

**County of San Bernardino
Department of Behavioral Health
Mental Health Services Act (MHSA)**

**Capital Facilities and
Technological Needs Component**

Enclosure III – Information Technology Plan

June 17, 2009

County of San Bernardino
Mental Health Services Act Capital Facilities & Technological Needs Component

Enclosure III - Information Technology Plan Proposal

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**Enclosure 3
Exhibit 2**

Technological Needs Assessment

County Name: San Bernardino

Project Name:

Behavioral Health Management Information System (BHMIS) Replacement, Charon-Vax Server Upgrade, Data Warehouse Continuation, Electronic Health Record (EHR), Empowered Communication/SharePoint, Virtual Desktop/Server Environment

Provide A Technological Needs Assessment Which Addresses Each Of The Following Three Elements

1. County Technology Strategic Plan Template

(Small Counties have the Option to Not Complete this Section.)

This section includes assessment of the County's current status of technology solutions, its long-term business plan and the long-term technology plan that will define the ability of County Mental Health to achieve an **Integrated Information Systems Infrastructure** over time.

Current Technology Assessment

List below or attach the current technology Systems In Place.

1.1 Systems Overview

The County of San Bernardino Department of Behavioral Health (DBH) currently has a multitude of information systems in place to support the ultimate goal of providing a progressive system of seamless, accessible, and effective services that promote prevention, intervention, recovery, and resiliency for individuals, families, and communities.

The current systems environment includes disparate systems, resulting in a fragmented systems architecture that requires additional manual effort to support. DBH expects to achieve a fully Integrated Information Systems Infrastructure (IISI) that will eliminate inefficiencies that are inherent with the existing information systems architecture.

Refer to Addendum 1.0 – DBH Applications Diagram “As-is”

Refer to Addendum 1.1 – DBH Proposed Integrated Information Systems Infrastructure “To-be”

1.2 Hardware

Refer to Addendum 3.0

1.3 Software

Refer to Addendum 4.0

1.4 Support (i.e., Maintenance and/or Technical Support Agreements)

All system support agreement documentation will be available upon request. Currently, the department has support agreements with ECHO, InfoMC, Spectrasoft, IBM-Cognos, Cisco, Microsoft, Hewlett Packard, Dell, Brooks Internet Software, Hershey Technologies, SPSS, Tableau, Adventnet Inc., and County Information Services Department (ISD).

Plan To Achieve An Integrated Information Systems Infrastructure (IISI) To Support MHSA Services
Describe the plan to obtain the technology and resources not currently available in the county to implement and manage the IISI. (Counties may attach their IT Plans or complete the categories below.)

1.5 Describe how your Technological Needs Projects associated with the Integrated Information System Infrastructure will accomplish the goals of the County MHSA Three-Year Plan.

The County of San Bernardino Department of Behavioral Health (DBH) currently has a multitude of information systems in place to support the ultimate goal of providing a progressive system of seamless, accessible, and effective services that promote prevention, intervention, recovery, and resiliency for individuals, families, and communities.

The Mental Health Services Act (MHSA) provides funding for services and resources that promote wellness, recovery, and resiliency for adults and older adults with severe mental illness and for children and youth with serious emotional disturbances and their family members. In 2005, the County of San Bernardino Department of Behavioral Health (DBH) began an extensive Community Program Planning process that led to the development of a comprehensive Community Services and Supports (CSS) Plan detailing how San Bernardino County would strengthen its mental health system with the delivery of MHSA funded services to individuals with mental illness and their families. State Department of Mental Health (DMH) Notices 08-02, 08-09 and 08-21, describe the most recent opportunity the State has provided for San Bernardino County to receive MHSA funding. Additional MHSA funding for Technological Needs provides a unique opportunity to further strengthen the County's mental health system by increasing its infrastructure to promote the implementation and support the continued delivery of the county's MHSA programs.

Consistent with the MHSA Technology Component guidelines to Modernize and Transform Information Systems and Increase Consumer and Family Empowerment SBC-DBH has identified seven projects that will enable a collaborative decision-making process with service providers, consumers and families in all aspects of the mental health system, while providing technology solutions to significantly improve quality of care by providing current and accurate accounting of a consumers mental health history to the service provider, the consumer and their family, when appropriate. These projects were defined to meet input gathered from providers and consumers in two technology focus group meetings where the following concerns and/or desires were expressed; privacy and security of client information, real time recording and access of electronic records, improving coordination across clinics, improve reporting and claiming, mental health education, access to community resources, improve provider and consumer communication, improve outreach and interaction and improve quality of care to name a few. The projects are designed to provide for the development of a long-term integrated infrastructure for mental health to facilitate the highest quality, cost-effective services and supports for consumer and family wellness, recovery and resiliency.

Current clinical and business operations rely on labor intensive, paper-based manual processes and many non-integrated technology solutions that result in fragmented information, poor access to and sharing of information, and considerable duplication of effort for both consumers and service delivery staff. Current hardware and software systems are barely adequate to support the service, administrative, program monitoring, and consumer/family needs of existing MHSA Community Services and Supports (CSS) programs and services, much less the anticipated information technology needs of future programs and services that will be developed for the Prevention and Early Intervention (PEI), Workforce Education and Training (WET), and Innovation components.

The technology projects submitted in the enclosed SBC-DBH-IT Plan will facilitate accomplishment of the goals of SBC-DBH MHSA three-year plan by:

- Implementing a new Behavioral Health Information Management System to support the Department's MHSA plan to meet best practices requirements in providing services and support to the client, family and community partnerships.
- Provide high availability server environment for DBH.
- Utilize full system resources while increasing uptimes.
- Provide DBH with offsite disaster recovery location.
- Provide high availability virtual desktop environment for DBH.
- Secure mobile users and PHI by using VDI to secure PHI on County network.
- Provide easily managed desktop environment.
- Increase cost savings on deployment times, administration, and energy savings.
- Increase the number of Video Conferencing Units in Behavioral Health.
- Upgrade current units involved in the Tele-Psych program.
- Increase productivity by reducing travel times for employees.
- Electronic Health Records will provide immediate recording of and access to important client service information.
- Will ensure that services are fully integrated across departmental units and geographic regions.
- Will overcome logistic obstacles in the sharing of client service information and eliminate redundancy in record keeping and reduce or prevent diagnostic medication errors.

1.6 Describe the new technology system(s) required to achieve an Integrated Information System Infrastructure.

The core technology projects that will allow SBC-DBH to move towards achieving an IISI are:

- Charon-VAX Emulation Server Upgrade
- Data Warehouse Continuation
- Electronic Health Record
- Empowered Communication/SharePoint
- Integrated Information Management System

- Virtual Desktop/Server environment

As the county prepares for the implementation of a new information system funds will also be used to upgrade the servers associated with the Charon-VAX Emulation OTO project to meet current system resource demands and maintain the advancements in data collection, manipulation, and reporting. This will ensure participating consumers are provided with relevant services and allow providers to have unrestricted access to accurate and timely client service records.

The Data Warehouse Continuation project includes additional funding for software development, product licensure and training as funding for the original project was under estimated as well as the specific skill sets that are required to support the data mining software, which is yet to be purchased. The project has been proceeding on schedule and will be used to better analyze the extensive amount of disparate health systems data that will assist DBH in making improved operational and/or strategic decisions directly related to consumer plans for wellness, recovery and resiliency.

The Electronic Health Record (EHR) project will provide immediate recording of and access to important service information, ensuring that services are fully integrated across departmental units and geographic regions. Expedited access to the appropriate service records will ensure that client-participants are provided with the most relevant and useful services and that their service providers and teams will have correct, timely information, thereby aiding the decision-making process related to client care. The EHR will assist in automating and streamlining the service provider's workflow and improve communication and response to alleviate delays or gaps in client care. It will also reduce the possibility of medical errors, and eliminate redundancies of assessments across service locations. While the application will have a direct interface with the department's consumer episode and service tracking software its raw data will also be extracted and deposited into a data warehouse along with data from numerous collection points. Information analysis software will provide the department a methodology (Data Mining) to recognize, understand and exploit previously unknown data relationships to provide continuous innovation in the presentation of consumer services. This project will compliment and build upon any "Lite EHR" that may be available in any new data collection and billing system and is expected to have a project life cycle of six to eight years. An additional facet that will be a significant project milestone of this project will be the imaging of client medical records to enable the capability to store, manage, retrieve, and route documentation in a secure electronic environment. An image system will provide for ease of search and retrieval, Internet access of scanned images, space and storage reduction and preservation of document integrity.

The Empowered Communication/SharePoint project will allow the department to upgrade various meeting facilities that will have wireless communication, computers available to consumers and their families, expanded video conferencing capabilities to areas of underserved populations, and the development of a complex meeting facility that will contain an audio/video studio, video conferencing, and the ability to perform live web-casts to consumers and their families, providers and the general public and to accommodate forums related to Mental Health Services. In addition, a consumer and family Web page will be developed to ensure that applicable information is available regarding MHP and community resources, consumer and family surveys, a communication blog designed for consumers to share information, identification of provider local service sites, and the deployment of informational kiosks through-out the MHP's service area in an effort to broaden effective communication to the consumer, family members and the general community. The framework for the Empowered Communications project will consist of a Microsoft Office SharePoint platform which will provide a scalable environment that will support the development and creation of automated business processes, internal information portals, web-based applications, and a consumer care portal while increasing services to the Department of Behavioral Health's consumers.

The project to implement a new Integrated Information Management System will provide for case management and billing functionality and will support the departments MHSA plan to meet best practices requirements in providing services and support to the client, family and community partnerships, which is a cornerstone of the departments CSS plan. The project will provide a scalable

environment that will enable a collaborative decision-making process with service providers, consumers and families in all aspects of the mental health system. The system will provide ongoing consumer service related changes, advances in reporting technology for daily operations, performance improvement plans and outcomes reporting. The system will provide increased efficiency in the access, reporting and a secure environment for sharing client records. While the Mental Health (MH) application will reside in a stand-alone environment its raw data will be extracted and deposited into a data warehouse along with data from numerous collection points. Information analysis software will provide the department a methodology (Data Mining) to recognize, understand and exploit previously unknown data relationships to meet its nine defined objectives for implementing the MHSA and providing continuous innovation in the presentation of consumer services.

The departments Virtual Desktop/Server project will consist of two separate virtual infrastructures, the first is a virtual desktop environment that will support departmental staff in day to day business processes while securing patient health information in a data center environment. This infrastructure will also support public access computers for consumers without compromising data integrity and security. The virtual server infrastructure will support the desktop environment functions of data capture, manipulation and reporting of all consumer service activity in an expedited fashion and expedite the deployment of new technology solutions. The virtual network will also allow for the reduction of infrastructure administrative cost, as well as, ensuring participating consumers are provided with relevant services, as providers and teams will have unrestricted access to accurate and timely data.

1.7 - Note the Implementation Resources Currently Available

- Oversight Committee: Yes No
- Project Manager: Yes No
- Budget: Yes No
- Implementation Staff in Place: Yes No
- Project Priorities Determined: Yes No

1.8 - Describe Plan To Complete Resources Marked “No” Above.

In section 1.7, SBC-DBH identified that in respect to the technology needs projects outlined in the enclosure 3 documents, that a need for funding will be a requirement as well as the need for additional resources to assist in moving the projects from conception through implementation. SBC-DBH received funding to support four MHSA one-time-only (OTO) projects and that money has been spent or earmarked for the completion of these projects. As that funding has been exhausted, further MHSA funding is required to carry on the IT technology needs projects in support of SBC-DBH’s CSS plan.

Some of the funding will be used to assist in paying for the necessary staffing resources to reverse the staff in place item from a no to a yes. SBC-DBH’s intentions are to address the staffing concerns on two fronts: The first would be to assign in place staff to work exclusively on the new technology needs projects, but only use the funding to support a calculated portion of their salary based upon MHSA project time contributions.

Additionally, outside resources (consultants/contractors) with the required skill sets to be a contributing factor in the timely and successful completion of MHSA projects will be recruited and funded by MHSA. The outside resources will be used as a catalyst to bolster SBC-DBH project resources. Again, depending on the projects to which they are assigned, their tenure will be determined based on the apparent need of services. They will also serve as a knowledge transfer agent, providing education and

training opportunities to in-house staff to ensure that the identified skill sets will be in place to provide long term sustainability and support of the MHSA IT projects. However, to promote long term sustainability of the MHSA IT projects, formal education and training will be required for those staff identified for each respective project.

Additionally, the contractors will serve as a knowledge transfer agent to be used and in-house staff will be provided education and training opportunities to ensure the identified skill sets will be transferred to IT staff to provide long term sustainability and support of the MHSA IT projects.

1.9 - Describe the Technological Needs Project priorities and their relationship to supporting the MHSA Programs in the County.

Current Technological Needs Projects in order of priority are:

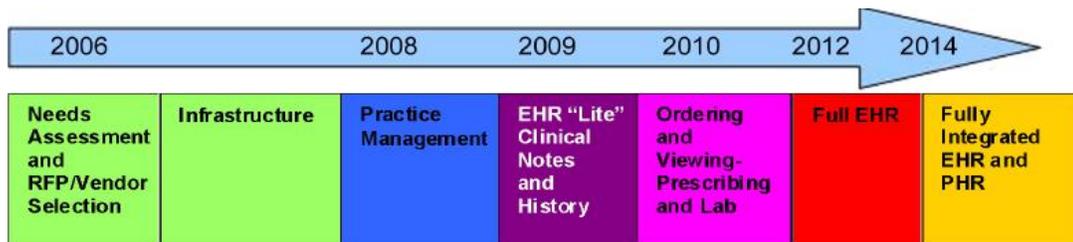
Priority	Project
1	Behavioral Health Management Information System (BHMISS) Replacement
2	Empowered Communication/SharePoint
3	Data Warehouse Continuation
4	Electronic Health Record (EHR)
5	Virtual Desktop/Server Environment
6	Charon-Vax Server Upgrade

2. Technological Needs Roadmap Template

This section includes a Plan, Schedule, and Approach to achieving an Integrated Information Systems Infrastructure. This Roadmap reflects the County’s overall technological needs.

Complete a Proposed Implementation Timeline with the Following Major Milestones.

2.1 List Integrated Information Systems Infrastructure Implementation Plan and Schedule or Attach a Current Roadmap (example below).



Refer to Addendum 2.0 through 2.6

2.2 Training and Schedule (List or provide in Timeline Format...Example Below)

Training Schedule for 2008	J	F	M	A	M	J	J	A	S	O	N	D
	a	e	a	p	a	u	u	u	e	c	o	e
	n	b	r	r	y	n	i	g	p	t	v	c
Basic System Nav	X											
Admin Staff	X											
Clinicians		X										
Contract Providers		X										
Client Look-up			X									

Each proposed MHSA technology project will have a comprehensive project plan and risk assessment performed prior to implementation. The project plans will cover initialization thru post-implementation phases and have resources assigned to each project task. Project plans will have identifiable training matrixes where applicable. Training plans will be developed in conjunction with vendors.

2.3 Describe your communication approach to the Integrated Information Infrastructure with Stakeholders (i.e., Clients and Family Members, Clinicians, and Contract Providers).

There are multiple forums in which DBH will communicate MHSA technology project approach and progress with stakeholders such as clients, family members, clinicians, contract providers, impacted business units, State DMH, and Mental Health Commission (MHC), Community Policy Advisory Committee (CPAC), Information Systems Steering Committee (ISC), and MHSA Executive Committee.

In addition to those forums there will be websites and/or Sharepoint sites developed to provide all stakeholders access to online electronic status reports related to all MHSA technology projects.

2.4 Inventory of Current Systems (May include System Overview provided in County Technology Strategic Plan).

Refer to Addendum 3.0 and 3.1

2.5 Please attach your Work Flow Assessment Plan and provide Schedule and List of Staff and Consultants Identified (May complete during the Implementation of the Project or RFP).

The department is currently performing an overall assessment of departmental business workflows as part of a process that needs to be completed prior to the issuance of an RFP for the BHMIS replacement. This effort is being managed by an outside consultant in conjunction with the Department’s Business Process Oversight Committee (BPOC) and Quality Management unit (QM). The focus of these efforts will be to document current process workflows, re-engineer those business processes to eliminate non-value added activities where appropriate, and establish streamlined business processes in correlation with the department’s goal of working towards an integrated information systems infrastructure that supports departmental business functions. The focal points are those processes that impact client services, billing, appointment scheduling, clinical business processes, claiming, and information technology.

Additionally, the BPOC and QM unit will have ongoing responsibility in the evaluation of departmental workflows and/or business processes.

2.6 Proposed EHR component purchases [May include information on Project Proposal(s)].

There will be a full accounting and requirements definition process performed in the department's selection process for an EHR before an RFP is issued. Since an EHR vendor has not been selected at this time, but will be identified through the RFP process, it will be difficult to project what the actual EHR components will be. However, it is anticipated that the EHR will include one or more of the following components listed below:

1. HL7 capable integration engine software
2. Vendor specific modules within a consolidated BHMIS
3. 3rd party EHR software or supporting modules such as:
 - Document management software
 - Electronic signature
 - Web services
 - Fax services
 - Scanning services
 - CPOE
4. Other supporting software to facilitate system implementation or integration
5. Servers
6. Computer workstations
7. Other supporting hardware or peripherals to facilitate system implementation

2.7 Vendor Selection Criteria (Such as Request for Proposal).

DBH will select vendors for each respective project via an RFP process where applicable. Review of proposals and vendor selection will be performed in a manner that is consistent with County policies and procedures.

2.8 Cost Estimates associated with achieving the Integrated Information Systems Infrastructure.

Total cost estimate for achieving an Integrated Information Systems Infrastructure is **\$13,128,060**.

3. County Personnel Analysis (Management and Staffing)
 (Small Counties have the Option to Not Complete this Section.)

Major Information Technology Positions	Estimated #FTE Authorized	Position Hard to Fill? 1=Yes 0=No	Estimated #FTE Needed in addition to #FTE Authorized
A. Information Technology Staff (Direct Services)			
Office of Information Technology Manager	1	1	0
Application Development	3	0	0
Application Support/Maintenance	4	1	0
Business Systems Analysis	2	1	0
Desktop Support 2nd and 3rd Level	5	0	0
Server Administration	3	0	0
Subtotal A	18	3	0
B. Project Managerial and Supervisory			
CEO or Manager Above Direct Supervisor	3	1	0
Supervising Project Manager	1	1	0
Project Coordinator	4	1	0
Other Project Leads (See Business Systems Analysis Positions Above)	2	1	0
Subtotal B	10	4	0
C. Technology Support Staff			
Research & Evaluation Technology Support Staff			
Chief of Research & Evaluation	1	1	0
Staff Analyst	2	0	0
Statistical Analyst	1	0	0
Automated Systems Analyst	2	0	0
Health Data Analyst	1	0	0

Administrative Supervisor	1	0	0
Project Coordinator (Outsourced - County ISD)	1	1	0
Application Development (Outsourced - County ISD)	3	0	0
Application Support/Maintenance (Outsourced - County ISD)	2	1	0
Information Security (Outsourced - County ISD)	1	0	0
Network Administration (Outsourced - County ISD)	1	0	0
Data Center Operations (Outsourced - County ISD)	1	0	0
Helpdesk Support 1st Level (Outsourced - County ISD)	1	0	0
Server Administration (Outsourced - County ISD)	1	0	0
Clerical, Secretary, Administrative Assistants	3	0	0
Subtotal C	22	3	0
Total County Technology Workforce (A + B + C)			
	50	10	0

Enclosure 3
Exhibit 1

Face Sheet
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Charon-Vax Server Upgrade

This Technological Needs Project Proposal is consistent with and supportive of the vision, values, mission, goals, objectives, and proposed actions of the Mental Health Services Act (MHSA) Capital Facilities and Technological Needs Component Proposal.

We are planning to, or have a strategy to modernize and transform clinical and administrative systems to improve quality of care, operational efficiency, and cost effectiveness. Our Roadmap for moving toward an Integrated Information Systems Infrastructure, as described in our Technological Needs Assessment, has been completed. This Project Proposal also supports the Roadmap.

We recognize the need for increasing client and family empowerment by providing tools for secure client and family access to health information within a wide variety of public and private settings. The Proposal addresses these goals.

