritten prescriptions.
    f. Ability to share/receive patient data to and from hospitals, labs and other health care organizations.
    g. Create better organization and efficiency in office, allowing for a happier and stress free clinical and billing staff.
    h. Spend more quality time with patients with built in time saving default program settings, that eliminate repetitive tasks.
    i. Increase patient safety by automatically checking for possible drug interactions with patient's current medications and allergies.
    j. Decrease use of paper over time.
    k. Ability to electronically connect to the VHIE.
    l. Several providers can access patient information at once from various locations and review/add information simultaneously.
    m. Required fields help to ensure that essential information date/times/provider/etc. are reflected, likely producing a record that is clearly reflective of the care provided and potentially more defendable as clarity is increased.

6. **Costs vs. Benefits:** Do the benefits of this project (consider both tangible and intangible) outweigh the costs in your opinion? Please elaborate on your response.
    a. There is no clear method of attaching dollar values to intangible benefits, thus, we assign a value of $0 to intangible benefits.

b. Based on dollar value, the tangible and intangible benefits do not outweigh the anticipated project costs.

7. **IT ABC Form Review:** Review the IT ABC form (Business Case/Cost Analysis) created by the Business for this project. Is the information consistent with your independent review and analysis? If not, please describe.
    a. The IT ABC Form is a good summary, and is mostly accurate at the time of its writing. However, some items were noted to be inaccurate the author believes, due to a lack of understanding for how the form was to be completed. Of note:
        i. The CURRENT COSTS State Labor hours were not a full representation of staff hours, rather, staff hours at the perceived percentage of time allocated to using paper (25%).
        ii. ANNUAL OPERATING COSTS went from $3.4M in Project Years 1 and 2, to $320K in Years 3-5. IMPLEMENTATION COSTS were included in those Years 1 and 2. Implementation Costs should not be included in Operating Costs.
        iii. There is a standard question as to whether this IT Activity generates revenue, and it was noted in the response the ability to start billing for Medicare services. That is actually not quite true. Medicare Part B is billed now electronically through Connex. Medicare Part A is billed now by paper, but will be done electronically in the future. In summary, there is no new revenue, but the Medicare Part A billing process will be streamlined.

Additional Comments on the Cost Benefit Analysis:

No additional comments.

9. Impact Analysis on Net Operating Costs

1.) Perform a lifecycle cost impact analysis on net operating costs for the agency carrying out the activity, minimally including the following:
a) Estimated future-state ongoing annual operating costs, and estimated lifecycle operating costs. Consider also if the project will yield additional revenue generation that may offset any increase in operating costs.
b) Current-state annual operating costs; assess total current costs over span of new IT activity lifecycle
c) Provide a breakdown of funding sources (federal, state, one-time vs. ongoing)
2.) Create a table to illustrate the net operating cost impact.
3.) Respond to the items below.

1. Insert a table to illustrate the Net Operating Cost Impact.
    a. See the detailed spreadsheet referenced in **Attachment 3** and the table below:

	Year 1 (FY16)	Year 2 (FY17)	Year 3 (FY18)	Year 4 (FY19	Year 5 (FY20)	Year 6 (FY21)	Year 7 (FY22)	TOTAL
Proposed Operating Costs:								
M&O	$160,142	$158,487	$158,487	$158,487	$158,487	$161,980	$161,980	$1,118,050
Total: Proposed Operating Costs:	***$160,142***	***$158,487***	***$158,487***	***$158,487***	***$158,487***	***$161,980***	***$161,980***	***$1,118,050***
Current Operating Costs:								
Hardware	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$35,000
Software	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$91,000
Paper	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$35,000
Total: Current Operating Costs:	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$161,000***
Net Operating Cost Decrease/(Increase)	**($137,142)**	**($135,487)**	**($135,487)**	**($135,487)**	**($135,487)**	**($138,980)**	**($138,980)**	**($957,050)**

2. Provide a narrative summary of the analysis conducted and include a list of any assumptions.
    a. As outlined in **Attachment 3** section titled "NET CHANGE IN OPERATING COSTS", you will see the new M&O costs in total, compared to the current operating costs, which are broken out into Hardware, Software, and Paper Costs. The delta between the two comprises the "Net Change In Operating Costs".

3. Explain any net operating increases that will be covered by federal funding. Will this funding cover the entire lifecycle? If not, please provide the breakouts by year.
    a. Of the roughly $1M increase in Operating Costs over the 7 year period, and using the 54% reimbursement rate, approximately $540K will be covered by Federal dollars.

4. What is the break-even point for this IT Activity (considering implementation and on-going operating costs)?
    a. There is no breakeven for this IT Activity, as there are no monetary benefits noted.

Attachment 1 - Illustration of System Integration

The project calls for **System Integration** as outlined in the Chart below, which is taken from **Template H – Non-Functional Requirements**, General Requirements section, G4 Interface List sheet. All items are positively responded to by Vendor, and provided via Core Functionality.

RFP Req #	Requirement Description	Vendor Response: Y or N	Vendor Response: L, T or D
G4.1	The System will interface with the statewide HIE system supported by VITL to obtain details of interactions with and services provided to patient's by the provider in real-time	Y	L
G4.2	The System will draw census data (including Emergency Department Visits and In-patient Stays) from a number of hospital systems on a mixture of weekly and daily schedules and will interface to receive this information in real-time in the future. Hospital systems include, but are not limited to: Fletcher-Allen, Copley, Central VT, Northwestern Med Center, NVRH, Bennington, and Rutland.	Y	L
G4.3	The System will obtain lab results, ADT, radiology Reports, Immunization and patient summaries in real-time from the statewide HIE system supported by VITL.	Y	L

The project calls for **Interoperability/Interfaces** as outlined in the Chart below, which is taken from **Template H – Non-Functional Requirements**, General Requirements section, T1 Interoperability-Interfaces sheet. All items except one are positively responded to by Vendor, only one requires a Third Party Product vs. Leveraging Core Functionality.