This proposed Project has been developed with contributions from stakeholders, the public and our contract service providers, in accordance with California Code of Regulations (CCR), Title 9, Sections 3300, 3310 and 3315(b). The draft proposal was circulated for 30 days to stakeholders for review and comment. All input has been considered, with adjustments made as appropriate.

Mental Health Services Act funds proposed in this Project are compliant with CCR Section 3410, non-supplant.

All documents in the attached Proposal are true and correct.

County Director

Name: Allan Rawland

Signature: 

Phone: (909) 382-3133

Date: 06-17-2009

Email: arawland@dbh.sbcounty.gov

Chief Information Officer

Name: Michael Day

Signature: 

Phone: (909) 382-3061

Date: 06-17-2009

Email: mday@dbh.sbcounty.gov

County Director

Name: _____

Signature: _____

Phone: _____

Date: _____

Email: _____

Enclosure 3
Exhibit 3

Technological Needs Project Proposal Description

County Name: San Bernardino Date: June 17, 2009

Project Name:

Check at Least One Box from Each Group that Describes this MHSA Technological Needs Project

- New System.
- Extend the Number of Users of an Existing System.
- Extend the Functionality of an Existing System.
- Supports Goal of Modernization / Transformation.
- Support Goal of Client and Family Empowerment.

Indicate the Type of MHSA Technological Needs Project

> Electronic Health Record (EHR) System Projects (Check All that Apply)

- Infrastructure, Security, Privacy.
- Practice Management.
- Clinical Data Management.
- Computerized Provider Order Entry.
- Full Electronic Health Record (EHR) with Interoperability Components (Example: Standard Data Exchanges with Other Counties, Contract Providers, Labs, Pharmacies).

> Client and Family Empowerment Projects

- Client/Family Access to Computing Resources Projects.
- Personal Health Record (PHR) System Projects
- Online Information Resource Projects (Expansion / Leveraging Information-Sharing Services)

> Other Technological Needs Projects that Support MHSA Operations

- Telemedicine and Other Rural / Underserved Service Access Methods.
- Pilot Projects to Monitor New Programs and Service Outcome Improvement.
- Data Warehousing Projects / Decision Support.
- Imaging / Paper Conversion Projects.
- Other.

Indicate the Technological Needs Project Implementation Approach

Custom Application

Name of Consultant or Vendor (if applicable):

Not applicable.

Commercial Off-The -Shelf (COTS) System

Name of Vendor:

Not applicable.

Product Installation

Name of Consultant or Vendor (if applicable):

The project implementation approach will be to utilize County Information Services Department's (ISD) server management team to plan, complete risk analysis, test, and migrate the existing Charon-Vax emulation environment supporting ECHO's InSyst information system to a new HP ProLiant server environment. The new server environment will replace infrastructure that is approaching end of life and will provide additional capacity for data staging that is part of an extraction, transform, load (ETL) process used for importing clinical data to the department's data warehouse environment. In addition, data transfer rates, memory speeds, availability of client service information, and the system's ability to support multiple concurrent connections will improve.

Software Installation

Name of Vendor:

Not applicable.

Project Description and Evaluation Criteria (Detailed Instructions)

Small County? Yes No

Complete Each Section Listed Below.

Small counties (under 200,000 in population) have the Option of submitting a Reduced Project Proposal; however, they must describe how these criteria will be addressed during the implementation of the Project.

A completed Technological Needs Assessment is required in addition to the Technological Needs Project Proposal. Technological Needs Project Proposals that are for planning or preparation of technology are not required to include hardware, software, interagency, training, or security considerations. These items are indicated with an “*”.

Project Management Overview (Medium-to-High Risk Projects)

Counties must provide a Project Management Overview based on the risk of the proposed Project. The Project must be assessed for **Risk Level** using the worksheet in **Appendix A**.

For Projects with Medium to High Risk, the County shall provide information in the following Project management areas.

Independent Project Oversight

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Integration Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Scope Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Time Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Cost Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Quality Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Human Resource Management (Consultants, Vendors, In-House Staff)

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Communications Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

Procurement Management

Refer to Appendix A - Project Risk Assessment Score = 12 (Low Risk Project Rating)

For Low-Risk Projects, as determined by the Worksheet in Appendix A, the above Project Management Reporting is Not Required.

Instead, the County shall provide a Project Management Overview that describes the steps from concept to completion in sufficient detail to assure the DMH Technological Needs Project evaluators that the proposed solution can be successfully accomplished. For some Technological Needs Projects, the overview may be developed in conjunction with the vendor and may be provided after vendor selection.

Refer to Charon-Vax Server Upgrade Project Plan (Addendum 6.0)

Project Cost

Technological Needs Projects will be reviewed in terms of their cost justification. The appropriate use of resources and the sustainability of the system on an ongoing basis should be highlighted. Costs should be forecasted on a Quarterly basis for the life of the Project.

Costs on a Yearly and Total basis will also be required for input on Exhibit 3 - Budget Summary.

Refer to Exhibit 4 and Addendum 7.0.

Nature of the Project

Extent to which the Project is Critical to the Accomplishment of the County, MHSA, and DMH Goals and Objectives.

The Charon-Vax Server Upgrade project is critical to the accomplishment of the County, MHSA, and DMH goals and objectives as the upgrades will more effectively meet current system resource demands and maintain the advancements in data collection, manipulation, and reporting. This will ensure that consumers are provided with the relevant services and allow providers to have unrestricted access to accurate and timely client service records. Additionally, the upgrade will provide needed capacity for data staging that is an essential part of an extraction, transform, load (ETL) process used for importing clinical data to the department's data warehouse environment.

Degree of Centralization or Decentralization Required for this Activity.

The Charon-Vax servers will be fully centralized in the County's Datacenter as this location allows for the County to maintain security of information while maintaining system performance and backup retention.

Data Communication Requirements associated with the Activity.

This project will utilize the County's existing wide area network and existing firewall to protect the systems from outside attacks that may originate from the internet. The County's existing virtual private network concentrator (VPN) will provide encrypted data access to providers that are outside of the County LAN/WAN infrastructure.

Characteristics of the Data to be Collected and Processed (i.e., source, volume, volatility, distribution, and security or confidentiality).

Client service data for the department's 30,000 unduplicated clients will be collected into the ECHO InSyst information system running on the Charon-Vax emulation environment by County and Contract staff. Collected data is distributed to staff, decision makers, and stakeholders in the form of standardized paper and electronic reports generated by querying the transactional database. Security and confidentiality of the data is ensured through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication.

Degree to which the Technology can be Integrated with Other Parts of a System in achieving the Integrated Information Systems Infrastructure.

The upgraded Charon-Vax emulation environment supporting ECHO's InSyst information system will be an integral part of the department's data warehouse architecture which is currently in development. The servers will support data staging that is part of an extraction, transform, load (ETL) process used for importing client service related data into data marts which will be used for reporting and analysis.

Hardware Considerations * (As Applicable)**Compatibility with Existing Hardware, Including Telecommunications Equipment.**

The proposed server upgrades will maintain compatibility with County ISD and vendor standards with respect to hardware specifications and interoperability.

Physical Space Requirements Necessary for Proper Operation of the Equipment.

Physical space for servers associated with this project will be provided by County ISD. Currently, the ISD datacenter has the physical space capacity to accommodate the housing of servers for the Charon-Vax Server Upgrade project.

Hardware Maintenance.

All hardware purchased for this project will be covered under maintenance agreements through the vendor.

Existing Capacity, Immediate Required Capacity and Future Capacity.

The existing Charon-Vax servers do not provide adequate resources to effectively meet current system demands and allow for ideal system provisioning. At the present time, the Insyst database environments, reporting processes, and data extraction processes used for data warehousing are contributing to disk contention on the existing servers and as a result, additional throughput is required. There is an immediate need to increase the capacity of this server in the areas of data transfer rates, memory speed, processor speed, and storage capacity. Currently, there is not any anticipated need for additional server capacity beyond a three year time frame as the department plans to implement a new Behavioral Health Management Information System (BHMIS).

Backup Processing Capability.

Backups for the Insyst and server applications are completed daily. The backups are maintained at the County ISD data operations center. Backup copies are rotated to an off-site storage facility to mitigate the potential for unexpected or sudden loss of archived data at the primary storage site and vice versa. The nightly backup and tape rotation system is being evaluated for upgrade opportunities to support 256-bit AES hardware-based encryption.

Software Considerations * (As Applicable)**Compatibility of Computer Languages with Existing and Planned Activities.**

Not applicable.

Maintenance of the Proposed Software (e.g., vendor-supplied).

The existing emulation software for the Insyst application has been in use in excess of 3 years and requires no modification to support migration to a new server environment. However, the vendor support agreement for the Charon-Vax software will be extended as part of this project.

Availability of Complete Documentation of Software Capabilities.

Through vendors, complete documentation of all software used is currently available and will remain available for this project.

Availability of Necessary Security Features as defined in DMH Standards noted in Appendix B.

Not applicable.

Ability of the Software to meet Current Technology Standards or be Modified to meet them in the future.

The ability of the software to meet future technology standards will be evaluated as the department plans to implement a new BHMIS within the next several years. Nevertheless, the upgraded Charon-Vax environment will continue to serve as a key component in the department's overall integrated information system architecture serving as our current BHMIS which feeds the data warehouse until it is replaced, after which time the department will evaluate options as to maintaining or performing data migration of historical data from the existing BHMIS to the new BHMIS.

Interagency Considerations* (As Applicable)

Describe the County's interfaces with contract service providers and state and local agencies. Consideration must be given to compatibility of communications and sharing of data. The information technology needs of contract service providers must be considered in the local planning process.

All existing technologies and processes that support the sharing of data between contract service providers, state, and local agencies will remain intact. This includes service data uploads by providers through secure FTP, direct system access through VPN, and other secure extraction/upload reporting processes.

Training and Implementation * (As Applicable)

Describe the current status of workflow and the proposed process for assessment, implementation and training of new technology being considered.

Current status of workflow is not applicable for this project. The proposed process for assessment, implementation, and training of technology being considered for this project is to utilize existing County staff responsible for system administration of the existing Charon-Vax environment to plan, test, implement, and transition departmental Insyst users over to the new platform while project oversight is carried out by the department project manager. From an end-user perspective, no additional training will be required for implementation of this project as the Insyst application running on top of the Charon-Vax software will not be changed. This implementation is expected to be seamless to the end-user.

Security Strategy * (As Applicable)

Describe the County's policies and procedures related to Privacy and Security for the Project as they may differ from general Privacy and Security processes.

Protecting Data Security and Privacy.

This project and the data residing on the servers will continue to be administered in such a way that meets or exceeds data security and privacy policies the department is current subject to including County, department, HIPAA, AB211, SB541, and any other State or Federal regulations. This includes maintaining the security and confidentiality of the data through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication. The County has a privacy and security committee consisting of members belonging to various departments whose purpose is to ensure that all data security and privacy standards are maintained at a meets or exceeds level. The department also continually scrutinizes all technology to ensure compliance with all applicable policies and regulations.

Operational Recovery Planning.

The department is currently evaluating options in implementing a fully functional redundant copy of the Insyst application that could be utilized in the event of a failure of the primary server. One of the requirements in doing this is to have the system resources such as disk capacity, memory, and additional I/O capability to effectively provision multiple environments on the server infrastructure. One of the current servers is a test server, but can also serve as a "hot" standby environment in the event that the primary system fails.

Business Continuity Planning.

The SBC-DBH has in place a Departmental Emergency Operations Plan (DEOP) which places emphasis on manual business processes of essential functions to use in place of technology wherever possible in an effort to restore the department's ability to provide client services in the shortest time frame possible. A copy of the DEOP is available upon request.

Emergency Response Planning.

The DEOP that is in place serves to provide guidance and procedures to prepare for and respond to significant or catastrophic natural, environmental, or conflict related risks/events that produce situations requiring a coordinated response. The primary goals of that plan are to protect life and property, preserve infrastructure, and continue the operations of government. As that relates to the Charon-Vax server environment which hosts the Insyst BHMIS, it categorizes that data system as critical to carrying out DBH functions and prioritizes accordingly that the assessment and preservation of business critical data systems must be achieved.

Health Information Portability and Accountability Act (HIPAA) Compliance.

The County and department have policies in place that ensure compliance with HIPAA requirements for maintaining the confidentiality and security of patient health information (PHI). These policies encompass physical, administrative, and technical safeguards.

State and Federal Laws and Regulations.

The department will ensure that the Charon-Vax environment maintains compliance with all applicable state, federal, and local laws, ordinances, and regulations regarding the security and privacy of PHI.

Project Sponsor(s) Commitments [Small Counties May Elect to not Complete this Section]

Sponsor(s) Name(s) and Title(s)

Identify the Project Sponsor Name and Title. If multiple Sponsors, identify each separately.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Commitment

Describe each Sponsor's commitment to the success of the Project, identifying resource and management commitment.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

As Director of the County of San Bernardino Department of Behavioral Health (DBH), Mr. Rawland has overall responsibility for the implementation and administration of all MHSA programs within San Bernardino County. Additionally, he has overall responsibility for all MHSA component planning activities and is committed to the successful completion of the Technology Needs Projects. Mr. Rawland is fully committed to modernizing and transforming DBH clinical and administrative information systems in order to improve operational efficiency, quality of care, and cost effectiveness in support of the goals and objectives of the Mental Health Services Act (MHSA). He will ensure that identified project resources such as County and DBH Information Technology staff, supervisors, managers, program support staff, as well as information technology consultants and vendors are available to support the timely and successful completion of this project.

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

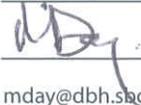
Mr. Day has overall responsibility for the planning and implementation of technology related projects supporting MHSA within San Bernardino County. He is fully committed to ensuring that the technology implemented supports the goals and objectives of the MHSA including increasing client and family empowerment through providing the tools necessary for secure client and family access to health information that is culturally and linguistically competent within a variety of public and private settings. He envisions a future information systems infrastructure that is modernized and transformed to ensure quality of care, parity, operational efficiency, and cost effectiveness. In addition to high level oversight and guidance, Mr. Day will work closely with the project manager and implementation team to ensure that project goals are met and timely completion is achieved.

Approvals/Contacts

Please include separate signoff sheet with the Names, Titles, Phone, E-mail, Signatures, and Dates for:

Individual(s) responsible for preparation of this Exhibit, such as the Project Lead or Project Sponsor(s).

Signatures

Prepared By			
Name:	Michael Day	Title:	Business Applications Manager
Signature:		Date:	06-17-2009
		Phone:	(909) 382-3061
Email Address:	mday@dbh.sbcounty.gov		
Name:	_____	Title:	_____
Signature:	_____	Date:	_____
		Phone:	_____
Email Address:	_____		

Enclosure 3
Exhibit 4

Budget Summary For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Charon-Vax Server Upgrade

(List Dollars in Thousands)

Category	(1) 08/09	(2) 09/10	(3) 10/11	(4) Future Years	(5) Total One-time Costs (1+2+3+4)	(6) Estimated Annual Ongoing Costs*
Personnel						
DBH Staff - 60 Hours		2,836			2,836	
ISD Server Management - 60 Hours		2,836			2,836	
Total Staff (Salaries and Benefits)		5,672				
Hardware						
Hardware						
From Exhibit 2		45,700			45,700	
Total Hardware		45,700			45,700	
Software						
Software						
From Exhibit 2						
Total Software						
Contract Services (list services to be provided)						
Emulation Software Vendor Support		10,000			10,000	
Total Contract Services		10,000			10,000	
Administrative Overhead						
Other Expenses (Describe)						
Total Costs (A)		61,372			61,372	
Total Offsetting Revenues (B) **						
MHSA Funding Requirements (A-B)		61,372			61,372	
* Annual Costs are the ongoing costs required to maintain the technology infrastructure after the one-time implementation.						
** For Projects providing services to Multiple-Program Clients (e.g., Mental Health and Alcohol and Drug Program clients), Attach a Description of Estimated Benefits and Project Costs allocated to Each Program.						

Notes:

As defined in Enclosure 1, this project is an upgrade to San Bernardino County's One Time Only (OTO) Project - Charon-Vax Emulation Software Implementation.

Enclosure 3
Exhibit 5

Stakeholder Participation For Technological Needs Project Proposal

County Name:

Project Name:

Counties are to provide a short summary of their Community Planning Process (for Projects), to include identifying stakeholder entities involved and the nature of the planning process; for example, description of the use of focus groups, planning meetings, teleconferences, electronic communication, and/or the use of regional partnerships.

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	08-06-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-01-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-03-2008
General Public	Stakeholder Public Comment Period Enclosure 1 Exhibits were posted on the department's internet site for a 30 day comment period (11-5-2008 thru 12-5-2008)	11-05-2008
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	11-06-2008
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	11-20-2008

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	01-28-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	03-16-2009
General Public	Stakeholder Public Comment Period Enclosure 3 Exhibits were posted on the department's internet site for a 30 day comment period (4-10-2009 thru 5-10-2009)	04-10-2009
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	05/21/2009
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	06-04-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	06-04-2009

APPENDIX A – PROJECT RISK ASSESSMENT – CHARON-VAX SERVER UPGRADE

Category		Factor	Rating	Score
Estimated Cost of Project		Over \$5 million	6	1
		Over \$3 million	5	
		Over \$500,00	2	
		Under \$ 500,000	1	
Project Manager Experience				
Like Projects Completed in a “key staff” role		None	3	1
		One	2	
		Two or More	1	
Team Experience				
Like Projects Completed by at least 75% Of Key Staff		None	3	1
		One	2	
		Two or More	1	
Elements of Project Type				
Hardware	New Install	Local Desktop/Server	1	2
		Distributed/Enterprise Server	3	
	Update/Upgrade	Local Desktop/Server	1	
		Distributed/Enterprise Server	2	
	Infrastructure	Local Network Cabling	1	
		Distributed Network	2	
Data Center/Network Operations Center		3		
Software	Custom Development-Application Service Provider		5	5
	COTS* Installation	“Off-the-Shelf”	1	
		Modified COTS	3	
	Number of Users	Over 1,000	5	
		Over 100	3	
		Over 20	2	
		Under 20	1	
	Architecture	Browser/thin client based	1	
Two-Tier (client/server)		2		
Multi-Tier (client & web, database, application, etc. servers)		3		
*Commercial Off-The-Shelf Software				
Total Score				12

Total Score	Project Risk Rating	
25 - 31	High	
16 - 24	Medium	
8 - 15	Low	✓

Enclosure 3
Exhibit 1

Face Sheet
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Data Warehouse Continuation

This Technological Needs Project Proposal is consistent with and supportive of the vision, values, mission, goals, objectives, and proposed actions of the Mental Health Services Act (MHSA) Capital Facilities and Technological Needs Component Proposal.

We are planning to, or have a strategy to modernize and transform clinical and administrative systems to improve quality of care, operational efficiency, and cost effectiveness. Our Roadmap for moving toward an Integrated Information Systems Infrastructure, as described in our Technological Needs Assessment, has been completed. This Project Proposal also supports the Roadmap.

We recognize the need for increasing client and family empowerment by providing tools for secure client and family access to health information within a wide variety of public and private settings. The Proposal addresses these goals.

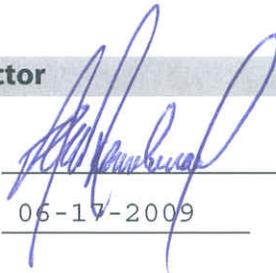
This proposed Project has been developed with contributions from stakeholders, the public and our contract service providers, in accordance with California Code of Regulations (CCR), Title 9, Sections 3300, 3310 and 3315(b). The draft proposal was circulated for 30 days to stakeholders for review and comment. All input has been considered, with adjustments made as appropriate.

Mental Health Services Act funds proposed in this Project are compliant with CCR Section 3410, non-supplant.

All documents in the attached Proposal are true and correct.

County Director

Name: Allan Rawland

Signature: 

Phone: (909) 382-3133

Date: 06-17-2009

Email: arawland@dbh.sbcounty.gov

Chief Information Officer

Name: Michael Day

Signature: 

Phone: (909) 382-3061

Date: 06-17-2009

Email: mday@dbh.sbcounty.gov

County Director

Name: _____

Signature: _____

Phone: _____

Date: _____

Email: _____

Enclosure 3
Exhibit 3

Technological Needs Project Proposal Description

County Name: San Bernardino Date: June 17, 2009

Project Name: Data Warehouse Continuation

Check at Least One Box from Each Group that Describes this MHSA Technological Needs Project

- New System.
- Extend the Number of Users of an Existing System.
- Extend the Functionality of an Existing System.
- Supports Goal of Modernization / Transformation.
- Support Goal of Client and Family Empowerment.

Indicate the Type of MHSA Technological Needs Project

> Electronic Health Record (EHR) System Projects (Check All that Apply)

- Infrastructure, Security, Privacy.
- Practice Management.
- Clinical Data Management.
- Computerized Provider Order Entry.
- Full Electronic Health Record (EHR) with Interoperability Components (Example: Standard Data Exchanges with Other Counties, Contract Providers, Labs, Pharmacies).

> Client and Family Empowerment Projects

- Client/Family Access to Computing Resources Projects.
- Personal Health Record (PHR) System Projects
- Online Information Resource Projects (Expansion / Leveraging Information-Sharing Services)

> Other Technological Needs Projects that Support MHSA Operations

- Telemedicine and Other Rural / Underserved Service Access Methods.
- Pilot Projects to Monitor New Programs and Service Outcome Improvement.
- Data Warehousing Projects / Decision Support.
- Imaging / Paper Conversion Projects.
- Other.

Indicate the Technological Needs Project Implementation Approach

Custom Application

Name of Consultant or Vendor (if applicable):

Not applicable.

Commercial Off-The -Shelf (COTS) System

Name of Vendor:

A Request for Information (RFI) has been submitted by the department, seeking information about the software capabilities of various data mining software vendors. Information gathered from the RFI will be used to assist in the decision making process for data mining software selection as well as for the development of the Statement of Work (SOW) that is associated with the Request for Proposal (RFP).

Product Installation

Name of Consultant or Vendor (if applicable):

To be determined via an RFP Process.

Software Installation

Name of Vendor:

To be determined via an RFP Process.

Project Description and Evaluation Criteria (Detailed Instructions)

Small County? Yes No

Complete Each Section Listed Below.

Small counties (under 200,000 in population) have the Option of submitting a Reduced Project Proposal; however, they must describe how these criteria will be addressed during the implementation of the Project.

A completed Technological Needs Assessment is required in addition to the Technological Needs Project Proposal. Technological Needs Project Proposals that are for planning or preparation of technology are not required to include hardware, software, interagency, training, or security considerations. These items are indicated with an “*”.

Project Management Overview (Medium-to-High Risk Projects)

Counties must provide a Project Management Overview based on the risk of the proposed Project. The Project must be assessed for **Risk Level** using the worksheet in **Appendix A**.

For Projects with Medium to High Risk, the County shall provide information in the following Project management areas.

Independent Project Oversight

Oversight of the Data Warehouse Continuation project will be provided by the SBC-DBH Information Steering Committee (ISC), the SBC-DBH Executive Steering Committee (ESC), the County Information Services Department (ISD) Application Development Division Chief, the DBH Office of Information Technology Manager, the Community Policy Advisory Committee (CPAC) the Mental Health Commission (MHC) and an independent consulting firm. The sources of independent project oversight are described below.

The ISC consists of stakeholders that represent contract providers, consumers, families, service programs, DBH Compliance, DBH Quality Management, and Information Technology. Together, they provide clinical, strategic, and operational guidance to information system projects to ensure that they are in line with DBH business goals and objectives. The ISC meets monthly to review business projects for status, issue resolution, and conformity to department and project management standards.

The ESC is comprised of the Department of Behavioral Health's (DBH) Chief Deputy Director, Deputy director of Administrative Services, Chief of Research and Evaluation, Manager of the Office of Information Technology (IT) and the County's Chief Technology Officer who meet quarterly, provides strategic, operational and service program guidance to IT planning and ensures IT projects are consistent with the departments business goals, IT objectives, are cost effective and viable.

The County ISD Application Development Division Chief provides objective oversight of all IT projects to ensure that project deliverables are consistent with County ISD standards for technology and systems development. The Division Chief will also ensure that project deliverables adhere to open/industry standards to ensure compatibility with existing and future technological infrastructure in terms of software, hardware, and protocols.

The manager of the DBH Office of Information Technology in collaboration with ISD's technology support groups will provide additional oversight to ensure that the Department network infrastructure and hardware are compatible with and sufficient to support the data warehouse and data mining application.

The CPAC consists of community stakeholders, consumers and their family members and was formed as an approving body for all Mental Health Services Act (MHSA) planning and implementation. The committee meets on a monthly basis

The MHC works collaboratively and provides insight and suggests direction to SBC-DBH to ensure that proposed IT projects will improve the delivery of behavioral health services to the community.

Integration Management

The DBH-IT Manager in conjunction with the project manager will be responsible for integration management of all systems deployed for this project from a data and infrastructure perspective. Systems integration at the data and infrastructure level typically involves consideration to protocol, standards, and compatibility of all systems involved.

An overall assessment of compatibility and capability of systems and/or data affected by this project will be completed by DBH-IT project leads in conjunction with County ISD technical staff. The ultimate goal of the County is to have a fully integrated system where client service data is shared to ensure continuity of services in a secure online web portal which is fed by multiple sources.

Scope Management

Project scope will be defined in the project charter. SBC-DBH utilizes and conforms to the standards set forth by the County ISD's project management methodology and change management procedures. The Project Manager has the overall responsibility of developing a project plan that encompasses all phases of the project from initialization through the post-implementation review. Project status reports produced on a regular basis will be required that identifies any change to the project scope, project deliverables, assigned resources, and will report on issue resolution.

Time Management

The Project Manager will be responsible for developing the overall project plan and Gantt chart which will specify all project deliverables, assigned resources, and time frames for completion. All schedules developed for this project will conform to guidelines within County ISD's project management methodology. The project management tool of choice will be Microsoft Project Professional. A copy of the County ISD project management guidelines is available upon request.

Cost Management

The Project Manager will be responsible for managing project costs which may include but is not limited to procurement, personnel, contract services, and facility upgrades. This responsibility also entails developing monthly cost accountability reports for all stakeholders which will identify all incurred project costs with particular attention paid to any cost variances that deviate within 5% of the projected budget allocation.

Quality Management

The Project Manager will be responsible for ensuring that all project activities, milestones, deployed infrastructure, business process re-engineering initiatives (if applicable), are effective, efficient, and meets the needs of the department's end users with respect to the system and its performance to achieve consistent quality. This responsibility will also entail developing a proper process for business scenario testing to ensure that product capabilities are aligned with the proposed/identified service level outcomes.

Human Resource Management (Consultants, Vendors, In-House Staff)

The Project Manager will be responsible for human resource management as they are defined in the project plan and project Gantt chart. This will include working with other identified business partners to identify the appropriate personnel resources to ensure the timely completion of the goals and objectives of this project. A quarterly assessment will be completed to assist in determining whether the appropriate resources are in place to facilitate timely project deliverable completion.

Communications Management

As part of the overall project plan, the Project Manager will be accountable for delivering monthly project status reports that communicate a summary of the tasks completed in the previous month, a schedule of tasks to be accomplished during the next reporting time frame, and a list of issues identifying resolution status.

Communication status reports will be provided to all project stakeholders and those individuals/groups responsible for project oversight.

Procurement Management

The SBC-DBH Project Manager will be responsible for procurement management with oversight from the DBH-IT Manager, the department's Fiscal Unit which manages MHSA funding allocations, together with the County's Central Purchasing Department. All procurement related to this project will follow established County/Departmental procurement processes and shall receive a level of oversight that is customary to all procurement processes. All MHSA IT procurements are logged independently and provided to the department's Fiscal unit which performs a monthly audit for reporting at the monthly MHSA Executive meeting. Additionally, the County CIO, CTO, CAO, and Board of Supervisors must approve all single item purchases that exceed eighty thousand dollars.

For Low-Risk Projects, as determined by the Worksheet in Appendix A, the above Project Management Reporting is Not Required.

Instead, the County shall provide a Project Management Overview that describes the steps from concept to completion in sufficient detail to assure the DMH Technological Needs Project evaluators that the proposed solution can be successfully accomplished. For some Technological Needs Projects, the overview may be developed in conjunction with the vendor and may be provided after vendor selection.

This is not a low-risk project. Refer to Appendix A.

Project Cost

Technological Needs Projects will be reviewed in terms of their cost justification. The appropriate use of resources and the sustainability of the system on an ongoing basis should be highlighted. Costs should be forecasted on a Quarterly basis for the life of the Project.

Costs on a Yearly and Total basis will also be required for input on Exhibit 3 - Budget Summary.

Refer to Exhibit 4 and Addendum 7.1.

Nature of the Project

Extent to which the Project is Critical to the Accomplishment of the County, MHSA, and DMH Goals and Objectives.

The Data Warehouse Continuation project will allow for completion of a centralized data repository for reporting and will also provide DBH with a decision support system with full data mining capability. This environment will allow decision makers to better analyze the extensive amount of disparate health systems data to assist the department in making improved operational and strategic decisions directly relating to consumer plans for wellness, recovery, and resiliency. Furthermore, a centralized data repository will consolidate some of the data silos containing client related data that are associated with disparate systems, resulting in gains in operational efficiency and better quality of data.

Degree of Centralization or Decentralization Required for this Activity.

All data warehouse servers are fully centralized in the County's Datacenter as this location allows for the County to maintain security of information while maintaining system performance and backup retention. From a data perspective, the data warehouse will receive data feeds from decentralized disparate source systems where the data will be consolidated through extract, transform, and load (ETL) processes, creating a centralized repository for departmental reporting and data mining purposes.

Data Communication Requirements associated with the Activity.

There is not any immediate need to expand the current data communication infrastructure for this project. The links from the data warehouse to all data source servers are centralized in the County ISD data center which will provide the optimal data transfer speeds during staging and loading into the data warehouse. The County's existing firewall will be used to protect systems from outside attacks that may originate from the internet and it's wide area network (WAN) will be used as a means for client level access to server resources.

Characteristics of the Data to be Collected and Processed (i.e., source, volume, volatility, distribution, and security or confidentiality).

The primary source of data that feeds the data warehouse is the department's Insyst application. Currently, there is an emphasis on collecting client service related data to perform reporting and analysis against, but for future phases of this project, all clinical, administrative, and financial data will be considered for collection into the data warehouse environment, thus creating a centralized data repository for departmental use. Once data is fed into the data warehouse, standardized online reports can be exposed for end user consumption. Delivery of reports in an online web-based environment allows for greater security and confidentiality as access control mechanisms will be implemented to allow staff to gain access to data on a need-to-know basis.

Degree to which the Technology can be Integrated with Other Parts of a System in achieving the Integrated Information Systems Infrastructure.

The data warehouse will be fed with data from existing and future health information systems and will be a cornerstone of a fully integrated information systems infrastructure. As development of this environment continues, DBH will focus on ensuring that industry and/or open standards are followed in all phases of the project to maximize the potential for seamless and easy integration with other applications for the purpose of connectivity and data transfer.

Hardware Considerations * (As Applicable)**Compatibility with Existing Hardware, Including Telecommunications Equipment.**

All existing hardware for this project adhere to County ISD standards to ensure compatibility, interoperability, and availability of support with existing infrastructure. Currently, there is not an anticipated need for an upgrade to existing telecommunications equipment for this project.

Final hardware requirements are not currently available as this will depend on final data warehouse design and the architecture of the development and production environments. Additionally, changes or enhancements to those environments must take into account the infrastructure used for performing backups, disaster recovery, and the introduction of hardware used for data mining software.

Physical Space Requirements Necessary for Proper Operation of the Equipment.

Physical space for servers and associated infrastructure for this project will continue to be provided by County ISD within their datacenter. Currently, the ISD datacenter has the physical space capacity to accommodate the hosting of any additional servers for the Data Warehouse Upgrade project.

Hardware Maintenance.

All hardware purchased for this project will be under maintenance agreements through the vendor.

Existing Capacity, Immediate Required Capacity and Future Capacity.

The existing data warehouse servers provide adequate storage and processing capacity for immediate needs and is estimated to meet near to medium term future needs. However, there may be a need to purchase additional servers with appropriate capacity for the proper implementation of data mining software to support the data warehouse as well as plan for long term storage and disaster recovery/business continuity needs. As the final architecture for the data warehouse environment is completed, DBH-IT will be able to more accurately project long term capacity needs.

Backup Processing Capability.

The existing data warehouse environment is backed up on a nightly basis using County ISD's enterprise backup solution. The backups are maintained at the County ISD datacenter while backup copies are rotated to an off-site storage facility to mitigate the potential for unexpected or sudden loss of archived data at the primary storage facility or vice versa.

An auxiliary backup copy of data is first made onto the County's storage area network (SAN), it then gets transferred to tier 2 SAN disks, and lastly copied to removable tape media before the tapes are rotated to an off-site storage facility.

Software Considerations * (As Applicable)**Compatibility of Computer Languages with Existing and Planned Activities.**

The primary software used for the data warehouse is Microsoft SQL Server. Currently, the department has chosen Microsoft SQL Server as the standard for enterprise database management systems whenever it is possible to ensure ease of data transfer and compatibility. Microsoft SQL Server makes use of Transact-SQL, but this variation is based upon the industry standard ANSI SQL. All other computer languages used for development/presentation of reporting and extraction, transform, load (ETL) processes will adhere to industry standards such as but not limited to HTML, ASP, ASP.NET, XML, or conform with application platform specific standards such as set forth by Microsoft or IBM-Cognos.

Maintenance of the Proposed Software (e.g., vendor-supplied).

All existing software purchased for this project is under maintenance agreements through the vendor. The department will ensure that any new software purchased for this project will also have vendor supplied maintenance agreements.

Availability of Complete Documentation of Software Capabilities.

The department has full access to complete documentation of all software used in the current data warehouse environment. It will continue to ensure that any new software is accompanied by complete documentation of capabilities and is available to support staff and end-users in printable and/or web-based format.

Availability of Necessary Security Features as defined in DMH Standards noted in Appendix B.

The data warehouse environment has in place all security criteria as defined in DMH Standards Appendix B. This applies to all tiers of the application environment including the operating system, DBMS, and reporting software level. At each tier, there are mechanisms in place to administer access control, auditing, and authentication providing the utmost level of security.

Additionally, the County has measures in place such as a firewall, anti-virus software on servers/desktops, and intrusion detection systems to protect computing equipment from security breaches.

Ability of the Software to meet Current Technology Standards or be Modified to meet them in the future.

The data warehouse environment meets current technology/industry standards and will continue to be reassessed to ensure that it meets future technology standards as the department works towards implementing an integrated information systems infrastructure over the next several years. Several of the core components of this environment such as the operating systems, DBMS, and ETL utility are all Microsoft based and are expected to have uncomplicated upgrade paths as each respective software component evolves over time. Other protocols and computer languages used within this environment are expected to remain relatively stable for the near, medium, and long term.

Interagency Considerations* (As Applicable)

Describe the County's interfaces with contract service providers and state and local agencies. Consideration must be given to compatibility of communications and sharing of data. The information technology needs of contract service providers must be considered in the local planning process.

DBH may share data with other County departments, contract service providers, and state and local agencies where it is required, but subject to all applicable policies, laws, and regulations to which the County is bound. DBH and other County departments such as Public Health, the Arrowhead Regional Medical Center (ARMC), Probation, Department of Children Services, Sheriff's Department, and the school system routinely share limited data as appropriate while coordinating service delivery to an overlapping consumer population. As such, the ultimate goal of the County is to have a fully integrated system where client service data is shared to ensure continuity of services in a secure online web portal which is fed by multiple sources.

Sharing of data typically involves compatibility, technical infrastructure, and communication protocol considerations at the contract service provider level, or more broadly between the sending and receiving entities. An overall assessment of compatibility and capability of these entities will be completed by the DBH ISC and County Health Services Agency (HSA) at a future date for which a time table has not been established, but due diligence will be completed to ensure that system plans will adhere to current industry/open standards such as HL7 messaging and/or record transfer.

Training and Implementation * (As Applicable)

Describe the current status of workflow and the proposed process for assessment, implementation and training of new technology being considered.

A comprehensive training and implementation plan will be developed at such time as a vendor has been selected for the data mining software solution. Currently, the request for proposals (RFP) process is under way with a tentative vendor selection time frame of December 2009. A copy of the project plan will be available upon request.

Security Strategy * (As Applicable)

Describe the County's policies and procedures related to Privacy and Security for the Project as they may differ from general Privacy and Security processes.

Protecting Data Security and Privacy.

This project and the data residing on the servers will continue to be administered in such a way that meets or exceeds data security and privacy policies the department is current subject to including County, department, HIPAA, AB211, SB541, and any other State or Federal regulations. This includes maintaining the security and confidentiality of the data through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication. The County has a privacy and security committee consisting of members belonging to various departments whose purpose is to ensure that all data security and privacy standards are maintained at a meets or exceeds level. The department also continually scrutinizes all technology to ensure compliance with all applicable policies and regulations.

Operational Recovery Planning.

Options in implementing a fully functional redundant copy of the data warehouse environment will be evaluated. The current data warehouse architecture contains multiple logical environments spread across redundant/load balanced application servers which could facilitate operational recovery of the system as it eliminates single points of failure.

Business Continuity Planning.

The SBC-DBH has in place a Departmental Emergency Operations Plan (DEOP) which places emphasis on manual business processes of essential functions to use in place of technology wherever possible in an effort to restore the department's ability to provide client services in the shortest time frame possible. A copy of the DEOP is available upon request.

Emergency Response Planning.

The DEOP serves to provide guidance and procedures to prepare for and respond to significant or catastrophic natural, environmental, or conflict related risks/events that produce situations requiring a coordinated response. The primary goals of that plan are to protect life and property, preserve infrastructure, and continue the operations of government. The data warehouse is not currently categorized as a data system that is critical to carrying out DBH functions, however, this may change during future scheduled revisions to the DEOP as this environment is finalized and the system becomes a more integral source information for decision makers.

Health Information Portability and Accountability Act (HIPAA) Compliance.

The County and department have policies in place that ensure compliance with HIPAA requirements for maintaining the confidentiality and security of patient health information (PHI). These policies encompass physical, administrative, and technical safeguards.

State and Federal Laws and Regulations.

The department will ensure that the data warehouse environment maintains compliance with all applicable state, federal, and local laws, ordinances, and regulations regarding the security and privacy of PHI.

Project Sponsor(s) Commitments [Small Counties May Elect to not Complete this Section]

Sponsor(s) Name(s) and Title(s)

Identify the Project Sponsor Name and Title. If multiple Sponsors, identify each separately.

Allan Rawland, Director
County of San Bernardino Department of Behavioral Health

Michael Day, IT Manager
Department of Behavioral Health Office of Information Technology

Commitment

Describe each Sponsor's commitment to the success of the Project, identifying resource and management commitment.

Allan Rawland, Director
County of San Bernardino Department of Behavioral Health

As Director of the County of San Bernardino Department of Behavioral Health (DBH), Mr. Rawland has overall responsibility for the implementation and administration of all MHSA programs within San Bernardino County. Additionally, he has overall responsibility for all MHSA component planning activities and is committed to the successful completion of the Technology Needs Projects. Mr. Rawland is fully committed to modernizing and transforming DBH clinical and administrative information systems in order to improve operational efficiency, quality of care, and cost effectiveness in support of the goals and objectives of the Mental Health Services Act (MHSA). He will ensure that identified project resources such as County and DBH Information Technology staff, supervisors, managers, program support staff, as well as information technology consultants and vendors are available to support the timely and successful completion of this project.

Michael Day, IT Manager
Department of Behavioral Health Office of Information Technology

Mr. Day has overall responsibility for the planning and implementation of technology related projects supporting MHSA within San Bernardino County. He is fully committed to ensuring that the technology implemented supports the goals and objectives of the MHSA including increasing client and family empowerment through providing the tools necessary for secure client and family access to health information that is culturally and linguistically competent within a variety of public and private settings. He envisions a future information systems infrastructure that is modernized and transformed to ensure quality of care, parity, operational efficiency, and cost effectiveness. In addition to high level oversight and guidance, Mr. Day will work closely with the project manager and implementation team to ensure that project goals are met and timely completion is achieved.