RFP Req #	Requirement Description	Vendor Response: Y or N	Vendor Response: L, T or D
T1.1	The System's interfaces shall secure and protect the data and the associated infrastructure from a confidentiality, integrity and availability perspective.	Y	L
T1.3	The System's interface infrastructure shall continue to operate despite failure or unavailability of individual technology components such as a server platform or network connection.	Y	L
T1.4	The System's interfaces shall be scalable to accommodate changes in scale including changes in patient population, transaction volume, throughput and geographical distribution. The System shall be capable of making any changes to the interface data elements/layouts easily, and to test those changes.	Y	L
T1.5	The System shall implement, at a minimum, interfaces (both real-time or batch) with the applications and data sources listed in the section "G4 Interface List". These interfaces shall be implemented using HL7 standards.	Y	L
T1.6	The System shall provide the capability to perform source to destination file integrity checks for exchange of data and alert appropriate parties with issues.	Y	L

RFP Req #	Requirement Description	Vendor Response: Y or N	Vendor Response: L, T or D
T1.7	The System shall integrate with Vermont Health Information Exchange using VITL's Service Oriented Architecture (Medicity), using an Enterprise Service Bus, responsible to monitor and control routing of message exchange between services, resolve contention between communicating service components, control deployment and versioning of services and marshal use of redundant services.	Y	L
T1.8	The Systems interface interoperability shall follow the National Institute of Standards (NIST)- adopted encryption standards.	Y	L
T1.9	The System shall provide the capabilities for a Real-Time (or near real-time) bi-directional Integrated Enterprise communication using standard PIX/PDQ XCPD/XCA, XDS.b Query or SSO formats.	Y	L
T1.10	All System services shall be reviewed, classified, and cataloged prior to use. The Documentation Artifacts shall be modeled per ISO/IEC/IEEE 42010 Architecture Description Template as part of the Vermont Enterprise Architecture Program Requirements.	Y	L
T1.11	All System services shall have key stakeholder/owners identified following the ADM Architecture Model. Role Matrix should include s/w developers, integrationists, technologists, Enterprise Architects, Business Leads, Testing teams, UAT Teams.	Y	L
T1.12	The System shall be designed, built and deployed with enterprise architecture best practices. The System shall undergo, at a minimum, 2 iterations integrated with VHIE development environment. Each iteration shall be have a maximum period of 10 days. The Systems shall have an alpha deployment on Medicity staging Environment and also shall have, at a minimum, three weeks of UAT Testing by Business and VITL SMEs on the Medicity Staging Environment	Y	L
T1.13	The System Interoperability Interface shall meet full VITL data sets that includes ADT, Lab results (LOINC), radiology reports, transcribed reports, VXU(Immunization) and CCDA(Patient summaries).	Y	L
T1.14	The System shall provide the functionality that provides reliability for applications, services or message flows: ' Load balancing ' High availability ' Fault tolerance ' Failover ' In-order delivery ' Transaction support ' Execution prioritization ' Message prioritization. Tests for High Availability and Failover shall be completed prior to the release to UAT.	Y	L
T1.15	The System shall have the ability to use standards-based communication protocols, such as TCP/IP, HTTP, HTTP/S and SMTP. ' Protocol bridging: The ability to convert between the protocol native to the messaging platform and other protocols, such as Remote Method Invocation (RMI), IIOP and .NET remoting.	Y	L
T1.16	The System shall have the capability to integrate with the VITL's MDM technology for Enterprise Master Person Index (EMPI) implemented (using Medicity) as part of the VHIE Platform in a centralized or registry style implementation.	Y	T

Additional comments on Data Exchange with VHIE (Vermont Health Information Exchange) through VITL (Vermont Information Technology Leaders)

Through our Independent Review Analysis, we discussed the data exchange between CPSI and VHIE with Mike Gagnon, CIO of VITL, focusing on the following items:

- Objective of EHR as it relates to VITL is as follows: *"The chosen EHR must include features and functions must interoperate with the Vermont Health Information Exchange (VHIE) through Vermont Information Technology Leaders (VITL)".*
- What role VITL has in making this happen.
- How VITL project priorities are set, and where this project ranks on that priority list.
- How VITL sees this "interoperability" sub-project playing out in terms of project approach and what resources are assigned by VITL to this project.
- How success is defined and measured.
- Known risks.
- Data exchange standards defined.
- Experience with similar projects.
- Experience with CPSI.

The summary of that discussion follows. Risks identified through this discussion are noted in the Risk Register.

- There is a policy decision needed to decide what data is allowed to be sent from VPCH. Currently, VITL cannot take the data from a Psychiatric hospital due to 42CFR Part2. DVHA is currently leading the charge with Blueprint to undertake a project to draft 42 CFR Prt.2 State policy for the VHIE
- VITL is currently working with CPSI through 3 other hospitals in Vermont (Springfield, Copley, Gifford). VITL has completed Admission/Discharge/Transfer data exchange with those hospitals. For this project, there are no current processes within CPSI software for automatically triggering the submission of a CCD (Continuity of Care Document) from CPSI. As such, CCD submission is currently a manual process that is being reviewed.
- Project priorities are set largely by who is ready to exchange data. VITL would put this project onto the project list of 130 interfaces, and whoever is ready, goes. Only occasionally are resources limited. Effort is expected to take 6-8 weeks but may take longer (months or years), due to multiple parties involved (4: VITL, DMH, Medicity (Health Exchange Vendor), CPSI) and coordinating schedules.
- There are several standards, it is just a matter of how many and how well they are adopted.
- Success is defined and measured by Interface is working/live, and data in query-able via VITL Access.