Approvals/Contacts

Please include separate signoff sheet with the Names, Titles, Phone, E-mail, Signatures, and Dates for:

Individual(s) responsible for preparation of this Exhibit, such as the Project Lead or Project Sponsor(s).

Signatures

Prepared By

Name: Michael Day Title: Business Applications Manager
Signature:  Date: 06-17-2009 Phone: (909) 382-3061
Email Address: mday@dbh.sbcountry.gov

Name: _____ Title: _____
Signature: _____ Date: _____ Phone: _____
Email Address: _____

Enclosure 3
Exhibit 4

Budget Summary

For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Data Warehouse Continuation

(List Dollars in Thousands)

Category	(1) 08/09	(2) 09/10	(3) 10/11	(4) Future Years	(5) Total One-time Costs (1+2+3+4)	(6) Estimated Annual Ongoing Costs*
Personnel		286,652	286,652	859,956	1,433,260	143,326
Total Staff (Salaries and Benefits)		286,652	286,652	859,956	143,326	143,326
Hardware		14,000	120,000		134,000	
From Exhibit 2						
Total Hardware		14,000	120,000		134,000	
Software						
From Exhibit 2		650,000	230,000	690,000	1,570,000	230,000
Total Software		650,000	230,000	690,000	1,570,000	230,000
Contract Services (list services to be provided)						
Data Modeling Consultant		125,000			125,000	
Data Mining Integration Consultant		62,500	187,500		250,000	
Total Contract Services		187,500	187,500		375,000	
Administrative Overhead						
Other Expenses (Describe)						
Software Development		183,696			183,696	
Total Costs (A)		1,321,848	824,152	1,549,956	3,695,956	373,326
Total Offsetting Revenues (B) **						
MHSA Funding Requirements (A-B)		1,321,848	824,152	1,549,956	3,695,956	373,326
* Annual Costs are the ongoing costs required to maintain the technology infrastructure after the one-time implementation.						
** For Projects providing services to Multiple-Program Clients (e.g., Mental Health and Alcohol and Drug Program clients), Attach a Description of Estimated Benefits and Project Costs allocated to Each Program.						

Notes:

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Enclosure 3
Exhibit 5

Stakeholder Participation For Technological Needs Project Proposal

County Name:

Project Name:

Counties are to provide a short summary of their Community Planning Process (for Projects), to include identifying stakeholder entities involved and the nature of the planning process; for example, description of the use of focus groups, planning meetings, teleconferences, electronic communication, and/or the use of regional partnerships.

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	08-06-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-01-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-03-2008
General Public	Stakeholder Public Comment Period Enclosure 1 Exhibits were posted on the department's internet site for a 30 day comment period (11-5-2008 thru 12-5-2008)	11-05-2008
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	11-06-2008
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	11-20-2008

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	01-28-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	03-16-2009
General Public	Stakeholder Public Comment Period Enclosure 3 Exhibits were posted on the department's internet site for a 30 day comment period (4-10-2009 thru 5-10-2009)	04-10-2009
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	05-21-2009
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	06-04-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	06-04-2009

APPENDIX A – PROJECT RISK ASSESSMENT – Data Warehouse Continuation

Category		Factor	Rating	Score	
Estimated Cost of Project		Over \$5 million	6	5	
		Over \$3 million	5		
		Over \$500,00	2		
		Under \$ 500,000	1		
Project Manager Experience					
Like Projects Completed in a “key staff” role		None	3	3	
		One	2		
		Two or More	1		
Team Experience					
Like Projects Completed by at least 75% Of Key Staff		None	3	1	
		One	2		
		Two or More	1		
Elements of Project Type					
Hardware	New Install	Local Desktop/Server	1	3	
		Distributed/Enterprise Server	3		
	Update/Upgrade	Local Desktop/Server	1		2
		Distributed/Enterprise Server	2		
	Infrastructure	Local Network Cabling	1	3	
		Distributed Network	2		
Data Center/Network Operations Center		3			
Software	Custom Development-Application Service Provider		5	1	
	COTS* Installation	“Off-the-Shelf”	1		
		Modified COTS	3		
	Number of Users	Over 1,000	5		
		Over 100	3	3	
		Over 20	2		
		Under 20	1		
	*Commercial Off-The-Shelf Software	Architecture	Browser/thin client based	1	3
		Two-Tier (client/server)	2		
		Multi-Tier (client & web, database, application, etc. servers)	3		
Total Score				24	

Total Score	Project Risk Rating	
25 - 31	High	
16 - 24	Medium	✓
8 - 15	Low	

Enclosure 3
Exhibit 1

Face Sheet
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Electronic Health Record (EHR)

This Technological Needs Project Proposal is consistent with and supportive of the vision, values, mission, goals, objectives, and proposed actions of the Mental Health Services Act (MHSA) Capital Facilities and Technological Needs Component Proposal.

We are planning to, or have a strategy to modernize and transform clinical and administrative systems to improve quality of care, operational efficiency, and cost effectiveness. Our Roadmap for moving toward an Integrated Information Systems Infrastructure, as described in our Technological Needs Assessment, has been completed. This Project Proposal also supports the Roadmap.

We recognize the need for increasing client and family empowerment by providing tools for secure client and family access to health information within a wide variety of public and private settings. The Proposal addresses these goals.

This proposed Project has been developed with contributions from stakeholders, the public and our contract service providers, in accordance with California Code of Regulations (CCR), Title 9, Sections 3300, 3310 and 3315(b). The draft proposal was circulated for 30 days to stakeholders for review and comment. All input has been considered, with adjustments made as appropriate.

Mental Health Services Act funds proposed in this Project are compliant with CCR Section 3410, non-supplant.

All documents in the attached Proposal are true and correct.

County Director

Name: Allan Rawland

Signature: 

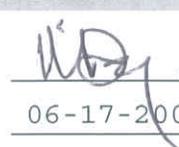
Phone: (909) 382-3133

Date: 06-17-2009

Email: arawland@dbh.sbcounty.gov

Chief Information Officer

Name: Michael Day

Signature: 

Phone: (909) 382-3061

Date: 06-17-2009

Email: mday@dbh.sbcounty.gov

County Director

Name: _____

Signature: _____

Phone: _____

Date: _____

Email: _____

Enclosure 3
Exhibit 3

Technological Needs Project Proposal Description

County Name: San Bernardino Date: June 17, 2009

Project Name: Electronic Health Record (EHR)

Check at Least One Box from Each Group that Describes this MHSA Technological Needs Project

- New System.
- Extend the Number of Users of an Existing System.
- Extend the Functionality of an Existing System.
- Supports Goal of Modernization / Transformation.
- Support Goal of Client and Family Empowerment.

Indicate the Type of MHSA Technological Needs Project

> Electronic Health Record (EHR) System Projects (Check All that Apply)

- Infrastructure, Security, Privacy.
- Practice Management.
- Clinical Data Management.
- Computerized Provider Order Entry.
- Full Electronic Health Record (EHR) with Interoperability Components (Example: Standard Data Exchanges with Other Counties, Contract Providers, Labs, Pharmacies).

> Client and Family Empowerment Projects

- Client/Family Access to Computing Resources Projects.
- Personal Health Record (PHR) System Projects
- Online Information Resource Projects (Expansion / Leveraging Information-Sharing Services)

> Other Technological Needs Projects that Support MHSA Operations

- Telemedicine and Other Rural / Underserved Service Access Methods.
- Pilot Projects to Monitor New Programs and Service Outcome Improvement.
- Data Warehousing Projects / Decision Support.
- Imaging / Paper Conversion Projects.
- Other.

Indicate the Technological Needs Project Implementation Approach

Custom Application

Name of Consultant or Vendor (if applicable):

Not applicable.

Commercial Off-The -Shelf (COTS) System

Name of Vendor:

To be determined via an RFP Process.

Product Installation

Name of Consultant or Vendor (if applicable):

To be determined via an RFP Process.

Software Installation

Name of Vendor:

To be determined via an RFP Process.

Project Description and Evaluation Criteria (Detailed Instructions)

Small County? Yes No

Complete Each Section Listed Below.

Small counties (under 200,000 in population) have the Option of submitting a Reduced Project Proposal; however, they must describe how these criteria will be addressed during the implementation of the Project.

A completed Technological Needs Assessment is required in addition to the Technological Needs Project Proposal. Technological Needs Project Proposals that are for planning or preparation of technology are not required to include hardware, software, interagency, training, or security considerations. These items are indicated with an “*”.

Project Management Overview (Medium-to-High Risk Projects)

Counties must provide a Project Management Overview based on the risk of the proposed Project. The Project must be assessed for **Risk Level** using the worksheet in **Appendix A**.

For Projects with Medium to High Risk, the County shall provide information in the following Project management areas.

Independent Project Oversight

Oversight of the EHR project will be provided by the SBC-DBH Information Steering Committee (ISC), the SBC-DBH Executive Steering Committee (ESC), the County Information Services Department (ISD) Application Development Division Chief, the DBH Office of Information Technology Manager, the Community Policy Advisory Committee (CPAC) the Mental Health Commission (MHC) and an independent consulting firm. The sources of independent project oversight are described below.

The ISC consists of stakeholders that represent contract providers, consumers, families, service programs, DBH Compliance, DBH Quality Management, and Information Technology. Together, they provide clinical, strategic, and operational guidance to information system projects to ensure that they are in line with DBH business goals and objectives. The ISC meets monthly to review business projects for status, issue resolution, and conformity to department and project management standards.

The ESC is comprised of the Department of Behavioral Health's (DBH) Chief Deputy Director, Deputy director of Administrative Services, Chief of Research and Evaluation, Manager of the Office of Information Technology (IT) and the County's Chief Technology Officer who meet quarterly, provides strategic, operational and service program guidance to IT planning and ensures IT projects are consistent with the departments business goals, IT objectives, are cost effective and viable.

The County ISD Application Development Division Chief provides objective oversight of all IT projects to ensure that project deliverables are consistent with County ISD standards for technology and systems development. The Division Chief will also ensure that project deliverables adhere to open/industry standards to ensure compatibility with existing and future technological infrastructure in terms of software, hardware, and protocols.

The manager of the DBH Office of Information Technology in collaboration with ISD's technology support groups will provide additional oversight to ensure that the Department network infrastructure and hardware are compatible with and sufficient to support the EHR application.

The CPAC consists of community stakeholders, consumers and their family members and was formed as an approving body for all Mental Health Services Act (MHSA) planning and implementation. The committee meets on a monthly basis.

The MHC works collaboratively and provides insight and suggests direction to SBC-DBH to ensure that proposed IT projects will improve the delivery of behavioral health services to the community.

Integration Management

Integration of the EHR with the CPOE and practice management systems will involve comprehensive project oversight with consultation from County ISD. Systems integration at the data and infrastructure level typically involves consideration to protocol, standards, and compatibility of all systems involved. An overall assessment of compatibility and capability of systems and/or data affected by this project will be completed by DBH-IT project leads in conjunction with County ISD technical staff.

Scope Management

Project scope management will include the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Scope planning will occur as a preliminary step and will include clear scope definition with agreement from the Information Steering Committee. Project progress will follow the Gantt chart, with scope verification occurring at each step of the process. The Project Manager will have full control over any changes to the Project.

Time Management

The Project Manager will use the WBS to estimate staff time usage, and then to adjust and control staff availability as necessary for project success. All schedules developed for this project will conform to guidelines within County ISD's project management methodology. The project management tool of choice will be Microsoft Project Professional. A copy of the County ISD project management guidelines is available upon request.

Cost Management

Cost estimates for specific steps within the Work Breakdown Schedule (WBS) will be established prior to the launch of the project. Any adjustments necessary to these estimates will be vetted with the Steering Committee. The Project Manager will also be responsible for managing project costs which may include but is not limited to procurement, personnel, contract services, and facility upgrades. This responsibility will also entail developing monthly cost accountability reports for all stakeholders which will identify all incurred project costs with particular attention paid to any cost variances that deviate within 5% of the projected budget allocation.

Quality Management

QM will be an integral part of the WBS, and will be verified by the Independent Oversight team. Each distinct component of the WBS will be tested and verified to ensure that product capabilities are aligned with the proposed/identified service level outcomes. The Project Manager will be responsible for developing a process for business scenario testing and reporting the outcomes.

Human Resource Management (Consultants, Vendors, In-House Staff)

The core project team will be comprised of regular County employees, but will be supplemented as necessary with vendor staff and consultants.

The Project Manager will be responsible for human resource management as they are defined in the project plan and project Gantt chart. This will include working with other identified business partners to identify the appropriate personnel resources to ensure the timely completion of the goals and objectives of this project. A quarterly assessment will be completed to assist in determining whether the appropriate resources are in place to facilitate timely project deliverable completion.

Communications Management

The EHR project team will closely interact, and will communicate with other teams and the Steering Committee via a web-based project detail site as well as quarterly update meetings.

The Project Manager will be accountable for delivering monthly project status reports that communicate a summary of the tasks completed in the previous month, a schedule of tasks to be accomplished during the next reporting time frame, and a list of issues identifying resolution status. Communication status reports will be provided to all project stakeholders and those individuals/groups responsible for project oversight. The web-based project detail site is one forum in which these updates can take place.

Procurement Management

The SBC-DBH Project Manager will be responsible for procurement management with oversight from the DBH-IT Manager, the department's Fiscal Unit which manages MHSA funding allocations, together with the County's Central Purchasing Department. All procurement related to this project will follow established County/ Departmental procurement processes and shall receive a level of oversight that is customary to all procurement processes. All MHSA IT procurements are logged independently and provided to the department's Fiscal unit which performs a monthly audit for reporting at the monthly MHSA Executive meeting. Additionally, the County CIO, CTO, CAO, and Board of Supervisors must approve all single item purchases that exceed eighty thousand dollars.

For Low-Risk Projects, as determined by the Worksheet in Appendix A, the above Project Management Reporting is Not Required.

Instead, the County shall provide a Project Management Overview that describes the steps from concept to completion in sufficient detail to assure the DMH Technological Needs Project evaluators that the proposed solution can be successfully accomplished. For some Technological Needs Projects, the overview may be developed in conjunction with the vendor and may be provided after vendor selection.

This is not a low risk project. Refer to Appendix A.

Project Cost

Technological Needs Projects will be reviewed in terms of their cost justification. The appropriate use of resources and the sustainability of the system on an ongoing basis should be highlighted. Costs should be forecasted on a Quarterly basis for the life of the Project.

Costs on a Yearly and Total basis will also be required for input on Exhibit 3 - Budget Summary.

See Budget Summary - Exhibit 4 and Addendum 7.3.

Nature of the Project

Extent to which the Project is Critical to the Accomplishment of the County, MHSA, and DMH Goals and Objectives.

The EHR will be an essential component of the Department's integrated information systems infrastructure. As the source system for detailed information regarding client services, course of treatment and outcomes, the EHR will be the primary way that clinical staff maintain and access client and services information. Providing clinical staff with instantaneous, relevant patient information through the EHR will improve the quality of care that clinicians will be able to provide, reduce administrative overhead, and minimize errors that can result from manual paper-based processes.

Degree of Centralization or Decentralization Required for this Activity.

All servers for this project will be fully centralized in the County's Datacenter as this location allows for the County to maintain security of information while maintaining system performance and backup retention. From a data perspective, it is not known at this time whether the final EHR product will support messaging feeds such as with HL7 or have other standards with respect to record transfer. This analysis will be part of the RFP process as a fully integrated EHR may be a module within a primary BHMIS or a 3rd party package which will rely on messaging or record transfer. The goal will be to fully centralize data feeds to prevent silos of data from developing. The project team will perform a full analysis and requirements definition during the RFP process.

Data Communication Requirements associated with the Activity.

It is expected that all servers used for this project will reside in the County ISD data center which will provide optimal data communication links for any data transfer required from server to server. As a final product is determined, a review of all LAN and WAN links will be performed by DBH-IT staff in conjunction with County ISD to ensure that those links have the capacity to support the operation of the EHR system. The County's existing firewall will be used to protect systems from outside attacks that may originate from the internet and its wide area network (WAN) will be used as a means for client level access to server resources.

Characteristics of the Data to be Collected and Processed (i.e., source, volume, volatility, distribution, and security or confidentiality).

The primary source of data that will feed the EHR will be the department's BHMIS whether the EHR exists as an add-on module, or through messaging/record transfer. Once the data is transferred to the EHR system/module, patient information will be distributed in electronic format on a need-to-know basis controlled through access control mechanisms.

Degree to which the Technology can be Integrated with Other Parts of a System in achieving the Integrated Information Systems Infrastructure.

The EHR will be fed with data from existing and future health information systems and will be a cornerstone of a fully integrated information systems infrastructure. As development of this environment performed, DBH will focus on ensuring that industry and/or open standards are followed in all phases of the project to maximize the potential for seamless and easy integration with other applications for the purpose of connectivity and data transfer.

Hardware Considerations * (As Applicable)**Compatibility with Existing Hardware, Including Telecommunications Equipment.**

All existing hardware for this project adhere to County ISD standards to ensure compatibility, interoperability, and availability of support with existing infrastructure. A telecommunications capability assessment on routers, switches, and LAN/WAN links affected by this project will be evaluated during the RFP process.

Final hardware requirements are not currently available as this will depend on final EHR design and system architecture. Additionally, changes or enhancements to those environments must take into account the infrastructure used for performing backups, and disaster recovery.

Physical Space Requirements Necessary for Proper Operation of the Equipment.

Physical space for servers and associated infrastructure for this project will continue to be provided by County ISD within their datacenter. Currently, the ISD datacenter has the physical space capacity to accommodate the hosting of any additional servers for this project.

Hardware Maintenance.

All hardware purchased for this project will be under maintenance agreements through the vendor.

Existing Capacity, Immediate Required Capacity and Future Capacity.

Capacity planning for the EHR environment will be performed as part of the requirements definition/systems analysis portion of the project. Areas that will be considered include the amount of data that will originate from the source system, any resources required for data/message queues, and storage for backups/disaster recovery needs. As a final product is identified and system architecture is defined, DBH-IT will be able to more accurately project capacity needs for the near, medium, and long term.

Backup Processing Capability.

The EHR environment will be backed up on a nightly basis using County ISD's enterprise backup solution. The backups will be maintained at the County ISD datacenter while backup copies will be rotated to an off-site storage facility to mitigate the potential for unexpected or sudden loss of archived data at the primary storage facility or vice versa.

Software Considerations * (As Applicable)**Compatibility of Computer Languages with Existing and Planned Activities.**

All computer languages and protocols used for existing and planned activities will adhere to open/industry or platform specific standards to ensure ease of data transfer and compatibility. An evaluation of computer languages and protocols will be performed during the RFP process. Messaging protocols such as HL7 for transmitting health related data will be evaluated at that time but will ultimately depend on need, relevance, and product support.

Maintenance of the Proposed Software (e.g., vendor-supplied).

The department will ensure that any new software purchased for this project will also have vendor supplied maintenance agreements.

Availability of Complete Documentation of Software Capabilities.

The department will ensure that full access to software documentation is available with any software product purchased.

Availability of Necessary Security Features as defined in DMH Standards noted in Appendix B.

The EHR environment will be implemented in such a manner that will meet or exceed all security criteria as defined in DMH Standards Appendix B. Additionally, the County has measures in place such as a firewall, anti-virus software on servers/desktops, an intrusion detection systems to protect computing equipment from security breaches.

Ability of the Software to meet Current Technology Standards or be Modified to meet them in the future.

All components that form the makeup of the EHR environment such as the protocols, standards, operating systems, DBMS, and application tiers will be evaluated during the RFP process to ensure that the technology standards will be met and will remain relatively stable for the near, medium, and long term .

Interagency Considerations* (As Applicable)

Describe the County's interfaces with contract service providers and state and local agencies. Consideration must be given to compatibility of communications and sharing of data. The information technology needs of contract service providers must be considered in the local planning process.

DBH may share data with other County departments, contract service providers, and state and local agencies where it is required, but subject to all applicable policies, laws, and regulations the County is bound by. DBH and other County departments such as Public Health, the Arrowhead Regional Medical Center (ARMC), Probation, Department of Children Services, Sheriff's Department, and the school system routinely share limited data as appropriate while coordinating service delivery to an overlapping consumer population.