Attachment 2 - Risk Register

See attached document: FINAL-REVIEW-SOV-DMH-EHR_STS_Risk_Register.pdf

Attachment 3 – Lifecycle Costs and Change in Operating Costs

See attached document: FINAL-REVIEW-SOV-DMH-EHR_STS_Cost_Detail.xlsx

Attachment 4 – Technology Infrastructure

OVERVIEW

The following describes the underlying technology used to develop the application, the database system used, and the servers used in the hosting environment.

SERVER ARCHITECTURE

- A multi-tenant virtualized server infrastructure is used in the data center running VMWare 5.x, with the CPSI specific servers as follows:
    - Red Hat Enterprise Linux 5.9 operating system, running Apache version 2.2.3 as the web server
    - Windows 2008 Standard or above as the RTF Server

DATABASE

- PostGreSQL 9.4

CLIENT

- The CPSI ClientWare and ClientWare 5 (CW5) applications are designed to be run on Windows Vista Business®, Windows 7 Professional®, Windows 8 Professional® or newer operating systems. Hardware specifications sufficient for the Windows XP Operating System or above should be adequate for most ClientWare and CW5 functions. Because of the fact that both ClientWare and CW5 are networked applications, a device using either application must have a network connection capable of accessing the CPSI HIS Production Server. ClientWare requires Adobe® Reader 8.0 or later for reviewing most documents and reports. Either Internet Explorer® 8 or 10 is required in order to utilize CPSI web-based applications, including but not limited to ChartLink, Electronic Forms (E-Forms), Electronic Signature (E-Sign) and Electronic File Management. (Internet Explorer 10 will need to be run in compatibility mode.)

DEVELOPMENT ENVIRONMENT

- Client programs (presentation layer) are object oriented Visual C++ graphical code.
- Server programs (application and data control layers) are written in ACUCOBOL or Java 7.

INTERFACES

- CPSI provides HL7 support through interfaces. CPSI has extensive experience in programming HL7 compliant interfaces and maintains membership in the HL7 organization to ensure access to the latest standards. When specified by the third-party vendor, custom interfaces will be programmed to the prescribed HL7 standards.

DMH EHR Project

STATEMENT OF: Use of Funds (Expenses), Source of Funds (Revenue), Cash Flow, and Change in Net Operating Cost

KEY:

Click on the links to the left to go to that data

SUMMARY:

Total Project Cost Over 7 Years: $2,818,587

Total Funding: $2,818,587

Potential Revenue Recovery: $0

Funding Excess/(Shortage): $0

NET DECREASE/(INCREASE) IN OP. COSTS: ($957,050)