Sharing of data typically involves compatibility, technical infrastructure, and communication protocol considerations at the contract service provider level, or more broadly between the sending and receiving entities. An overall assessment of compatibility and capability of these entities will be completed by the DBH ISC and County Health Services Agency (HSA) at a future date for which a time table has not been established, but due diligence will be completed to ensure that system plans will adhere to current industry/open standards such as HL7 messaging and/or record transfer.

Training and Implementation * (As Applicable)

Describe the current status of workflow and the proposed process for assessment, implementation and training of new technology being considered.

A comprehensive training and implementation plan will be developed at such time as a vendor has been selected for the EHR. This training and implementation plan may be developed in conjunction with the vendor and/or a consultant.

Security Strategy * (As Applicable)

Describe the County's policies and procedures related to Privacy and Security for the Project as they may differ from general Privacy and Security processes.

Protecting Data Security and Privacy.

This project and the data residing on the servers will continue to be administered in such a way that meets or exceeds data security and privacy policies the department is current subject to including County, department, HIPAA, AB211, SB541, and any other State or Federal regulations. This includes maintaining the security and confidentiality of the data through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication. The County has a privacy and security committee consisting of members belonging to various departments whose purpose is to ensure that all data security and privacy standards are maintained at a meets or exceeds level. The department also continually scrutinizes all technology to ensure compliance with all applicable policies and regulations.

Operational Recovery Planning.

For the EHR project, ORP requires the development and documentation of arrangements and procedures that enable the organization to respond to unplanned events that interrupt the Project for an unacceptable period of time and allow it to return to critical functions after interruptions. The ORP will be integral to the Project Plan.

Additionally, options creating a systems environment that will eliminate single points of failure will be evaluated by DBH-IT in conjunction with County ISD to ensure that the system architecture will easily allow for operational recovery in the event that any essential component fails.

Business Continuity Planning.

The SBC-DBH has in place a Departmental Emergency Operations Plan (DEOP) which places emphasis on manual business processes of essential functions to use in place of technology wherever possible in an effort to restore the department's ability to provide client services in the shortest time frame possible. A copy of the DEOP is available upon request.

Emergency Response Planning.

The DEOP serves to provide guidance and procedures to prepare for and respond to significant or catastrophic natural, environmental, or conflict related risks/events that produce situations requiring a coordinated response. The primary goals of that plan are to protect life and property, preserve infrastructure, and continue the operations of government. The proposed EHR is not currently categorized as a data system that is critical to carrying out DBH functions, however, this may change during future scheduled revisions to the DEOP as this environment is finalized and the system becomes a more integral source information for decision makers.

Health Information Portability and Accountability Act (HIPAA) Compliance.

The County and department have policies in place that ensure compliance with HIPAA requirements for maintaining the confidentiality and security of patient health information (PHI). These policies encompass physical, administrative, and technical safeguards.

State and Federal Laws and Regulations.

The department will ensure that the EHR environment maintains compliance with all applicable state, federal, and local laws, ordinances, and regulations regarding the security and privacy of PHI.

Project Sponsor(s) Commitments [Small Counties May Elect to not Complete this Section]

Sponsor(s) Name(s) and Title(s)

Identify the Project Sponsor Name and Title. If multiple Sponsors, identify each separately.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Commitment

Describe each Sponsor's commitment to the success of the Project, identifying resource and management commitment.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

As Director of the County of San Bernardino Department of Behavioral Health (DBH), Mr. Rawland has overall responsibility for the implementation and administration of all MHSA programs within San Bernardino County. Additionally, he has overall responsibility for all MHSA component planning activities and is committed to the successful completion of the Technology Needs Projects. Mr. Rawland is fully committed to modernizing and transforming DBH clinical and administrative information systems in order to improve operational efficiency, quality of care, and cost effectiveness in support of the goals and objectives of the Mental Health Services Act (MHSA). He will ensure that identified project resources such as County and DBH Information Technology staff, supervisors, managers, program support staff, as well as information technology consultants and vendors are available to support the timely and successful completion of this project.

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Mr. Day has overall responsibility for the planning and implementation of technology related projects supporting MHSA within San Bernardino County. He is fully committed to ensuring that the technology implemented supports the goals and objectives of the MHSA including increasing client and family empowerment through providing the tools necessary for secure client and family access to health information that is culturally and linguistically competent within a variety of public and private settings. He envisions a future information systems infrastructure that is modernized and transformed to ensure quality of care, parity, operational efficiency, and cost effectiveness. In addition to high level oversight and guidance, Mr. Day will work closely with the project manager and implementation team to ensure that project goals are met and timely completion is achieved.

Approvals/Contacts

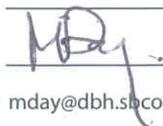
Please include separate signoff sheet with the Names, Titles, Phone, E-mail, Signatures, and Dates for:

Individual(s) responsible for preparation of this Exhibit, such as the Project Lead or Project Sponsor(s).

Signatures

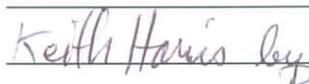
Prepared By

Name: Michael Day Title: Business Applications Manager

Signature:  Date: 06-17-2009 Phone: (909) 382-3061

Email Address: mday@dbh.sbcounty.gov

Name: Dr. Keith Harris Title: Chief of Research

Signature:  Date: 06-17-2009 Phone: (909) 382-3082

Email Address: kharris@dbh.sbcounty.gov 

Enclosure 3
Exhibit 4

Budget Summary
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Electronic Health Record (EHR)

(List Dollars in Thousands)

Category	(1) 08/09	(2) 09/10	(3) 10/11	(4) Future Years	(5) Total One-time Costs (1+2+3+4)	(6) Estimated Annual Ongoing Costs*
Personnel				599,993	599,993	
Total Staff (Salaries and Benefits)				599,993		
Hardware			20,000		20,000	
From Exhibit 2						
Total Hardware			20,000		20,000	
Software			700,000	495,000	1,195,000	165,000
From Exhibit 2						
Software Development (Imaging)			32,500	32,500	65,000	
Total Software			732,500	527,500	1,260,000	165,000
Contract Services (list services to be provided)						
Training			45,000		45,000	
Implementation Services			124,000	124,000	248,000	
Total Contract Services			169,000	124,000	293,000	
Administrative Overhead						
Other Expenses (Describe)						
Consulting Services			75,000	25,000	100,000	
Total Costs (A)			996,500	1,276,493	2,272,993	165,000
Total Offsetting Revenues (B) **						
MHSA Funding Requirements (A-B)			996,500	1,276,493	2,272,993	165,000
<p>* Annual Costs are the ongoing costs required to maintain the technology infrastructure after the one-time implementation.</p> <p>** For Projects providing services to Multiple-Program Clients (e.g., Mental Health and Alcohol and Drug Program clients), Attach a Description of Estimated Benefits and Project Costs allocated to Each Program.</p>						

Notes:

[Empty rectangular box for notes]

Enclosure 3
Exhibit 5

Stakeholder Participation For Technological Needs Project Proposal

County Name:

Project Name:

Counties are to provide a short summary of their Community Planning Process (for Projects), to include identifying stakeholder entities involved and the nature of the planning process; for example, description of the use of focus groups, planning meetings, teleconferences, electronic communication, and/or the use of regional partnerships.

Stakeholder Type <small>(e.g., Contract Provider, Client, Family Member, Clinician)</small>	Meeting Type <small>(e.g., Public Teleconference)</small>	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	08-06-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-01-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-03-2008
General Public	Stakeholder Public Comment Period Enclosure 1 Exhibits were posted on the department's internet site for a 30 day comment period (11-5-2008 thru 12-5-2008)	11-05-2008
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	11-06-2008
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	11-20-2008

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	01-28-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	03-16-2009
General Public	Stakeholder Public Comment Period Enclosure 3 Exhibits were posted on the department's internet site for a 30 day comment period (4-10-2009 thru 5-10-2009)	04-10-2009
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	05-21-2009
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	06-04-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	06-04-2009

APPENDIX A – PROJECT RISK ASSESSMENT – Electronic Health Record (EHR)

Category		Factor	Rating	Score	
Estimated Cost of Project		Over \$5 million	6	2	
		Over \$3 million	5		
		Over \$500,00	2		
		Under \$ 500,000	1		
Project Manager Experience					
Like Projects Completed in a “key staff” role		None	3	2	
		One	2		
		Two or More	1		
Team Experience					
Like Projects Completed by at least 75% Of Key Staff		None	3	3	
		One	2		
		Two or More	1		
Elements of Project Type					
Hardware	New Install	Local Desktop/Server	1	3	
		Distributed/Enterprise Server	3		
	Update/Upgrade	Local Desktop/Server	1		
		Distributed/Enterprise Server	2		
	Infrastructure	Local Network Cabling	1		3
		Distributed Network	2		
Data Center/Network Operations Center		3			
Software	Custom Development-		5	3	
	Application Service Provider		1		
	COTS* Installation	“Off-the-Shelf”	1		
		Modified COTS	3		
	Number of Users	Over 1,000	5	5	
		Over 100	3		
		Over 20	2		
		Under 20	1		
Architecture	Browser/thin client based	1	3		
	Two-Tier (client/server)	2			
	Multi-Tier (client & web, database, application, etc. servers)	3			
*Commercial Off-The-Shelf Software					
Total Score				24	

Total Score	Project Risk Rating	
25 - 31	High	
16 - 24	Medium	✓
8 - 15	Low	

Enclosure 3
Exhibit 1

Face Sheet
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Empowered Communication/SharePoint

This Technological Needs Project Proposal is consistent with and supportive of the vision, values, mission, goals, objectives, and proposed actions of the Mental Health Services Act (MHSA) Capital Facilities and Technological Needs Component Proposal.

We are planning to, or have a strategy to modernize and transform clinical and administrative systems to improve quality of care, operational efficiency, and cost effectiveness. Our Roadmap for moving toward an Integrated Information Systems Infrastructure, as described in our Technological Needs Assessment, has been completed. This Project Proposal also supports the Roadmap.

We recognize the need for increasing client and family empowerment by providing tools for secure client and family access to health information within a wide variety of public and private settings. The Proposal addresses these goals.

This proposed Project has been developed with contributions from stakeholders, the public and our contract service providers, in accordance with California Code of Regulations (CCR), Title 9, Sections 3300, 3310 and 3315(b). The draft proposal was circulated for 30 days to stakeholders for review and comment. All input has been considered, with adjustments made as appropriate.

Mental Health Services Act funds proposed in this Project are compliant with CCR Section 3410, non-supplant.

All documents in the attached Proposal are true and correct.

County Director

Name: Allan Rawland

Signature: 

Phone: (909) 382-3133

Date: 06-17-2009

Email: arawland@dbh.sbcounty.gov

Chief Information Officer

Name: Michael Day

Signature: 

Phone: (909) 382-3061

Date: 06-17-2009

Email: mday@dbh.sbcounty.gov

County Director

Name: _____

Signature: _____

Phone: _____

Date: _____

Email: _____

**Enclosure 3
Exhibit 3**

Technological Needs Project Proposal Description

County Name: San Bernardino Date: June 17, 2009

Project Name: Empowered Communications/SharePoint

Check at Least One Box from Each Group that Describes this MHSA Technological Needs Project

- New System.
- Extend the Number of Users of an Existing System.
- Extend the Functionality of an Existing System.
- Supports Goal of Modernization / Transformation.
- Support Goal of Client and Family Empowerment.

Indicate the Type of MHSA Technological Needs Project

> Electronic Health Record (EHR) System Projects (Check All that Apply)

- Infrastructure, Security, Privacy.
- Practice Management.
- Clinical Data Management.
- Computerized Provider Order Entry.
- Full Electronic Health Record (EHR) with Interoperability Components (Example: Standard Data Exchanges with Other Counties, Contract Providers, Labs, Pharmacies).

> Client and Family Empowerment Projects

- Client/Family Access to Computing Resources Projects.
- Personal Health Record (PHR) System Projects
- Online Information Resource Projects (Expansion / Leveraging Information-Sharing Services)

> Other Technological Needs Projects that Support MHSA Operations

- Telemedicine and Other Rural / Underserved Service Access Methods.
- Pilot Projects to Monitor New Programs and Service Outcome Improvement.
- Data Warehousing Projects / Decision Support.
- Imaging / Paper Conversion Projects.
- Other.

Indicate the Technological Needs Project Implementation Approach

Custom Application

Name of Consultant or Vendor (if applicable):

The framework for the Empowered Communications/SharePoint project will consist of a Microsoft Office SharePoint platform which will provide a scalable environment that will support the development and creation of automated business processes, internal informational portals, web based applications, and a consumer care portal, while increasing services to the Department of Behavioral Health's consumers.

A website and communications blog developed by in-house staff in conjunction with County ISD based upon direct input received from a consumer-based advisory committee, family members, stakeholders, public forums, and advocacy groups will be made available for consumers to access unlimited information.

Consumers will have online access to information on treatment options, County resources, support groups, faith based organizations, local shelters, food banks, places to get free services, and where to go for crisis intervention, just to name a few.

It will also be a forum for consumers to share advice and stories about challenges, progress, and provide support for one another as they progress down the road to recovery, wellness, and resiliency.

Once the consumer based advisory committee has been formed, site content will be maintained to meet their specific needs and expectations on an ongoing basis.

Commercial Off-The -Shelf (COTS) System

Name of Vendor:

Not applicable.

Product Installation

Name of Consultant or Vendor (if applicable):

Not applicable.

Software Installation

Name of Vendor:

Not applicable.

Project Description and Evaluation Criteria (Detailed Instructions)

Small County? Yes No

Complete Each Section Listed Below.

Small counties (under 200,000 in population) have the Option of submitting a Reduced Project Proposal; however, they must describe how these criteria will be addressed during the implementation of the Project.

A completed Technological Needs Assessment is required in addition to the Technological Needs Project Proposal. Technological Needs Project Proposals that are for planning or preparation of technology are not required to include hardware, software, interagency, training, or security considerations. These items are indicated with an “*”.

Project Management Overview (Medium-to-High Risk Projects)

Counties must provide a Project Management Overview based on the risk of the proposed Project. The Project must be assessed for **Risk Level** using the worksheet in **Appendix A**.

For Projects with Medium to High Risk, the County shall provide information in the following Project management areas.

Independent Project Oversight

Oversight of the Empowered Communications/SharePoint project will be provided by the SBC-DBH Information Steering Committee (ISC), the SBC-DBH Executive Steering Committee (ESC), the County Information Services Department (ISD) Application Development Division Chief, the DBH Office of Information Technology Manager, the Community Policy Advisory Committee (CPAC) the Mental Health Commission (MHC) and an independent consulting firm. The sources of independent project oversight are described below.

The ISC consists of stakeholders that represent contract providers, consumers, families, service programs, DBH Compliance, DBH Quality Management, and Information Technology. Together, they provide clinical, strategic, and operational guidance to information system projects to ensure that they are in line with DBH business goals and objectives. The ISC meets monthly to review business projects for status, issue resolution, and conformity to department and project management standards.

The ESC is comprised of the Department of Behavioral Health's (DBH) Chief Deputy Director, Deputy director of Administrative Services, Chief of Research and Evaluation, Manager of the Office of Information Technology (IT) and the County's Chief Technology Officer who meet quarterly, provides strategic, operational and service program guidance to IT planning and ensures IT projects are consistent with the departments business goals, IT objectives, are cost effective and viable.

The County ISD Application Development Division Chief provides objective oversight of all IT projects to ensure that project deliverables are consistent with County ISD standards for technology and systems development. The Division Chief will also ensure that project deliverables adhere to open/industry standards to ensure compatibility with existing and future technological infrastructure in terms of software, hardware, and protocols.

The manager of the DBH Office of Information Technology in collaboration with ISD's technology support groups will provide additional oversight to ensure that the Department network infrastructure and hardware are compatible with and sufficient to support the Empowered Communications/SharePoint project.

The CPAC consists of community stakeholders, consumers and their family members and was formed as an approving body for all Mental Health Services Act (MHSA) planning and implementation. The committee meets on a monthly basis

The MHC works collaboratively and provides insight and suggests direction to SBC-DBH to ensure that proposed IT projects will improve the delivery of behavioral health services to the community.

Integration Management

The DBH-IT Manager in conjunction with the project manager will be responsible for integration management of all systems deployed for this project from a data and infrastructure perspective. Systems integration at the data and infrastructure level typically involves consideration to protocol, standards, and compatibility of all systems involved.

An overall assessment of compatibility and capability of systems and/or data affected by this project will be completed by DBH-IT project leads in conjunction with County ISD technical staff. The ultimate goal of the County is to have a fully integrated system where client service data is shared to ensure continuity of services in a secure online web portal which is fed by multiple sources.

Scope Management

Project scope will be defined in the project charter. SBC-DBH utilizes and conforms to the standards set forth by the County ISD's project management methodology and change management procedures. The Project Manager has the overall responsibility of developing a project plan that encompasses all phases of the project from initialization through the post-implementation review. Project status reports produced on a regular basis will be required that identifies any change to the project scope, project deliverables, assigned resources, and will report on issue resolution.

Time Management

The Project Manager will be responsible for developing the overall project plan and Gantt chart which will specify all project deliverables, assigned resources, and time frames for completion. All schedules developed for this project will conform to guidelines within County ISD's project management methodology. The project management tool of choice will be Microsoft Project Professional. A copy of the County ISD project management guidelines is available upon request.

Cost Management

The Project Manager will be responsible for managing project costs which may include but is not limited to procurement, personnel, contract services, and facility upgrades. This responsibility also entails developing monthly cost accountability reports for all stakeholders which will identify all incurred project costs with particular attention paid to any cost variances that deviate within 5% of the projected budget allocation.

Quality Management

The Project Manager will be responsible for ensuring that all project activities, milestones, deployed infrastructure, business process re-engineering initiatives (if applicable), are effective, efficient, and meets the needs of the department's end users with respect to the system and its performance to achieve consistent quality. This responsibility will also entail developing a proper process for business scenario testing to ensure that product capabilities are aligned with the proposed/identified service level outcomes.

Human Resource Management (Consultants, Vendors, In-House Staff)

The Project Manager will be responsible for human resource management as they are defined in the project plan and project Gantt chart. This will include working with other identified business partners to identify the appropriate personnel resources to ensure the timely completion of the goals and objectives of this project. A quarterly assessment will be completed to assist in determining whether the appropriate resources are in place to facilitate timely project deliverable completion.

Communications Management

As part of the overall project plan, the Project Manager will be accountable for delivering monthly project status reports that communicate a summary of the tasks completed in the previous month, a schedule of tasks to be accomplished during the next reporting time frame, and a list of issues identifying resolution status. Communication status reports will be provided to all project stakeholders and those individuals/groups responsible for project oversight.

Procurement Management

The SBC-DBH Project Manager will be responsible for procurement management with oversight from the DBH-IT Manager, the department's Fiscal Unit which manages MHSA funding allocations, together with the County's Central Purchasing Department. All procurement related to this project will follow established County/ Departmental procurement processes and shall receive a level of oversight that is customary to all procurement processes. All MHSA IT procurements are logged independently and provided to the department's Fiscal unit which performs a monthly audit for reporting at the monthly MHSA Executive meeting. Additionally, the County CIO, CTO, CAO, and Board of Supervisors must approve all single item purchases that exceed eighty thousand dollars.

For Low-Risk Projects, as determined by the Worksheet in Appendix A, the above Project Management Reporting is Not Required.

Instead, the County shall provide a Project Management Overview that describes the steps from concept to completion in sufficient detail to assure the DMH Technological Needs Project evaluators that the proposed solution can be successfully accomplished. For some Technological Needs Projects, the overview may be developed in conjunction with the vendor and may be provided after vendor selection.

This is not a low-risk project. Refer to Appendix A.

Project Cost

Technological Needs Projects will be reviewed in terms of their cost justification. The appropriate use of resources and the sustainability of the system on an ongoing basis should be highlighted. Costs should be forecasted on a Quarterly basis for the life of the Project.

Costs on a Yearly and Total basis will also be required for input on Exhibit 3 - Budget Summary.

See Budget Summary - Exhibit 4 and Addendum 7.4.

Nature of the Project

Extent to which the Project is Critical to the Accomplishment of the County, MHSA, and DMH Goals and Objectives.