CASH FLOW ANALYSIS: Click Here

USE OF FUNDS - START		One Time Costs					Maint and Ops	Maint and Ops	Maint and Ops	Maint and Ops	Maint and Ops	Maint and Ops	Maint and Ops	Software Total	One Time	M&O
Description	**Billing Milestone**	**Unit Price**	**# of Units**	**Total**	**State Funded**	**Fed Funded**	**Year 1 (FY16)**	**Year 2 (FY17)**	**Year 3 (FY18)**	**Year 4 (FY19)**	**Year 5 (FY20)**	**Year 6 (FY21)**	**Year 7 (FY22)**			
VENDOR OUT OF POCKET EXPENSES																
SOFTWARE AND SERVICES																
SOFTWARE ❶				$0												
Phase 1:					46%	54%										
Registration/ADT		$10,700	1	$10,700	$4,932.70	$5,767.30	$1,177	$1,284	$1,284	$1,284	$1,284	$1,323	$1,323	$10,700		
AHA UBO4 Codes		$187	1	$187	$86.21	$100.79	$0	$187	$187	$187	$187	$193	$193	$187		
E-File Mgmt		$16,000	1	$16,000	$7,376.00	$8,624.00	$2,431	$2,652	$2,652	$2,652	$2,652	$2,732	$2,732	$16,000		
Clearing House Software		$2,000	1	$2,000	$922.00	$1,078.00	$4,620	$4,620	$4,620	$4,620	$4,620	$4,759	$4,759	$2,000		
Patient Acctg		$25,500	1	$25,500	$11,755.50	$13,744.50	$2,805	$3,060	$3,060	$3,060	$3,060	$3,152	$3,152	$25,500		
Digital Signature		$1,300	1	$1,300	$599.30	$700.70	$143	$156	$156	$156	$156	$161	$161	$1,300		
Mcare & Mcaid E-Remittance		$5,200	1	$5,200	$2,397.20	$2,802.80	$624	$624	$624	$624	$624	$643	$643	$5,200		
270/271 Eligibility		$8,500	1	$8,500	$3,918.50	$4,581.50	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$6,000	$8,500		
General Ledger		$6,000	1	$6,000	$2,766.00	$3,234.00	$660	$720	$720	$720	$720	$742	$742	$6,000		
Budgeting		$3,800	1	$3,800	$1,751.80	$2,048.20	$418	$456	$456	$456	$456	$470	$470	$3,800		
Fixed Assets		$1,700	1	$1,700	$783.70	$916.30	$187	$204	$204	$204	$204	$210	$210	$1,700		
Accounts Payable		$3,800	1	$3,800	$1,751.80	$2,048.20	$418	$456	$456	$456	$456	$470	$470	$3,800		
Payroll w/Direct Deposit		$14,500	1	$14,500	$6,684.50	$7,815.50	$1,595	$1,740	$1,740	$1,740	$1,740	$1,792	$1,792	$14,500		
Time and Attendance		$10,600	1	$10,600	$4,886.60	$5,713.40	$1,166	$1,272	$1,272	$1,272	$1,272	$1,310	$1,310	$10,600		
Human Resources		$11,900	1	$11,900	$5,485.90	$6,414.10	$1,309	$1,428	$1,428	$1,428	$1,428	$1,471	$1,471	$11,900		
Materials Mgmt		$19,600	1	$19,600	$9,035.60	$10,564.40	$2,156	$2,352	$2,352	$2,352	$2,352	$2,423	$2,423	$19,600		
Health Info Mgmt		$15,300	1	$15,300	$7,053.30	$8,246.70	$1,584	$1,728	$1,728	$1,728	$1,728	$1,780	$1,780	$15,300		
Master Pt Index		$10,200	1	$10,200	$4,702.20	$5,497.80	$1,122	$1,224	$1,224	$1,224	$1,224	$1,261	$1,261	$10,200		
CodeFinder Interface		$3,400	1	$3,400	$1,567.40	$1,832.60	$220	$240	$240	$240	$240	$247	$247	$3,400		
Specialty Lab Info System		$24,000	1	$24,000	$11,064.00	$12,936.00	$2,640	$2,880	$2,880	$2,880	$2,880	$2,966	$2,966	$24,000		
Radiology Info System		$25,500	1	$25,500	$11,755.50	$13,744.50	$2,805	$3,060	$3,060	$3,060	$3,060	$3,152	$3,152	$25,500		
Micromedex - Pt Education		$6,050	1	$6,050	$2,789.05	$3,260.95	$3,700	$3,700	$3,700	$3,700	$3,700	$3,811	$3,811	$6,050		
Pharmacy		$27,000	1	$27,000	$12,447.00	$14,553.00	$2,970	$3,240	$3,240	$3,240	$3,240	$3,337	$3,337	$27,000		
Formulary Wholesale Update		$2,100	1	$2,100	$968.10	$1,131.90	$132	$144	$144	$144	$144	$148	$148	$2,100		
Pharmacy Clinical Monitoring		$5,000	1	$5,000	$2,305.00	$2,695.00	$5,000	$2,500	$2,500	$2,500	$2,500	$2,575	$2,575	$5,000		
Quality Improvement		$17,000	1	$17,000	$7,837.00	$9,163.00	$1,870	$2,040	$2,040	$2,040	$2,040	$2,101	$2,101	$17,000		
Core Measure		$15,000	1	$15,000	$6,915.00	$8,085.00	$1,650	$1,800	$1,800	$1,800	$1,800	$1,854	$1,854	$15,000		
Order Entry/Results Reporting		$34,000	1	$34,000	$15,674.00	$18,326.00	$3,740	$4,080	$4,080	$4,080	$4,080	$4,202	$4,202	$34,000		
Point of Care Documentation		$51,250	1	$51,250	$23,626.25	$27,623.75	$5,643	$6,156	$6,156	$6,156	$6,156	$6,341	$6,341	$51,250		
Medication Management		$40,000	1	$40,000	$18,440.00	$21,560.00	$4,400	$4,800	$4,800	$4,800	$4,800	$4,944	$4,944	$40,000		
Executive Information		$7,200	1	$7,200	$3,319.20	$3,880.80	$792	$864	$864	$864	$864	$890	$890	$7,200		
Electronic Forms		$30,000	1	$30,000	$13,830.00	$16,170.00	$3,300	$3,600	$3,600	$3,600	$3,600	$3,708	$3,708	$30,000		
Enterprise Wide Scheduling		$23,400	1	$23,400	$10,787.40	$12,612.60	$2,574	$2,808	$2,808	$2,808	$2,808	$2,892	$2,892	$23,400		
Patient Portal		$10,000	1	$10,000	$4,610.00	$5,390.00	$3,685	$4,020	$4,020	$4,020	$4,020	$4,141	$4,141	$10,000		
Ad-Hoc Reporting		$10,200	1	$10,200	$4,702.20	$5,497.80	$1,617	$1,764	$1,764	$1,764	$1,764	$1,817	$1,817	$10,200		
Auto-Fax Distribution		$9,300	1	$9,300	$4,287.30	$5,012.70	$1,012	$1,104	$1,104	$1,104	$1,104	$1,137	$1,137	$9,300		
Archival Storage/Report Image		$21,300	1	$21,300	$9,819.30	$11,480.70	$2,343	$2,556	$2,556	$2,556	$2,556	$2,633	$2,633	$21,300		
Interface Managament System		$20,000	1	$20,000	$9,220.00	$10,780.00	$3,069	$3,348	$3,348	$3,348	$3,348	$3,448	$3,448	$20,000		
Bi-di Reference Lab Interface		$9,000	1	$9,000	$4,149.00	$4,851.00	$990	$1,080	$1,080	$1,080	$1,080	$1,112	$1,112	$9,000		
Bi-di Blood Glucose Device Int		$9,000	1	$9,000	$4,149.00	$4,851.00	$990	$1,080	$1,080	$1,080	$1,080	$1,112	$1,112	$9,000		
Bi-di Pyxis Interface		$9,000	1	$9,000	$4,149.00	$4,851.00	$990	$1,080	$1,080	$1,080	$1,080	$1,112	$1,112	$9,000		
Bi-di PACS Interface		$9,000	1	$9,000	$4,149.00	$4,851.00	$990	$1,080	$1,080	$1,080	$1,080	$1,112	$1,112	$9,000		
PACS URL Interface		$9,000	1	$9,000	$4,149.00	$4,851.00	$990	$1,080	$1,080	$1,080	$1,080	$1,112	$1,112	$9,000		
Bi-di Transcription Interface		$9,000	1	$9,000	$4,149.00	$4,851.00	$990	$1,080	$1,080	$1,080	$1,080	$1,112	$1,112	$9,000		
VITL HIE Interface		$0	1	$0	$0.00	$0.00	$550	$600	$600	$600	$600	$618	$618	$0		
24 Hour Emergency Support		$0	1	$0	$0.00	$0.00	$2,398	$3,816	$3,816	$3,816	$3,816	$3,930	$3,930	$0		
60 User Licenses (concurrent)		$14,465	1	$14,465	$6,668.37	$7,796.64	$1,914	$2,088	$2,088	$2,088	$2,088	$2,151	$2,151	$14,465		
Stedman's Medical Dictionary		$425	1	$425	$195.93	$229.08	$425	$0	$0	$0	$0	$0	$0	$425		
Auto-Fax Configuration		$2,134	1	$2,134	$983.77	$1,150.23	$209	$228	$228	$228	$228	$235	$235	$2,134		
Phase 2:																
Physician Portal		$85,600	1	$85,600	$39,461.60	$46,138.40	$9,416	$10,272	$10,272	$10,272	$10,272	$10,580	$10,580	$85,600		
CPOE		$63,300	1	$63,300	$29,181.30	$34,118.70	$6,963	$7,596	$7,596	$7,596	$7,596	$7,824	$7,824	$63,300		
Physician Documentation		$56,750	1	$56,750	$26,161.75	$30,588.25	$5,940	$6,480	$6,480	$6,480	$6,480	$6,674	$6,674	$56,750		