The Empowered Communications project supported by the SharePoint framework is critical to meet the goals of the County, MHSA, and DMH by modernizing and transforming clinical and administrative information systems to improve quality of care, operational efficiency and cost effectiveness and Increasing Consumer and Family Empowerment by providing the tools for secure consumer and family access to health information within a wide variety of public and private settings.

The use of SharePoint will provide comprehensive content management and enterprise search, accelerate shared business processes and facilitate information sharing across business boundaries. When fully implemented, the framework will allow providers, consumers, families and the public a single portal into DBH's various data containers. The goal is to empower the user to access data that is relevant to their particular needs.

The upgrade in expansion of the department's Telemedicine /Video Conferencing network will allow Behavioral health to increase service offering to rural/underserved communities. This project will also allow the department to be more cost effective by reducing travel times for employees.

The establishment of Computer Lab Facilities for consumers and family members to access data available through the county, consumer organizations, and internet educational sites.

The creation of a web site for and by consumer's and their family members to ensure all applicable information is available regarding the MHP and community resources.

The deployment of informational kiosks through-out the MHP's service area in an effort to broaden effective communications to the consumer, family members and the general public.

The creation of a communications blog designed by and for consumers to share information.

Degree of Centralization or Decentralization Required for this Activity.

The Empowered Communication/SharePoint project is a series of smaller projects to increase the level of communication and access to mental health information for our consumers and family members. Each smaller project will be decentralized to get the needed equipment out in locations closer to the consumers.

Data Communication Requirements associated with the Activity.

The Empowered Communication/SharePoint project encompasses multiple smaller projects that will utilize data communication to increase the level of communication and service to the consumer. Each project will consist of data communications that will be provided by the County's current WAN/LAN infrastructure. In areas that equipment is placed in non-county facilities, data communication equipment has been built out into the budget for this project.

Characteristics of the Data to be Collected and Processed (i.e., source, volume, volatility, distribution, and security or confidentiality).

The Empowered Communication/SharePoint project encompasses multiple smaller projects that will be used to gather and distribute information.

The SharePoint framework will be used to develop web-based applications that will provide online access to patient information. This system will not store any data, but will retrieve requested information from multiple integrated data sources including: Appointment Scheduler, Electronic Health Record, Imaging Systems, Data Warehouse, and other systems used within DBH. A consumer built web site and blog will be developed to allow DBH to receive feedback from consumers and their family members on the levels of service, types of services needed and other recommendations that would assist DBH in providing better levels of services to our consumers. The site will also allow DBH, consumers, and family members to distribute, gather, and share information. The blog will require users to obtain a user account to be able to participate in the blog and ensure the identity of the poster. DBH will evaluate data security and encryption methods that are offered for the technologies used to develop and host these sites.

The telemedicine video conferencing system will be used to provide services to consumers that lives in a remote location where behavioral health may not have a clinical therapist. This system can be used to gather or distribute information directly with consumer without the Clinical Therapist being physically with the client. The telemedicine project utilizes a secure point to point connection over the County's data network to communicate with each other. Each connection will utilize point to point communication to ensure privacy and security of the session. Behavioral Health will evaluate vendor specific security standards when purchasing the equipment.

The information kiosks will be used to notify the public of the services provided by behavioral health, and the locations of these services, based on their location. It will also provide them with information contained on departmental web sites including; directory of services, ways to seek treatment, events , and links to other mental health informational portals.. These system will utilize the use of secure databases for the gathering of service level and other feedback information.

The Wireless Infrastructure project will be deployed for the support of all Empowered Communications/SharePoint projects. While providing support for these projects, the wireless infrastructure project will be used to give consumers and their family members free internet access at specified behavioral health locations throughout the county.

Degree to which the Technology can be Integrated with Other Parts of a System in achieving the Integrated Information Systems Infrastructure.

The Empowered Communications/SharePoint project encompasses multiple smaller projects that will integrate other parts of a system that achieves an Integrated Information Systems Infrastructure using the SharePoint framework as one of the core technologies at achieving interoperability.

The information kiosks will be used for notifying the public about services provided by Behavioral health. After the completion of the System Replacement, and Electronic Health Record, an opportunity to allow consumers to access their personal health record from an information kiosk utilizing the SharePoint infrastructure will be evaluated.

The consumer built web site and blog would utilize database storage within the integrated information system infrastructure to allow for the secure storage of information pertaining to the Department of Behavioral Health.

Hardware Considerations * (As Applicable)

Compatibility with Existing Hardware, Including Telecommunications Equipment.

All equipment used in the Empowered Communications/SharePoint project will integrate with the existing telecommunication and WAN/LAN infrastructure. Infrastructure upgrades will be required for the telemedicine and video conferencing equipment and wireless networking deployment project.

Physical Space Requirements Necessary for Proper Operation of the Equipment.

The Empowered Communications/SharePoint project will encompass multiple smaller projects with individual space requirements.

Physical space for servers and associated infrastructure for this project will continue to be provided by County ISD within their datacenter. Currently, the ISD datacenter has the physical space capacity to accommodate the hosting of any additional servers for this project.

Physical space for informational kiosks, computer labs, and telemedicine video conferencing expansion will be evaluated prior to deployment and will be made available.

Hardware Maintenance.

The Empowered Communications/SharePoint project will be supported by Behavioral Health and County ISD staff, and will be implemented through a joint project with departmental staff and a contracted county vendors. The hardware purchased for this project will have vendor maintained support agreements.

Existing Capacity, Immediate Required Capacity and Future Capacity.

Capacity planning for the Empowered Communication/SharePoint project will be performed as part of the requirements definition/systems analysis portion of the project.

Areas that will be considered include 1.) the amount of storage required for configuration, site collection, user authentication, and application databases to support the SharePoint framework in addition to backup and disaster recovery needs. 2.) capacity relating to network communication bandwidth, teleconferencing infrastructure bridges, network switches, and required hardware for the maintenance and monitoring of the equipment.

Backup Processing Capability.

The Empowered Communication/SharePoint project will utilize the county's disaster recovery infrastructure. This infrastructure includes the use of a storage area network for data to backup to disk, and then uses a tape silo to provide an auxiliary copy for data to be shipped off site to a secure location. The county utilizes Commvault Simpana for data backup and compression.

Software Considerations * (As Applicable)

Compatibility of Computer Languages with Existing and Planned Activities.

The County currently utilizes Microsoft development standards including the development in the following languages; ASP, ASP.NET, AJAX, SOAP, and SQL.

Maintenance of the Proposed Software (e.g., vendor-supplied).

The Empowered Communications/SharePoint Project will encompass the purchase and maintenance of software based on the needs of the projects. DBH and County ISD will evaluate the needs for software and software maintenance for these projects. If software is required, software support agreements will be obtained from the vendor or the manufacturer of the software.

Availability of Complete Documentation of Software Capabilities.

The Empowered Communications/SharePoint Project consists of multiple smaller projects that will be implemented to increase services and information to consumers, their family members, and the public in San Bernardino County: SharePoint Framework, Informational Kiosk Deployment; Computer Lab Facilities; Telemedicine and Video Conferencing upgrade and Expansion; Wireless Network Infrastructure Deployment.

The project manager will ensure that all new software whether purchased or developed in-house will have a full set of documentation that defines the products capabilities, functionality, and use.

Availability of Necessary Security Features as defined in DMH Standards noted in Appendix B.

All software used in the Empowered Communications/SharePoint project will meet DMH, County, and HIPAA standards that have been noted in Appendix B. The consumer web site and blog will utilize strict security policies, where required, due to the confidentiality of data and information that could possibly be presented to the consumer.

Ability of the Software to meet Current Technology Standards or be Modified to meet them in the future.

All software used in the Empowered Communications/SharePoint project will meet all current technology standards and/or be modified to meet them in the future. All in-house developed software will meet DBH development standards for development and security. All purchase software will be evaluated based on the ability to be modified to meet current and future standards.

Interagency Considerations* (As Applicable)

Describe the County's interfaces with contract service providers and state and local agencies. Consideration must be given to compatibility of communications and sharing of data. The information technology needs of contract service providers must be considered in the local planning process.

DBH may utilize the Telemedicine/ Video Conferencing equipment with other County departments, contract service providers, and state and local agencies where it is required, but is subject to all applicable policies, laws, and regulations the County bound by. DBH and other County departments such as Public Health, the Arrowhead Regional Medical Center (ARMC), Probation, Department of Children Services, Sheriff's Department, as well as, Contract providers, utilize open video conferencing standards to communicate.

Training and Implementation * (As Applicable)

Describe the current status of workflow and the proposed process for assessment, implementation and training of new technology being considered.

A comprehensive training and implementation plan will be developed at such time as a vendor has been selected for the Empowered Communications/SharePoint Project.

Security Strategy * (As Applicable)

Describe the County's policies and procedures related to Privacy and Security for the Project as they may differ from general Privacy and Security processes.

Protecting Data Security and Privacy.

This project and the data residing on the servers will continue to be administered in such a way that meets or exceeds data security and privacy policies the department is current subject to including County, department, HIPAA, AB211, SB541, and any other State or Federal regulations. This includes maintaining the security and confidentiality of the data through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication. The County has a privacy and security committee consisting of members belonging to various departments who ensure that all data security and privacy standards are maintained at a meets or exceeds level. The department also continually scrutinizes all technology to ensure compliance with all applicable policies and regulations.

Operational Recovery Planning.

Options in implementing an infrastructure that will eliminate single points of failure will be evaluated. The goal will be to implement a systems architecture that will allow for easy operational recovery in the event that any essential system component fails.

Business Continuity Planning.

The SBC-DBH has in place a Departmental Emergency Operations Plan (DEOP) which places emphasis on manual business processes of essential functions to use in place of technology wherever possible in an effort to restore the department's ability to provide client services in the shortest time frame possible. A copy of the DEOP is available upon request.

Emergency Response Planning.

The DEOP serves to provide guidance and procedures to prepare for and respond to significant or catastrophic natural, environmental, or conflict related risks/events that produce situations requiring a coordinated response. The primary goals of that plan are to protect life and property, preserve infrastructure, and continue the operations of government. As that relates to the Empowered Communications/SharePoint project, these systems are not currently categorized as essential to carrying out DBH functions, but this may change during future scheduled

revisions of the DEOP as this environment is finalized and the system becomes an integral source of information.

Health Information Portability and Accountability Act (HIPAA) Compliance.

The County and department have policies in place that ensure compliance with HIPAA requirements for maintaining the confidentiality and security of patient health information (PHI). These policies encompass physical, administrative, and technical safeguards.

State and Federal Laws and Regulations.

The department will ensure that the Empowered Communication/SharePoint project maintains compliance with all applicable state, federal, and local laws, ordinances, and regulations regarding the security and privacy of PHI.

Project Sponsor(s) Commitments [Small Counties May Elect to not Complete this Section]

Sponsor(s) Name(s) and Title(s)

Identify the Project Sponsor Name and Title. If multiple Sponsors, identify each separately.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Commitment

Describe each Sponsor's commitment to the success of the Project, identifying resource and management commitment.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

As Director of the County of San Bernardino Department of Behavioral Health (DBH), Mr. Rawland has overall responsibility for the implementation and administration of all MHSA programs within San Bernardino County. Additionally, he has overall responsibility for all MHSA component planning activities and is committed to the successful completion of the Technology Needs Projects. Mr. Rawland is fully committed to modernizing and transforming DBH clinical and administrative information systems in order to improve operational efficiency, quality of care, and cost effectiveness in support of the goals and objectives of the Mental Health Services Act (MHSA). He will ensure that identified project resources such as County and DBH Information Technology staff, supervisors, managers, program support staff, as well as information technology consultants and vendors are available to support the timely and successful completion of this project.

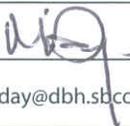
Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Mr. Day has overall responsibility for the planning and implementation of technology related projects supporting MHSA within San Bernardino County. He is fully committed to ensuring that the technology implemented supports the goals and objectives of the MHSA including increasing client and family empowerment through providing the tools necessary for secure client and family access to health information that is culturally and linguistically competent within a variety of public and private settings. He envisions a future information systems infrastructure that is modernized and transformed to ensure quality of care, parity, operational efficiency, and cost effectiveness. In addition to high level oversight and guidance, Mr. Day will work closely with the project manager and implementation team to ensure that project goals are met and timely completion is achieved.

Approvals/Contacts

Please include separate signoff sheet with the Names, Titles, Phone, E-mail, Signatures, and Dates for:

Individual(s) responsible for preparation of this Exhibit, such as the Project Lead or Project Sponsor(s).

Signatures			
Prepared By			
Name:	Michael Day	Title:	Business Applications Manager
Signature:		Date:	06-17-2009
		Phone:	(909) 382-3061
Email Address:	mday@dbh.sbcounty.gov		
Name:	_____	Title:	_____
Signature:	_____	Date:	_____
		Phone:	_____
Email Address:	_____		

Enclosure 3
Exhibit 4

Budget Summary
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Empowered Communications/SharePoint

(List Dollars in Thousands)

Category	(1) 08/09	(2) 09/10	(3) 10/11	(4) Future Years	(5) Total One-time Costs (1+2+3+4)	(6) Estimated Annual Ongoing Costs*
Personnel		118,000	118,000	118,000	354,000	
Total Staff (Salaries and Benefits)		118,000	118,000	118,000		
Hardware		180,000	130,000	85,000	395,000	50,000
From Exhibit 2						
Total Hardware		180,000	130,000	85,000	395,000	50,000
Software		25,000	12,500	25,000	62,500	50,000
From Exhibit 2						
Total Software		25,000	12,500	25,000	62,500	50,000
Contract Services (list services to be provided)						
Hardware Support		75,000	30,000	40,000	145,000	
Software Development		30,000	30,000	70,000	130,000	
Total Contract Services		105,000	60,000	110,000	275,000	
Administrative Overhead						
Other Expenses (Describe)						
Total Costs (A)		428,000	320,500	338,000	1,086,500	100,000
Total Offsetting Revenues (B) **						
MHSA Funding Requirements (A-B)		428,000	320,500	338,000	1,086,500	100,000
<p>* Annual Costs are the ongoing costs required to maintain the technology infrastructure after the one-time implementation.</p> <p>** For Projects providing services to Multiple-Program Clients (e.g., Mental Health and Alcohol and Drug Program clients), Attach a Description of Estimated Benefits and Project Costs allocated to Each Program.</p>						

Notes:

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Enclosure 3
Exhibit 5

Stakeholder Participation For Technological Needs Project Proposal

County Name:

Project Name:

Counties are to provide a short summary of their Community Planning Process (for Projects), to include identifying stakeholder entities involved and the nature of the planning process; for example, description of the use of focus groups, planning meetings, teleconferences, electronic communication, and/or the use of regional partnerships.

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	08-06-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-01-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-03-2008
General Public	Stakeholder Public Comment Period Enclosure 1 Exhibits were posted on the department's internet site for a 30 day comment period (11-5-2008 thru 12-5-2008)	11-05-2008
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	11-06-2008
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	11-20-2008

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	01-28-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	03-16-2009
General Public	Stakeholder Public Comment Period Enclosure 3 Exhibits were posted on the department's internet site for a 30 day comment period (4-10-2009 thru 5-10-2009)	04-10-2009
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	05-21-2009
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	06-04-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	06-04-2009

APPENDIX A – PROJECT RISK ASSESSMENT – Empowered Communications/SharePoint

Category	Factor	Rating	Score	
Estimated Cost of Project	Over \$5 million	6	2	
	Over \$3 million	5		
	Over \$500,00	2		
	Under \$ 500,000	1		
Project Manager Experience				
Like Projects Completed in a "key staff" role	None	3	1	
	One	2		
	Two or More	1		
Team Experience				
Like Projects Completed by at least 75% Of Key Staff	None	3	1	
	One	2		
	Two or More	1		
Elements of Project Type				
Hardware	New Install	Local Desktop/Server	1	3
		Distributed/Enterprise Server	3	
	Update/Upgrade	Local Desktop/Server	1	
		Distributed/Enterprise Server	2	
	Infrastructure	Local Network Cabling	1	3
		Distributed Network	2	
Data Center/Network Operations Center		3		
Software	Custom Development-Application Service Provider		5	1
	COTS* Installation	"Off-the-Shelf"	1	
		Modified COTS	3	
	Number of Users	Over 1,000	5	
		Over 100	3	5
		Over 20	2	
		Under 20	1	
	*Commercial Off-The-Shelf Software	Architecture	Browser/thin client based	1
		Two-Tier (client/server)	2	
		Multi-Tier (client & web, database, application, etc. servers)	3	
Total Score			21	

Total Score	Project Risk Rating	
25 - 31	High	
16 - 24	Medium	✓
8 - 15	Low	

Enclosure 3
Exhibit 1

Face Sheet
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Behavioral Health Management Information System (BHMIS) Replacement

This Technological Needs Project Proposal is consistent with and supportive of the vision, values, mission, goals, objectives, and proposed actions of the Mental Health Services Act (MHSA) Capital Facilities and Technological Needs Component Proposal.

We are planning to, or have a strategy to modernize and transform clinical and administrative systems to improve quality of care, operational efficiency, and cost effectiveness. Our Roadmap for moving toward an Integrated Information Systems Infrastructure, as described in our Technological Needs Assessment, has been completed. This Project Proposal also supports the Roadmap.

We recognize the need for increasing client and family empowerment by providing tools for secure client and family access to health information within a wide variety of public and private settings. The Proposal addresses these goals.

This proposed Project has been developed with contributions from stakeholders, the public and our contract service providers, in accordance with California Code of Regulations (CCR), Title 9, Sections 3300, 3310 and 3315(b). The draft proposal was circulated for 30 days to stakeholders for review and comment. All input has been considered, with adjustments made as appropriate.

Mental Health Services Act funds proposed in this Project are compliant with CCR Section 3410, non-supplant.

All documents in the attached Proposal are true and correct.

County Director

Name: Allan Rawland

Signature: 

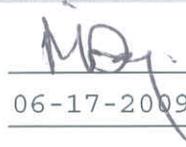
Phone: (909) 382-3133

Date: 06-17-2009

Email: arawland@dbh.sbcounty.gov

Chief Information Officer

Name: Michael Day

Signature: 

Phone: (909) 382-3061

Date: 06-17-2009

Email: mday@dbh.sbcounty.gov

County Director

Name: _____

Signature: _____

Phone: _____

Date: _____

Email: _____

Enclosure 3
Exhibit 3

Technological Needs Project Proposal Description

County Name: San Bernardino Date: June 17, 2009

Project Name: Behavioral Health Management Information System - Replacement

Check at Least One Box from Each Group that Describes this MHSA Technological Needs Project

- New System.
- Extend the Number of Users of an Existing System.
- Extend the Functionality of an Existing System.
- Supports Goal of Modernization / Transformation.
- Support Goal of Client and Family Empowerment.

Indicate the Type of MHSA Technological Needs Project

> Electronic Health Record (EHR) System Projects (Check All that Apply)

- Infrastructure, Security, Privacy.
- Practice Management.
- Clinical Data Management.
- Computerized Provider Order Entry.
- Full Electronic Health Record (EHR) with Interoperability Components (Example: Standard Data Exchanges with Other Counties, Contract Providers, Labs, Pharmacies).

> Client and Family Empowerment Projects

- Client/Family Access to Computing Resources Projects.
- Personal Health Record (PHR) System Projects
- Online Information Resource Projects (Expansion / Leveraging Information-SharingServices)

> Other Technological Needs Projects that Support MHSA Operations

- Telemedicine and Other Rural / Underserved Service Access Methods.
- Pilot Projects to Monitor New Programs and Service Outcome Improvement.
- Data Warehousing Projects / Decision Support.
- Imaging / Paper Conversion Projects.
- Other.

Indicate the Technological Needs Project Implementation Approach

Custom Application

Name of Consultant or Vendor (if applicable):

Commercial Off-The -Shelf (COTS) System

Name of Vendor:

To be determined via an RFP process.

Product Installation

Name of Consultant or Vendor (if applicable):

To be determined via an RFP Process.

Software Installation

Name of Vendor:

To be determined via an RFP process.

Project Description and Evaluation Criteria (Detailed Instructions)

Small County? Yes No

Complete Each Section Listed Below.

Small counties (under 200,000 in population) have the Option of submitting a Reduced Project Proposal; however, they must describe how these criteria will be addressed during the implementation of the Project.

A completed Technological Needs Assessment is required in addition to the Technological Needs Project Proposal. Technological Needs Project Proposals that are for planning or preparation of technology are not required to include hardware, software, interagency, training, or security considerations. These items are indicated with an “**”.

Project Management Overview (Medium-to-High Risk Projects)

Counties must provide a Project Management Overview based on the risk of the proposed Project. The Project must be assessed for **Risk Level** using the worksheet in **Appendix A**.

For Projects with Medium to High Risk, the County shall provide information in the following Project management areas.

Independent Project Oversight

Oversight of the BHMIS project will be provided by the SBC-DBH Information Steering Committee (ISC), the SBC-DBH Executive Steering Committee (ESC), the County Information Services Department (ISD) Application Development Division Chief, the DBH Office of Information Technology Manager, the Community Policy Advisory Committee (CPAC) the Mental Health Commission (MHC) and an independent consulting firm. The sources of independent project oversight are described below.

The ISC consists of stakeholders that represent contract providers, consumers, families, service programs, DBH Compliance, DBH Quality Management, and Information Technology. Together, they provide clinical, strategic, and operational guidance to information system projects to ensure that they are in line with DBH business goals and objectives. The ISC meets monthly to review business projects for status, issue resolution, and conformity to department and project management standards.

The ESC is comprised of the Department of Behavioral Health's (DBH) Chief Deputy Director, Deputy director of Administrative Services, Chief of Research and Evaluation, Manager of the Office of Information Technology (IT) and the County's Chief Technology Officer who meet quarterly, provides strategic, operational and service program guidance to IT planning and ensures IT projects are consistent with the departments business goals, IT objectives, are cost effective and viable.

The County ISD Application Development Division Chief provides objective oversight of all IT projects to ensure that project deliverables are consistent with County ISD standards for technology and systems development. The Division Chief will also ensure that project deliverables adhere to open/industry standards to ensure compatibility with existing and future technological infrastructure in terms of software, hardware, and protocols.

The manager of the DBH Office of Information Technology in collaboration with ISD's technology support groups will provide additional oversight to ensure that the Department network infrastructure and hardware are compatible with and sufficient to support the BHMIS project.

The CPAC consists of community stakeholders, consumers and their family members and was formed as an approving body for all Mental Health Services Act (MHSA) planning and implementation. The committee meets on a monthly basis

The MHC works collaboratively and provides insight and suggests direction to SBC-DBH to ensure that proposed IT projects will improve the delivery of behavioral health services to the community.

Integration Management

The DBH-IT Manager in conjunction with the project manager will be responsible for integration management of all systems deployed for this project from a data and infrastructure perspective. Systems integration at the data and infrastructure level typically involves consideration to protocol, standards, and compatibility of all systems involved.

An overall assessment of compatibility and capability of systems and/or data affected by this project will be completed by DBH-IT project leads in conjunction with County ISD technical staff. The ultimate goal of the County is to have a fully integrated system where client service data is shared to ensure continuity of services in a secure online web portal which is fed by multiple sources.

Scope Management

Project scope will be defined in the project charter. SBC-DBH utilizes and conforms to the standards set forth by the County ISD's project management methodology and change management procedures. The Project Manager has the overall responsibility of developing a project plan that encompasses all phases of the project from initialization through the post-implementation review. Project status reports produced on a regular basis will be required that identifies any change to the project scope, project deliverables, assigned resources, and will report on issue resolution.

Time Management

The Project Manager will be responsible for developing the overall project plan and Gantt chart which will specify all project deliverables, assigned resources, and time frames for completion. All schedules developed for this project will conform to guidelines within County ISD's project management methodology. The project management tool of choice will be Microsoft Project Professional. A copy of the County ISD project management guidelines is available upon request.

Cost Management

The Project Manager will be responsible for managing project costs which may include but is not limited to procurement, personnel, contract services, and facility upgrades. This responsibility also entails developing monthly cost accountability reports for all stakeholders which will identify all incurred project costs with particular attention paid to any cost variances that deviate within 5% of the projected budget allocation.

Quality Management

The Project Manager will be responsible for ensuring that all project activities, milestones, deployed infrastructure, business process re-engineering initiatives (if applicable), are effective, efficient, and meets the needs of the department's end users with respect to the system and its performance to achieve consistent quality. This responsibility will also entail developing a proper process for business scenario testing to ensure that product capabilities are aligned with the proposed/identified service level outcomes.

Human Resource Management (Consultants, Vendors, In-House Staff)

The Project Manager will be responsible for human resource management as they are defined in the project plan and project Gantt chart. This will include working with other identified business partners to identify the appropriate personnel resources to ensure the timely completion of the goals and objectives of this project. A quarterly assessment will be completed to assist in determining whether the appropriate resources are in place to facilitate timely project deliverable completion.

Communications Management

As part of the overall project plan, the Project Manager will be accountable for delivering monthly project status reports that communicate a summary of the tasks completed in the previous month, a schedule of tasks to be accomplished during the next reporting time frame, and a list of issues identifying resolution status.

Communication status reports will be provided to all project stakeholders and those individuals/groups responsible for project oversight.

Procurement Management

The SBC-DBH Project Manager will be responsible for procurement management with oversight from the DBH-IT Manager, the department's Fiscal Unit which manages MHSA funding allocations, together with the County's Central Purchasing Department. All procurement related to this project will follow established County/Departmental procurement processes and shall receive a level of oversight that is customary to all procurement processes. All MHSA IT procurements are logged independently and provided to the department's Fiscal unit which performs a monthly audit for reporting at the monthly MHSA Executive meeting. Additionally, the County CIO, CTO, CAO, and Board of Supervisors must approve all single item purchases that exceed eighty thousand dollars.

For Low-Risk Projects, as determined by the Worksheet in Appendix A, the above Project Management Reporting is Not Required.

Instead, the County shall provide a Project Management Overview that describes the steps from concept to completion in sufficient detail to assure the DMH Technological Needs Project evaluators that the proposed solution can be successfully accomplished. For some Technological Needs Projects, the overview may be developed in conjunction with the vendor and may be provided after vendor selection.

This is not a low-risk project. Refer to Appendix A.

Project Cost

Technological Needs Projects will be reviewed in terms of their cost justification. The appropriate use of resources and the sustainability of the system on an ongoing basis should be highlighted. Costs should be forecasted on a Quarterly basis for the life of the Project.

Costs on a Yearly and Total basis will also be required for input on Exhibit 3 - Budget Summary.

See Exhibit 4 and Addendum 7.2.

Nature of the Project

Extent to which the Project is Critical to the Accomplishment of the County, MHSA, and DMH Goals and Objectives.

The Behavioral Health Information Management System replacement project will allow for completion of a centralized data repository for reporting and will also provide SBC-DBH with a complete enterprise system that automates key financial, clinical, and management processes. This environment will allow the department to realize operational efficiencies, increase quality of care, and increase productivity. The BHMIS will also allow decision makers to better analyze the extensive amount of disparate health systems data through an aggregated data repository to assist the department in making improved operational and strategic decisions directly relating to consumer plans for wellness, recovery, and resiliency.

Degree of Centralization or Decentralization Required for this Activity.

All BMHIS servers will be fully centralized in the County's Datacenter as this location allows for the County to maintain security of information while maintaining system performance and backup retention. From a data perspective, the BMHIS through a extraction, transfer and load process (ETL) will provide data feeds to SBC-DBH's data warehouse application thereby creating a centralized repository for departmental reporting and data mining purposes.

Data Communication Requirements associated with the Activity.

There is not any immediate need to expand the current data communication infrastructure for this project. The links from the BHMIS data source servers are centralized in the County ISD data center which will provide the optimal data transfer speeds during data input, review and reporting to the extensive network of system users. The County's existing firewall will be used to protect systems from outside attacks that may originate from the internet and it's wide area network (WAN) will be used as a means for client level access to server resources.

Characteristics of the Data to be Collected and Processed (i.e., source, volume, volatility, distribution, and security or confidentiality).

The primary source of data that will be maintained within the BHMIS data server infrastructure is provided via direct input from SBC-DBH's vast network of County and Contract Provider clinic facilities. During implementation, a data conversion process will be performed by the vendor to extract, transform (if applicable), and load client data from the existing BHMIS to the new BHMIS. Specific security requirements that meet or exceed HIPAA and all laws, regulations, and ordinances the County is subject to will be defined in the RFP for BHMIS replacement.

Degree to which the Technology can be Integrated with Other Parts of a System in achieving the Integrated Information Systems Infrastructure.

The BHMS will be a cornerstone of a fully integrated information systems infrastructure that includes a data warehouse application, a Electronic Health Record system that will be selected through a RFP process, a centralized imaging system and the use of a SharePoint framework. This portal when fully implemented will provide full integration and interoperability with the county's Arrowhead Regional Medical Center and the Department of Public Health. As development of this environment continues, SBC-DBH will focus on ensuring that industry and/or open standards are followed in all phases of the project to maximize the potential for seamless and easy integration with other applications for the purpose of connectivity and data transfer.

Hardware Considerations * (As Applicable)

Compatibility with Existing Hardware, Including Telecommunications Equipment.

All existing hardware for this project adhere to County ISD standards to ensure compatibility, interoperability, and availability of support with existing infrastructure. Currently, there is not an anticipated need for an upgrade to existing telecommunications equipment for this project.

Final hardware requirements are not currently available as this will depend on the vendor selected during the previously mentioned RFP process for the BHMIS, to determine the final design and the architecture of the test and production environments. Additionally, changes or enhancements to those environments must take into account the infrastructure used for performing backups and disaster recovery.

Physical Space Requirements Necessary for Proper Operation of the Equipment.

Physical space for servers and associated infrastructure for this project will continue to be provided by County ISD within their datacenter. Currently, the ISD datacenter has the physical space capacity to accommodate the hosting of any additional servers for the BHMIS Replacement project.

Hardware Maintenance.

All existing hardware purchased for this project will be under maintenance agreements through the vendor.

Existing Capacity, Immediate Required Capacity and Future Capacity.

Capacity planning for the BHMIS environment will be performed as part of the requirements definition/systems analysis portion of the project. Areas that will be considered include the amount of data that will originate from the source system, any resources required for data/message queues, and storage for backups/disaster recovery needs. As a final product is identified and system architecture is defined, DBH-IT will be able to more accurately project capacity needs for the near, medium, and long term.

Backup Processing Capability.

The BHMIS environment will be backed up on a nightly basis using County ISD's enterprise backup solution. The backups are maintained at the County ISD datacenter while backup copies are rotated to an off-site storage facility to mitigate the potential for unexpected or sudden loss of archived data at the primary storage facility or vice versa.

An auxiliary backup copy of data is first made onto the County's storage area network (SAN), it then gets transferred to tier 2 SAN disks, and lastly copied to removable tape media.

Software Considerations * (As Applicable)

Compatibility of Computer Languages with Existing and Planned Activities.

All computer languages and protocols used for existing and planned activities will adhere to open/industry or platform specific standards to ensure ease of data transfer and compatibility. An evaluation of computer languages and protocols will be performed during the RFP process. Messaging protocols such as HL7 for transmitting health related data will be evaluated at that time but will ultimately depend on need, relevance, and product support.

Maintenance of the Proposed Software (e.g., vendor-supplied).

All existing software purchased for this project will be under maintenance agreements through the vendor.

Availability of Complete Documentation of Software Capabilities.

The department has full access to complete documentation of all software used in the current data warehouse environment. It will continue to ensure that any new software is accompanied by complete documentation of capabilities.

Availability of Necessary Security Features as defined in DMH Standards noted in Appendix B.

The BHMIS environment will be implemented in such a manner that will meet or exceed all security criteria as defined in DMH Standards Appendix B. Additionally, the County has measures in place such as a firewall, anti-virus software on servers/desktops, an intrusion detection systems to protect computing equipment from security breaches.

Ability of the Software to meet Current Technology Standards or be Modified to meet them in the future.

All components that form the makeup of the BHMIS environment such as the protocols, standards, operating systems, DBMS, and application tiers will be evaluated during the RFP process to ensure that the technology standards will be met and will remain relatively stable for the near, medium, and long term .

Interagency Considerations* (As Applicable)

Describe the County's interfaces with contract service providers and state and local agencies. Consideration must be given to compatibility of communications and sharing of data. The information technology needs of contract service providers must be considered in the local planning process.

DBH may share data with other County departments, contract service providers, and state and local agencies where it is required, but subject to all applicable policies, laws, and regulations the County is bound by. DBH and other County departments such as Public Health, the Arrowhead Regional Medical Center (ARMC), Probation, Department of Children Services, Sheriff's Department, and the school system routinely share limited data as appropriate while coordinating service delivery to an overlapping consumer population. As such, the ultimate goal of the County is to have a fully integrated system where client service data is shared to ensure continuity of services in a secure online web portal which is fed by multiple sources.

Sharing of data typically involves compatibility, technical infrastructure, and communication protocol considerations at the contract service provider level, or more broadly between the sending and receiving entities. An overall assessment of compatibility and capability of these entities will be completed by the DBH ISC and County Health Services Agency (HSA) at a future date for which a time table has not been established, but due diligence will be completed to ensure that system plans will adhere to current industry/open standards such as HL7 messaging and/or record transfer.

Training and Implementation * (As Applicable)

Describe the current status of workflow and the proposed process for assessment, implementation and training of new technology being considered.

A comprehensive training and implementation plan will be developed at such time as a vendor has been selected for the BHMIS software solution. Currently, the request for proposals (RFP) process is under way with a tentative vendor selection time frame of March 2010 thru June 2010.

Security Strategy * (As Applicable)

Describe the County's policies and procedures related to Privacy and Security for the Project as they may differ from general Privacy and Security processes.

Protecting Data Security and Privacy.

This project and the data residing on the servers will continue to be administered in such a way that meets or exceeds data security and privacy policies the department is current subject to including County, department, HIPAA, AB211, SB541, and any other State or Federal regulations. This includes maintaining the security and confidentiality of the data through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication. The County has a privacy and security committee consisting of members belonging to various departments whose purpose is to ensure that all data security and privacy standards are maintained at a meets or exceeds level. The department also continually scrutinizes all technology to ensure compliance with all applicable policies and regulations.

Operational Recovery Planning.

Options in implementing a fully functional redundant copy of the BHMIS environment will be evaluated in addition to other high availability/disaster recovery (HD/DR) requirements that will be specified in the RFP.

Business Continuity Planning.

The SBC-DBH has in place a Departmental Emergency Operations Plan (DEOP) which places emphasis on manual business processes of essential functions to use in place of technology wherever possible in an effort to restore the department's ability to provide client services in the shortest time frame possible. A copy of the DEOP is available upon request.

Emergency Response Planning.

The DEOP serves to provide guidance and procedures to prepare for and respond to significant or catastrophic natural, environmental, or conflict related risks/events that produce situations requiring a coordinated response. The primary goals of that plan are to protect life and property, preserve infrastructure, and continue the operations of government. The department's BHMIS is categorized as a data system that is critical to carrying out DBH functions in the event of a disaster, therefore, one of the priorities for the department is to reestablish the BHMIS environment and preserve data.

Health Information Portability and Accountability Act (HIPAA) Compliance.

The County and department have policies in place that ensure compliance with HIPAA requirements for maintaining the confidentiality and security of patient health information (PHI). These policies encompass physical, administrative, and technical safeguards.

State and Federal Laws and Regulations.

The SBC-DBH will ensure that the BHMIS environment maintains compliance with all applicable state, federal, and local laws, ordinances, and regulations regarding the security and privacy of PHI.

Project Sponsor(s) Commitments [Small Counties May Elect to not Complete this Section]

Sponsor(s) Name(s) and Title(s)

Identify the Project Sponsor Name and Title. If multiple Sponsors, identify each separately.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Commitment

Describe each Sponsor's commitment to the success of the Project, identifying resource and management commitment.

Allan Rawland, Director
 County of San Bernardino Department of Behavioral Health

As Director of the County of San Bernardino Department of Behavioral Health (DBH), Mr. Rawland has overall responsibility for the implementation and administration of all MHSA programs within San Bernardino County. Additionally, he has overall responsibility for all MHSA component planning activities and is committed to the successful completion of the Technology Needs Projects. Mr. Rawland is fully committed to modernizing and transforming DBH clinical and administrative information systems in order to improve operational efficiency, quality of care, and cost effectiveness in support of the goals and objectives of the Mental Health Services Act (MHSA). He will ensure that identified project resources such as County and DBH Information Technology staff, supervisors, managers, program support staff, as well as information technology consultants and vendors are available to support the timely and successful completion of this project.

Michael Day, IT Manager
 Department of Behavioral Health Office of Information Technology

Mr. Day has overall responsibility for the planning and implementation of technology related projects supporting MHSA within San Bernardino County. He is fully committed to ensuring that the technology implemented supports the goals and objectives of the MHSA including increasing client and family empowerment through providing the tools necessary for secure client and family access to health information that is culturally and linguistically competent within a variety of public and private settings. He envisions a future information systems infrastructure that is modernized and transformed to ensure quality of care, parity, operational efficiency, and cost effectiveness. In addition to high level oversight and guidance, Mr. Day will work closely with the project manager and implementation team to ensure that project goals are met and timely completion is achieved.

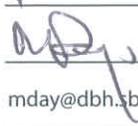
Approvals/Contacts

Please include separate signoff sheet with the Names, Titles, Phone, E-mail, Signatures, and Dates for:

Individual(s) responsible for preparation of this Exhibit, such as the Project Lead or Project Sponsor(s).

Signatures

Prepared By

Name: Michael Day Title: Business Applications Manager
Signature:  Date: 06-17-2009 Phone: (909) 382-3111
Email Address: mday@dbh.sbcounty.gov

Name: _____ Title: _____
Signature: _____ Date: _____ Phone: _____
Email Address: _____

Enclosure 3
Exhibit 4

Budget Summary For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Behavioral Health Management Information System (BHMIS) Replacement

(List Dollars in Thousands)

Category	(1) 08/09	(2) 09/10	(3) 10/11	(4) Future Years	(5) Total One-time Costs (1+2+3+4)	(6) Estimated Annual Ongoing Costs*
Personnel		247,409	247,409	483,889	978,707	247,409
Total Staff (Salaries and Benefits)		247,409	247,409	483,889	247,409	247,409
Hardware		101,000			101,000	
From Exhibit 2						
Total Hardware		101,000			101,000	
Software		1,162,000	350,000	1,050,000	2,562,000	350,000
From Exhibit 2						
Software Enhancements			35,000	105,000	140,000	
Total Software		1,162,000	385,000	1,155,000	2,702,000	350,000
Contract Services (list services to be provided)						
Training		65,000			65,000	
Implementation Services		200,000			200,000	
Total Contract Services		265,000			265,000	
Administrative Overhead						
Other Expenses (Describe)						
Data Conversion		225,000			225,000	
Total Costs (A)		2000409.36	632,409	1638888.52	4,271,707	597,409
Total Offsetting Revenues (B) **						
MHSA Funding Requirements (A-B)		2,000,409	632,409	1,638,889	4,271,707	597,409
* Annual Costs are the ongoing costs required to maintain the technology infrastructure after the one-time implementation.						
** For Projects providing services to Multiple-Program Clients (e.g., Mental Health and Alcohol and Drug Program clients), Attach a Description of Estimated Benefits and Project Costs allocated to Each Program.						

Notes:

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Enclosure 3
Exhibit 5

Stakeholder Participation For Technological Needs Project Proposal

County Name:

Project Name:

Counties are to provide a short summary of their Community Planning Process (for Projects), to include identifying stakeholder entities involved and the nature of the planning process; for example, description of the use of focus groups, planning meetings, teleconferences, electronic communication, and/or the use of regional partnerships.