Competitive Discount		($313,362)	1	($313,362)	-$144,459.88	-$168,902.12	$0	$0	$0	$0	$0	$0	$0	$0			
SOFTWARE TOTAL				**$511,799**	**$235,940**	**$275,860**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$511,800**	$511,799		
SERVICES																	
IMPLEMENTATION SERVICES																	
IMPLEMENTATION SERVICES																	
Solution Implementation		$439,415	1	$0	45%	55%	$439,415	$0	$0	$0	$0	$0	$0	$439,415			
Travel		$0	0	$0	45%	55%	$0	$0	$0	$0	$0	$0	$0	$0			
TOTAL: IMPLEMENTATION SERVICES				**$0**			**$439,415**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$439,415**			
SERVICES TOTAL				**$0**			**$439,415**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$439,415**	$439,415		
SOFTWARE AND SERVICES TOTAL				**$0**			**$439,415**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$951,215**			
HARDWARE																	
Laptops (17@$1,500)				$0	45%	55%	$25,500	$0	$0	$0	$0	$0	$0	$0			
HARDWARE TOTAL							**$25,500**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$25,500**	$25,500		
MAINTENANCE AND OPERATIONS SUPPORT																	
Hosting HIS (Health Information System) and RTF (Rich Text Format Printing) Environments				$3,250	45%	55%	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800	$28,800	$204,850		$204,850	
Hosting Test Environment				$500	45%	55%	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$4,800	$34,100		$34,100	
Connection to VITL				$5,000	45%	55%	$0	$0	$0	$0	$0	$0	$0	$5,000		$5,000	
Clearing House (Electronic Billing) Software Transaction Costs - Estimated	$.40 for weekly electronic claim, $.60 for weekly paper claim; <100 month expected First 1500 monthly transactions are included,	$0.40	100	$40	45%	55%	$480	$480	$480	$480	$480	$480	$480	$3,360		$3,360	
270/271 Eligibility Software Transaction Costs - Estimated	$.30 per transaction thereafter	$0.30	0	$0	45%	55%	$480	$480	$480	$480	$480	$480	$480	$3,360		$3,360	
Change Orders/Unanticipated Tasks (Implementation) - Estimated					45%	55%	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$20,000	$0	
Change Orders/Unanticipated Tasks (M&O) - Estimated					45%	55%	$0	$0	$0	$0	$0	$0	$0	$0		$0	
Software Maintenance (from above)					45%	55%	$115,332	$122,427	$122,427	$122,427	$122,427	$125,920	$125,920	$856,880		$856,880	
MAINTENANCE AND OPERATIONS SUPPORT TOTAL				**$8,750**			**$169,892**	**$156,987**	**$156,987**	**$156,987**	**$156,987**	**$160,480**	**$160,480**	**$1,127,550**			
TOTAL VENDOR OUT OF POCKET EXPENSES				$8,750			$1,155,357	$156,987	$156,987	$156,987	$156,987	$160,480	$160,480	$2,104,265			
DMH INTERNAL COSTS																	
Staffing Costs: ❷														$0			
Temporary Mental Health Specialists (10 people)							$256,620	$0	$0	$0	$0	$0	$0	$256,620	$256,620		
Temporary Nurses (8 people)							$268,944	$0	$0	$0	$0	$0	$0	$268,944	$268,944		
Existing Staff Overtime	increase from $46K to $57K during implementation						$103,809	$0	$0	$0	$0	$0	$0	$103,809	$103,809		
DII Project Management Oversight	Included in DII Fee Below	$0	1	$0	45%	55%	$0	$0	$0	$0	$0	$0	$0	$0		$0	
External Project Management Services	Not anticipated	$0	5	$0	45%	55%	$0	$0	$0	$0	$0	$0	$0	$0		$0	
Security Assessment	Not anticipated	$0	1	$0	45%	55%	$0	$0	$0	$0	$0	$0	$0	$0		$0	
Travel to Mobile, AL for Training		$2,000	10	$20,000	45%	55%	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$20,000	$0	
Paper		$0	1	$0	45%	55%	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$1,500	$10,500		$10,500	
Contingency		$0	1	$0	45%	55%	$0	$0	$0	$0	$0	$0	$0	$0		$0	
DMH INTERNAL COSTS TOTAL							**$650,873**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$1,500**	**$659,873**			
Summary of Costs by One Time and M&O															See numbers in columns above to understand how thes		
One Time							*$1,646,087*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$1,646,087*	$1,646,087		
M&O							*$160,142*	*$158,487*	*$158,487*	*$158,487*	*$158,487*	*$161,980*	*$161,980*	*$1,118,050*		$1,118,050	
TOTAL							***$1,806,229***	***$158,487***	***$158,487***	***$158,487***	***$158,487***	***$161,980***	***$161,980***	***$2,764,137***			
PROJECT SUB TOTAL COSTS				**$8,750**			**$1,806,230**	**$158,487**	**$158,487**	**$158,487**	**$158,487**	**$161,980**	**$161,980**	**$2,764,138**			
3% Charge for DII PMO/EA Services				**$263**	45%	55%	**$54,449**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$54,449**			
PROJECT TOTAL COSTS				**$9,013**			**$1,860,679**	**$158,487**	**$158,487**	**$158,487**	**$158,487**	**$161,980**	**$161,980**	**$2,818,587**			

USE OF FUNDS - END

SOURCE OF FUNDS (PAYMENT SCHEDULE BASED ON DELIVERABLES) - START

Revenue Source:							Year 1 (FY16)	Year 2 (FY17)	Year 3 (FY18)	Year 4 (FY19)	Year 5 (FY20)	Year 6 (FY21)	Year 7 (FY22)	TOTAL
DMH Operating Budget**	Year 1 paid with Vermont Equipment Revolving Fund Dollars						$1,700,537	$158,487	$158,487	$158,487	$158,487	$161,980	$161,980	$2,658,445
DMH Operating Budget							$160,142	$0	$0	$0	$0	$0	$0	$160,142
TOTAL:							**$1,860,679**	**$158,487**	**$158,487**	**$158,487**	**$158,487**	**$161,980**	**$161,980**	**$2,818,587**

SOURCE OF FUNDS - END

**** DMH Operating Budget Total Commitment**

DMH Operating Budget**	M&O						$160,142	$158,487	$158,487	$158,487	$158,487	$161,980	$161,980	$1,118,050
DMH Operating Budget - Payback of Vermont Equipment Revolving Fund	Payback over 5 years with added .003 Administrative Cost		$5,102				$341,128	$341,128	$341,128	$341,128	$341,128	$0	$0	$1,705,639
TOTAL:							**$501,270**	**$499,615**	**$499,615**	**$499,615**	**$499,615**	**$161,980**	**$161,980**	**$2,823,689**
GF Portion	Includes Year 1 M&O					45%	**$225,421**	**$224,677**	**$224,677**	**$224,677**	**$224,677**	**$72,842**	**$72,842**	**$1,269,813**
Federal Portion	Excludes Year 1 M&O					55%	**$275,849**	**$274,938**	**$274,938**	**$274,938**	**$274,938**	**$89,137**	**$89,137**	**$1,553,876**

OVERALL PROJECT CASH FLOW - START

							Year 1 (FY16)	Year 2 (FY17)	Year 3 (FY18)	Year 4 (FY19)	Year 5 (FY20)	Year 6 (FY21)	Year 7 (FY22)	TOTAL
Use							$1,860,679	$158,487	$158,487	$158,487	$158,487	$161,980	$161,980	$2,818,587
Source							$1,860,679	$158,487	$158,487	$158,487	$158,487	$161,980	$161,980	$2,818,587
Net Cash by Fiscal Year:							$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow:							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Potential Revenue Recovery:														
							$0	$0	$0	$0	$0	$0	$0	$0
Net Cash by Fiscal Year:							$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow:							**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

CASH FLOW - END

NET CHANGE IN OPERATING COSTS - START

							Year 1 (FY16)	Year 2 (FY17)	Year 3 (FY18)	Year 4 (FY19	Year 5 (FY20)	Year 6 (FY21)	Year 7 (FY22)	TOTAL
Proposed Operating Costs:														
M&O							$160,142	$158,487	$158,487	$158,487	$158,487	$161,980	$161,980	$1,118,050
Total: Proposed Operating Costs:							***$160,142***	***$158,487***	***$158,487***	***$158,487***	***$158,487***	***$161,980***	***$161,980***	***$1,118,050***
Current Operating Costs:														
Hardware							$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$35,000
Software							$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$13,000	$91,000
Paper							$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000	$35,000
Total: Current Operating Costs:							***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$23,000***	***$161,000***
Net Operating Cost Decrease/(Increase)							**($137,142)**	**($135,487)**	**($135,487)**	**($135,487)**	**($135,487)**	**($138,980)**	**($138,980)**	**($957,050)**

NET CHANGE IN OPERATING COSTS - END

NOTES / ASSUMPTIONS:

1. Includes base system maintenance and upgrades
2. No change in staffing anticipated

DMH EHR PROJECT
RISK REGISTER DESCRIPTION:

1. Risk Description: Provide a description of what the risk entails
2. Source of Risk: Project, Proposed Solution, Vendor or Other
3. Risk Rating: Risk ratings to indicate: Likelihood and probability of risk occurrence; Impact should risk occur; and Overall risk rating (high, medium or low priority)
4. Risk Strategy: State's Planned Risk Strategy: **Avoid, Mitigate, Transfer or Accept**
5. Timing of Risk Response: Describe the planned timing for carrying out the risk response (e.g. prior to the start of the project, during the Planning Phase, prior to implementation, etc.)
6. State's Planned Risk Response: Describe what the State plans to do (if anything) to address the risk
7. Reviewer's Assessment of State's Planned Response: Indicate if the planned response is adequate/appropriate in your judgment and if not what would you recommend.

NOTE: Hyperlinks are used on the Risk ID. From the Risk Register, CTL-CLICK on a link to see the Risk Response, or from the Risk Response, CTL-CLICK on a link to go back to the Risk Register.

RISK REGISTER:

Risk #:	Risk Description	Source of Risk	Risk Rating: Impact	Risk Rating: Probability	Risk Rating: Overall Risk	State Risk Strategy Summary (Avoid, Mitigate, Transfer, Accept)	Timing of Response	Reviewer Assessment of Response
1a	Budget/Funding: No issues. Using Vermont Equipment Revolving Fund. Federal Funding source is not clear.	Project	High	Low	Low	Mitigate	Prior to starting project	Risk adequately mitigated
2a	Contract Item: Service Level Agreement Compliance: Vendor was asked to complete a table from Template I, Section 3: SERVICE LEVEL REQUIREMENTS that identified, LIQUIDATED DAMAGES to be paid when not meeting certain desired components of the Service Level Agreement, yet the Vendor did not provide those amounts or percentages. DMH expects these items are going to be discussed during contract negotiations. This Risk is noted here to ensure that does in fact get resolved to DMH's satisfaction.	Contract	Medium	Low	Low	Negotiate/ Avoid	Prior to signing contract	To be reviewed when contract is negotiated
2b	Contract Item: Acceptance Criteria: DMH included specific Acceptance criteria/process in Section 2.07.03 in the RFP. The vendor took exception to this, and indicated willingness to discuss/negotiate. This Risk is noted here to ensure that does in fact get resolved to DMH's satisfaction.	Contract	Medium	Low	Low	Negotiate/ Avoid	Prior to signing contract	To be reviewed when contract is negotiated
2c	Contract Item: Connect Deliverables to Tasks: The Project Schedule provided as part of the original proposal did not include associated Deliverables, thus, not able to tie Tasks to Deliverables to Payments. CPSI was asked to tie Deliverables to the Task Schedule as part of the IR. See Section 4.4 of the IR for that table, and it is suggested using that as part of the contract.	Contract	Medium	Low	Low	Negotiate/ Avoid	Prior to signing contract	To be reviewed when contract is negotiated

3a	Vendor Risk: CPSI does not follow PMI Project Management practices, instead, use their own internally developed methodology. While CPSI success with other projects points to this being a low risk, DMH should explicitly accept CPSI Project Management methodology.	Project	Medium	Low	Low	Accept	Prior to starting project	Risk adequately mitigated
4a	SOV Service Level/Staffing: There are inadequate hours for care providers to perform both their care-related duties as well as provide time to this project.	Project	High	Low	Low	Mitigate	During Project	Risk adequately mitigated
5a	Project Management Staffing: Question whether CPSI is providing a true Project Manager to the project and whether 50% staffing by DMH Project Manager is adequate.	Project	Medium	Low	Low	Accept	Prior to starting project	Risk adequately mitigated
5b	SOV Project Implementation/SME Staffing – Risk of whether SME staff had adequate vision of how an EHR system can be truly leveraged, considering most of the staff have not used and EHR.	Project	High	Low	Low	Accept	During Project	Risk adequately mitigated
6a	Project Schedule: Most projects completed to date similar to VT are much shorter in duration that Vermont's. This is due to Vermont defining a longer project schedule in the RFP, to which CPSI agreed. This is just a note. Not a risk.	Project	Medium	Low	Low	Accept	Prior to starting project	Risk adequately mitigated
7a	Data Conversion: No risks noted. We'll use the 9 months project duration, which is a longer than usual project timeline for CPSI, to ensure this work is done.	Project	Low	Low	Low	Accept	Prior to starting project	Risk adequately mitigated
8a	Functionality: Template E – Functional Requirements – There are gaps in what was asked for and what is being delivered, based on Vendor response to RFP. Have these been accepted by DMH?	Project	Medium	Low	Low	Accept	Prior to starting project	Risk adequately mitigated
8b	Functionality: Template H – Non-Functional Requirements - There are gaps in what was asked for and what is being delivered, based on Vendor response to RFP. Have these been accepted by DMH?	Project	Medium	Low	Low	Accept	Prior to starting project	Risk adequately mitigated

9a	Interoperability: Interface with VHIE through VITL – There are two key issues: 1. Non-Technical: VHIE cannot accept data from a Psychiatric hospital due to 42CFRPart2; The State is working on another project to allow data to flow into the Exchange to allow "specialized consent" 2. Technical: While VITL has worked with CPSI previously as CPSI software is used in 3 VT Hospitals, and VITL has completed Admission/Discharge/Transfer data exchange with those hospitals, there are no current processes for automatically triggering the submission of a CCD (Continuity of Care Document) from CPSI. CCD submission is a manual process.	Project	Medium	Low	Low	Accept	During project	Risk adequately mitigated

RISK RESPONSE:

<table>
<tr><th>Risk #:</th><th>State's Planned Risk Response and Reviewer's Assessment of State's Risk Response</th></tr>
<tr><td>1a</td><td><u>STATE'S RISK RESPONSE:</u>
Funding for the project is already earmarked in the equipment revolving funds budget for fiscal year 2016 and funded by global commitment dollars.

<u>REVIEWER'S ASSESSMENT:</u>
Accept this response.</td></tr>
<tr><td>2a</td><td><u>STATE'S RISK RESPONSE:</u>
The State has drafted proposed percentages and penalty and will provide those to CPSI as part of the contract negotiation process.

A sample of the Service Level Requirements table from Template I, Section 3, is noted below.

<table>
<tr><th>SERVICE LEVEL REQUIRMENT NAME</th><th>SERVICE LEVEL REQUIREMENT DESCRIPTION</th><th>MEASUREMENT OF NONCOMPLIANCE</th><th>FREQUENCY OF MEASUREMENT</th><th>VENDOR ASSESSMENT OF LIQUIDATED DAMAGES (LD)</th></tr>
<tr><td>Virus Contamination</td><td>All software developed and delivered by the Vendor must be free of viruses.</td><td>Each virus that is included in software developed and delivered by the Vendor.</td><td>Monthly after deployment</td><td>[$ 1500 or 15%] per virus</td></tr>
<tr><td>On-line Availability</td><td>The components of the Solution under Vendor control as delivered into production shall be available at a level agreed to in the Contract (the contracted target level of availability). This will be chosen from one (1) of the three (3) availability levels shown in Table 4 Levels of Availability of the future EHR**.</td><td>Each tenth of percentage point less than the contracted level of availability.</td><td>Monthly after deployment</td><td>[$1500 or 15%] for each percentage point below the contracted level of availability for the month</td></tr>
</table>

<u>REVIEWER'S ASSESSMENT:</u>
Accept this response.</td></tr>
<tr><td>2b</td><td><u>STATE'S RISK RESPONSE:</u>
To be negotiated during contract discussions. Here is the section in question:

2.07.03 Acceptance
All Vendor deliverables are subject to review by the State prior to final approval, acceptance, and payment.

Acceptance of all Vendor deliverables will be completed via a Deliverables Acceptance Document (DAD) to be drafted by the State.

The State will have ten (10) working days to complete its review of the deliverables outlined in 2.08 Detailed Scope of Work. The State will accept or reject the deliverables in writing using Controlled Correspondence and the Deliverables Acceptance Document. In the event of the rejection of any deliverable, the Vendor shall be notified in</td></tr>
</table>

writing via Controlled Correspondence, giving the specific reason(s) for rejection. The Vendor shall have five (5) working days to correct the rejected deliverable and return it to the State via Controlled Correspondence. Deliverables must be tracked in a tracking tool approved by State.

REVIEWER'S ASSESSMENT:
Accept this response.

2c

STATE'S RISK RESPONSE:
To be negotiated during contract discussions.

A sample of the Date/Task/Deliverables Table is included below.

Date	Task	Deliverables
7/14-16	Site Evaluation and Patient Documentation Administrative Workshop at The Vermont Psychiatric Care Hospital (Manweeks 12) • Hardware Evaluation (Peripherals) • Financial Software • Enterprise Wide Scheduling • Payroll / Human Resources / Time & Attendance • Materials Management • Ancillary Applications • Pharmacy • Point of Care Applications	Project Kick-off Presentation Project Management Plan Project Work Plan, Work Breakdown Structure (WBS), and Schedule Requirements Analysis (Functional and Non-Functional) System Implementation Plan System Maintenance and Support Plan (includes verification of plan Preliminary Training Plan Initial System Design and Functional Specification Plan
7/24	Deadline for Key Financial Data Elements	
7/28-30	Site Evaluation at The Vermont Psychiatric Care Hospital (Manweeks 1) Inpatient Physician Applications	Requirements Analysis (Functional and Non-Functional)

REVIEWER'S ASSESSMENT:
Accept this response.

3a

STATE'S RISK RESPONSE:
DMH has noted this and accepts CPSI's PM processes. DMH also expects to discuss this during contract negotiations in order to fully understand and commit to CPSI's PM processes. In addition, CPSI has agreed to modify their process as much as possible to meet the State's needs.

REVIEWER'S ASSESSMENT:
Accept this response.

4a

STATE'S RISK RESPONSE:
VPCH will be hiring several temporary positions to cover the primary duties of staff who will be involved in the implementation of this project.

REVIEWER'S ASSESSMENT:
Accept this response.

5a	**STATE'S RISK RESPONSE:** Cheryl Burcham, PMP is the assigned Project Manager for this project and will dedicate 50 percent of her time to this project. We also have DII's Enterprise Project Management Office providing oversight. Phil Dessureau will be devoting time to the project oversight. **REVIEWER'S ASSESSMENT:** Accept this response.
5b	**STATE'S RISK RESPONSE:** VPCH will be hiring several temporary positions to cover the primary duties of staff who will be involved in the task shifts from current staff for the implementation of this project. **REVIEWER'S ASSESSMENT:** Accept this response.
6a	**STATE'S RISK RESPONSE:** The State is comfortable with the time frame which comes in under our 12 month requirement outlined in the RFP. **REVIEWER'S ASSESSMENT:** Accept this response.
7a	**STATE'S RISK RESPONSE:** The State realizes the current system is a legacy system with many unknowns. **REVIEWER'S ASSESSMENT:** Accept this response.
8a	**STATE'S RISK RESPONSE:** These gaps have been accepted by the State. Clarification was received on those gaps from CPSI and a comparable functionality was available. **REVIEWER'S ASSESSMENT:** Accept this response.
8b	**STATE'S RISK RESPONSE:** The State will address the gaps during contract negotiation. **REVIEWER'S ASSESSMENT:** Accept this response.
9a	**STATE'S RISK RESPONSE:** For Risk #1, DVHA is currently leading the charge with Blueprint to undertake a project to draft 42 CFR Prt.2 State policy for the VHIE along with draft functional requirements to provide to VITL, who is responsible for building a VHIE solution to accommodate Part 2 data. The project is not expected to start until the fall of 2015 and the perception is that it could be completed within the next couple years. During the interim the State plans to explore use Direct messaging, manual delivery, fax or other means to send documents to other providers on an as-needed basis. For Risk #2, the State accepts that CPSI is connected and everything is working except this one very advanced feature. There is a possibility that VPCH could end up exempt from sending information to VHIE using automatic triggers. According to Mike Gagnon, VITL cannot do anything with our data because there are no part 2 policies in place that resolve the federal requirement to separate and flag part 2 data. Internally, VPCH needs to work out the consent issue for patients who do not have the capability to

	understand and sign consent. The States immediate requirements are around receiving lab results and other data which VITL states is currently operational with the 3 hospitals that use CPSI. Part 2 policy would need to be resolved and the VITL system would need to be designed before the hospital could consider sending automatic CCDS. **REVIEWER'S ASSESSMENT:** Accept this response.