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	08-06-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-01-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-03-2008
General Public	Stakeholder Public Comment Period Enclosure 1 Exhibits were posted on the department's internet site for a 30 day comment period (11-5-2008 thru 12-5-2008)	11-05-2008
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	11-06-2008
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	11-20-2008

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	01-28-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	03-16-2009
General Public	Stakeholder Public Comment Period Enclosure 3 Exhibits were posted on the department's internet site for a 30 day comment period (4-10-2009 thru 5-10-2009)	04-10-2009
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	05-21-2009
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	06-04-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	06-04-2009

APPENDIX A – PROJECT RISK ASSESSMENT – BHMIS Replacement

Category		Factor	Rating	Score	
Estimated Cost of Project		Over \$5 million	6	5	
		Over \$3 million	5		
		Over \$500,00	2		
		Under \$ 500,000	1		
Project Manager Experience					
Like Projects Completed in a “key staff” role		None	3	1	
		One	2		
		Two or More	1		
Team Experience					
Like Projects Completed by at least 75% Of Key Staff		None	3	3	
		One	2		
		Two or More	1		
Elements of Project Type					
Hardware	New Install	Local Desktop/Server	1	3	
		Distributed/Enterprise Server	3		
	Update/Upgrade	Local Desktop/Server	1		
		Distributed/Enterprise Server	2		
	Infrastructure	Local Network Cabling	1		3
		Distributed Network	2		
Data Center/Network Operations Center		3			
Software	Custom Development-		5	3	
	Application Service Provider		1		
	COTS* Installation	“Off-the-Shelf”	1		
		Modified COTS	3		
	Number of Users	Over 1,000	5	5	
		Over 100	3		
		Over 20	2		
		Under 20	1		
*Commercial Off-The-Shelf Software	Architecture	Browser/thin client based	1	3	
		Two-Tier (client/server)	2		
		Multi-Tier (client & web, database, application, etc. servers)	3		
Total Score				26	

Total Score	Project Risk Rating	
25 - 31	High	✓
16 - 24	Medium	
8 - 15	Low	

Enclosure 3
Exhibit 1

Face Sheet
For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Virtual Desktop/Server Environment

This Technological Needs Project Proposal is consistent with and supportive of the vision, values, mission, goals, objectives, and proposed actions of the Mental Health Services Act (MHSA) Capital Facilities and Technological Needs Component Proposal.

We are planning to, or have a strategy to modernize and transform clinical and administrative systems to improve quality of care, operational efficiency, and cost effectiveness. Our Roadmap for moving toward an Integrated Information Systems Infrastructure, as described in our Technological Needs Assessment, has been completed. This Project Proposal also supports the Roadmap.

We recognize the need for increasing client and family empowerment by providing tools for secure client and family access to health information within a wide variety of public and private settings. The Proposal addresses these goals.

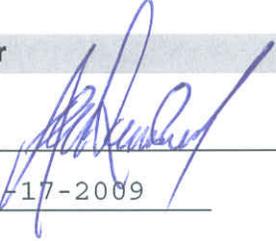
This proposed Project has been developed with contributions from stakeholders, the public and our contract service providers, in accordance with California Code of Regulations (CCR), Title 9, Sections 3300, 3310 and 3315(b). The draft proposal was circulated for 30 days to stakeholders for review and comment. All input has been considered, with adjustments made as appropriate.

Mental Health Services Act funds proposed in this Project are compliant with CCR Section 3410, non-supplant.

All documents in the attached Proposal are true and correct.

County Director

Name: Allan Rawland

Signature: 

Phone: (909) 382-3133

Date: 06-17-2009

Email: arawland@dbh.sbcounty.gov

Chief Information Officer

Name: Michael Day

Signature: 

Phone: (909) 382-3061

Date: 06-17-2009

Email: mday@dbh.sbcounty.gov

County Director

Name: _____

Signature: _____

Phone: _____

Date: _____

Email: _____

Enclosure 3
Exhibit 3

Technological Needs Project Proposal Description

County Name: San Bernardino Date: June 17, 2009

Project Name: Virtual Desktop/Server Environment

Check at Least One Box from Each Group that Describes this MHSA Technological Needs Project

- New System.
- Extend the Number of Users of an Existing System.
- Extend the Functionality of an Existing System.
- Supports Goal of Modernization / Transformation.
- Support Goal of Client and Family Empowerment.

Indicate the Type of MHSA Technological Needs Project

> Electronic Health Record (EHR) System Projects (Check All that Apply)

- Infrastructure, Security, Privacy.
- Practice Management.
- Clinical Data Management.
- Computerized Provider Order Entry.
- Full Electronic Health Record (EHR) with Interoperability Components (Example: Standard Data Exchanges with Other Counties, Contract Providers, Labs, Pharmacies).

> Client and Family Empowerment Projects

- Client/Family Access to Computing Resources Projects.
- Personal Health Record (PHR) System Projects
- Online Information Resource Projects (Expansion / Leveraging Information-SharingServices)

> Other Technological Needs Projects that Support MHSA Operations

- Telemedicine and Other Rural / Underserved Service Access Methods.
- Pilot Projects to Monitor New Programs and Service Outcome Improvement.
- Data Warehousing Projects / Decision Support.
- Imaging / Paper Conversion Projects.
- Other.

Indicate the Technological Needs Project Implementation Approach

Custom Application

Name of Consultant or Vendor (if applicable):

Not applicable

Commercial Off-The -Shelf (COTS) System

Name of Vendor:

Product selected for the Virtual Server Environment is VMWare Infrastructure 3. The Virtual Desktop Infrastructure product is VMWare View. The Virtual Infrastructure will be hosted on an Hewlett Packard server and storage area network, while the desktop users will utilize thin clients.

Product Installation

Name of Consultant or Vendor (if applicable):

Vendor has not been selected due to County RFP process has not completed.

Software Installation

Name of Vendor:

Vendor has not been selected due to County RFP process has not completed.

Project Description and Evaluation Criteria (Detailed Instructions)

Small County? Yes No

Complete Each Section Listed Below.

Small counties (under 200,000 in population) have the Option of submitting a Reduced Project Proposal; however, they must describe how these criteria will be addressed during the implementation of the Project.

A completed Technological Needs Assessment is required in addition to the Technological Needs Project Proposal. Technological Needs Project Proposals that are for planning or preparation of technology are not required to include hardware, software, interagency, training, or security considerations. These items are indicated with an “*”.

Project Management Overview (Medium-to-High Risk Projects)

Counties must provide a Project Management Overview based on the risk of the proposed Project. The Project must be assessed for **Risk Level** using the worksheet in **Appendix A**.

For Projects with Medium to High Risk, the County shall provide information in the following Project management areas.

Independent Project Oversight

Oversight of the Virtual Desktop/Server Infrastructure project will be provided by the SBC-DBH Information Steering Committee (ISC), the SBC-DBH Executive Steering Committee (ESC), the County Information Services Department (ISD) Application Development Division Chief, the DBH Office of Information Technology Manager, the Community Policy Advisory Committee (CPAC) the Mental Health Commission (MHC) and an independent consulting firm. The sources of independent project oversight are described below.

The ISC consists of stakeholders that represent contract providers, consumers, families, service programs, DBH Compliance, DBH Quality Management, and Information Technology. Together, they provide clinical, strategic, and operational guidance to information system projects to ensure that they are in line with DBH business goals and objectives. The ISC meets monthly to review business projects for status, issue resolution, and conformity to department and project management standards.

The ESC is comprised of the Department of Behavioral Health's (DBH) Chief Deputy Director, Deputy director of Administrative Services, Chief of Research and Evaluation, Manager of the Office of Information Technology (IT) and the County's Chief Technology Officer who meet quarterly, provides strategic, operational and service program guidance to IT planning and ensures IT projects are consistent with the departments business goals, IT objectives, are cost effective and viable.

The County ISD Application Development Division Chief provides objective oversight of all IT projects to ensure that project deliverables are consistent with County ISD standards for technology and systems development. The Division Chief will also ensure that project deliverables adhere to open/industry standards to ensure compatibility with existing and future technological infrastructure in terms of software, hardware, and protocols.

The manager of the DBH Office of Information Technology in collaboration with ISD's technology support groups will provide additional oversight to ensure that the Department network infrastructure and hardware are compatible with and sufficient to support the Virtual Desktop/Server Infrastructure project.

The CPAC consists of community stakeholders, consumers and their family members and was formed as an approving body for all Mental Health Services Act (MHSA) planning and implementation. The committee meets on a monthly basis

The MHC works collaboratively and provides insight and suggests direction to SBC-DBH to ensure that proposed IT projects will improve the delivery of behavioral health services to the community.

Integration Management

The DBH-IT Manager in conjunction with the project manager will be responsible for integration management of all systems deployed for this project from a data and infrastructure perspective. Systems integration at the data and infrastructure level typically involves consideration to protocol, standards, and compatibility of all systems involved.

An overall assessment of compatibility and capability of systems and/or data affected by this project will be completed by DBH-IT project leads in conjunction with County ISD technical staff. The ultimate goal of the County is to have a fully integrated system where client service data is shared to ensure continuity of services in a secure online web portal which is fed by multiple sources.

Scope Management

Project scope will be defined in the project charter. SBC-DBH utilizes and conforms to the standards set forth by the County ISD's project management methodology and change management procedures. The Project Manager has the overall responsibility of developing a project plan that encompasses all phases of the project from initialization through the post-implementation review. Project status reports produced on a regular basis will be required that identifies any change to the project scope, project deliverables, assigned resources, and will report on issue resolution.

Time Management

The Project Manager will be responsible for developing the overall project plan and Gantt chart which will specify all project deliverables, assigned resources, and time frames for completion. All schedules developed for this project will conform to guidelines within County ISD's project management methodology. The project management tool of choice will be Microsoft Project Professional. A copy of the County ISD project management guidelines is available upon request.

Cost Management

The Project Manager will be responsible for managing project costs which may include but is not limited to procurement, personnel, contract services, and facility upgrades. This responsibility also entails developing monthly cost accountability reports for all stakeholders which will identify all incurred project costs with particular attention paid to any cost variances that deviate within 5% of the projected budget allocation.

Quality Management

The Project Manager will be responsible for ensuring that all project activities, milestones, deployed infrastructure, business process re-engineering initiatives (if applicable), are effective, efficient, and meets the needs of the department's end users with respect to the system and its performance to achieve consistent quality. This responsibility will also entail developing a proper process for business scenario testing to ensure that product capabilities are aligned with the proposed/identified service level outcomes.

Human Resource Management (Consultants, Vendors, In-House Staff)

The Project Manager will be responsible for human resource management as they are defined in the project plan and project Gantt chart. This will include working with other identified business partners to identify the appropriate personnel resources to ensure the timely completion of the goals and objectives of this project. A quarterly assessment will be completed to assist in determining whether the appropriate resources are in place to facilitate timely project deliverable completion.

Communications Management

As part of the overall project plan, the Project Manager will be accountable for delivering monthly project status reports that communicate a summary of the tasks completed in the previous month, a schedule of tasks to be accomplished during the next reporting time frame, and a list of issues identifying resolution status. Communication status reports will be provided to all project stakeholders and those individuals/groups responsible for project oversight.

Procurement Management

The SBC-DBH Project Manager will be responsible for procurement management with oversight from the DBH-IT Manger, the department's Fiscal Unit which manages MHSA funding allocations, together with the County's Central Purchasing Department. All procurement related to this project will follow established County/ Departmental procurement processes and shall receive a level of oversight that is customary to all procurement processes. All MHSA IT procurements are logged independently and provided to the department's Fiscal unit which performs a monthly audit for reporting at the monthly MHSA Executive meeting. Additionally, the County CIO, CTO, CAO, and Board of Supervisors must approve all single item purchases that exceed eighty thousand dollars.

For Low-Risk Projects, as determined by the Worksheet in Appendix A, the above Project Management Reporting is Not Required.

Instead, the County shall provide a Project Management Overview that describes the steps from concept to completion in sufficient detail to assure the DMH Technological Needs Project evaluators that the proposed solution can be successfully accomplished. For some Technological Needs Projects, the overview may be developed in conjunction with the vendor and may be provided after vendor selection.

Not a low-risk project. Refer to Appendix A.

Project Cost

Technological Needs Projects will be reviewed in terms of their cost justification. The appropriate use of resources and the sustainability of the system on an ongoing basis should be highlighted. Costs should be forecasted on a Quarterly basis for the life of the Project.

Costs on a Yearly and Total basis will also be required for input on Exhibit 3 - Budget Summary.

Refer to Exhibit 4 and Addendum 7.5.

Nature of the Project

Extent to which the Project is Critical to the Accomplishment of the County, MHSA, and DMH Goals and Objectives.

The Virtual Desktop/Server Project will consist of two separate virtual infrastructures, the first is a virtual desktop environment that will support DBH staff in day to day business processes while securing patient health information in a data center environment. This infrastructure will also support public access computers for consumers without compromising data integrity and security.

The Virtual Desktop/Server infrastructure will support the desktop environment functions of data capture, manipulation and reporting of all consumer service activity in an expedited fashion and expedite the deployment of new technology solutions with less regard to prior limitations such as older hardware capability, footprint/space requirements, and location. The virtual network will also allow for the reduction of infrastructure administrative cost, as well as, ensuring participating consumers are provided with relevant services, as providers and teams will have unrestricted access to accurate and timely data.

Additionally, the virtual environment will give the department the capability to upgrade and expand the service offerings to rural and under-served communities, provide improved computer resource facilities for consumer and family members to access data available through County, State, consumer organizations, and internet education sites. It will also provide the capability for the deployment of information kiosks throughout the MHP service area in an effort to broaden effective communication to the consumer, family members, and the general community.

Degree of Centralization or Decentralization Required for this Activity.

The Virtual Server & Desktop Infrastructure's main infrastructure will be housed centralized in the County's data center. This centralization is key to delivering high performance to the user, while maintaining data security for all behavioral health data, including patient health information. A smaller one hundred user deployment of Virtual Desktop Infrastructure will be housed at a new site for the Workforce Education & Training center. The WorkForce Education & Training center is a training facility being developed for the department and will also be the department's operations center during disaster events. The Workforce Education & Training site can also be used as a disaster recovery site for quick data recovery in a disaster event.

Data Communication Requirements associated with the Activity.

The Virtual Server & Desktop Infrastructure's requires the purchase of additional network infrastructure due to the amount of data being processed. This project includes the purchase of multiple switch components to be installed in the blade server chassis to provide data throughput and redundancy for optimal availability. The Virtual Server & Desktop Infrastructure's switching components are compatible with the County's existing WAN/LAN infrastructure. Once all the servers and desktop have been virtualized, data traffic for behavioral health will decrease on the WAN due to the data residing in the County's data center.

Characteristics of the Data to be Collected and Processed (i.e., source, volume, volatility, distribution, and security or confidentiality).

The data serviced by the Virtual Server & Desktop Infrastructure encompasses all types of data used by the department. The desktop infrastructure will contain data used by behavioral health user including; word documents, spreadsheets, presentations, databases, user applications, and other files normally used on a desktop computer. The server infrastructure will encompass all types of data including databases, large applications, patient health information, and other sensitive data for the department.

Degree to which the Technology can be Integrated with Other Parts of a System in achieving the Integrated Information Systems Infrastructure.

The Virtual Server & Desktop Infrastructure can be used as the platform to host the Integrated Information System Infrastructure. The virtual technology used in this infrastructure allows for optimal system performance, high availability, and provides a reliable means for disaster recovery, while reducing the cost of administrative, power, and environmental overhead due to the amount of physical servers used to house this infrastructure.

Hardware Considerations * (As Applicable)**Compatibility with Existing Hardware, Including Telecommunications Equipment.**

The Virtual Server & Desktop Infrastructure is compatible with all existing County WAN/LAN infrastructure and server infrastructure.

Physical Space Requirements Necessary for Proper Operation of the Equipment.

The Virtual Server & Desktop Infrastructure requires redundant and high performance disks to provide optimal availability and system performance. The projected disk space for the server infrastructure will start off with twelve terabytes of fiber channel disks for production server use and twenty terabytes of fiber channel ATA drives for disk to disk backups and development environments. The Virtual Desktop infrastructure is planned to start at twenty four terabytes with the expectation to grow based on usage.

Hardware Maintenance.

The Virtual Server & Desktop Infrastructure will be supported by current behavioral health staff and will be implemented through a joint project with departmental staff and a contracted county vendor. The storage area network will be implemented and maintained by a contracted service provider through a proactive storage area network maintenance agreement that includes remote monitoring and performance tuning for five years. The hardware purchased for this project will have vendor maintained support agreements that will support the infrastructure for five years.

Existing Capacity, Immediate Required Capacity and Future Capacity.

The Virtual Server & Desktop Infrastructure requires the purchase of new hardware not existing in Behavioral Health today. The purchase of a storage area network, which provides highly redundant storage to the infrastructure, is required since it is the backbone of the virtualization project. The storage area network is where the virtual machines are stored and shared between multiple physical hosting servers. The storage area network will also contain the storage of all files pertaining to the Department of Behavioral Health.

Backup Processing Capability.

The Virtual Server & Desktop Infrastructure will utilize the county's disaster recover infrastructure. This infrastructure includes the use of a storage area network for data to backup to disk, and then use of a tape silo to provide an auxiliary copy for data to be shipped off site to a secure location. The county utilizes Commvault Simpana for data backup and compression. The purchase of additional software to backup the virtual machines for disaster recovery purposes is included in the projected software budget.

Software Considerations * (As Applicable)**Compatibility of Computer Languages with Existing and Planned Activities.**

Not applicable.

Maintenance of the Proposed Software (e.g., vendor-supplied).

Maintenance of the Virtual Server and Desktop Infrastructure will be managed by current behavioral health technical staff. The initial deployment and maintenance of this project will be completed by a vendor that has not been selected at this time. During the implementation phase, county staff will work with the contracted vendor to implement, optimize, document the infrastructure. After completion, the contracted vendor will then provide knowledge transfer to county staff for continual maintenance of the infrastructure.

Availability of Complete Documentation of Software Capabilities.

Complete documentation of the capabilities of VMWare Infrastructure 3 and VMWare view are available through the vendor.

Availability of Necessary Security Features as defined in DMH Standards noted in Appendix B.

The Virtual Server & Desktop Infrastructure project is in alignment with the standards noted in Appendix B for necessary security features. User access and controls within the virtual environment can be made secure and require complex password, use technology to encrypt communication between the client and the system, and provide auditing to track misuse utilizing built in features, as well as, third party software.

Ability of the Software to meet Current Technology Standards or be Modified to meet them in the future.

The Virtual Server & Desktop Infrastructure is a robust and flexible by allowing security levels to be modified to meet changing security standards. As new technology and features are developed into this infrastructure, technology standards changes can be written into the infrastructure to ensure compatibility to current and future technology standards.

Interagency Considerations* (As Applicable)

Describe the County's interfaces with contract service providers and state and local agencies. Consideration must be given to compatibility of communications and sharing of data. The information technology needs of contract service providers must be considered in the local planning process.

The county provides contract service providers with secure virtual private network (VPN) access to county for the purposes of communicating with the county and accessing essential systems. This technology creates a encrypted tunnel from the contract service provider to the county for accessing county resources. Once the contract provider has established this connection, they will be provided access to the systems required to complete their tasks.

Training and Implementation * (As Applicable)

Describe the current status of workflow and the proposed process for assessment, implementation and training of new technology being considered.

The Virtual Server & Desktop Infrastructure plan has completed the assessment stage. In mid 2008, DBH-IT started an evaluation of virtual infrastructures to test the viability of the new technology. After the completion of the assessment in December of 2008, DBH-IT put a small Virtual Infrastructure in place for the purposes of hosting virtual machines for testing/QA purposes.

As this project moves forward, Behavioral Health IT staff, County ISD staff, and a contract vendor (has not been selected at this time) will work together to develop a fully redundant and secure environment for servers and desktop machines.

Training will consist of a two fold process, the first step is to send staff to VMware administration and certification courses to be taught the best practices and support methodologies from VMware support professionals. The second step will consist of having a contract vendor assist DBH staff in performing setup and configuration of the VMware infrastructure where DBH staff will have the opportunity learn the procedures necessary to facilitate the framework architecture and be able to sustain the VMware environment into the foreseeable future.

When this deployment is started, the county will contract with a county vendor (has not been selected at this time) to work with DBH and county ISD staff to deploy these technologies. During this deployment, knowledge transfer and complete documentation will be completed for the infrastructure.

After the deployments have been completed, DBH-IT will continue to consult with VMware through support agreements that will be built into the licensing agreement. These support agreements will provide DBH with technical support by the vendor for a period of five years.

Security Strategy * (As Applicable)

Describe the County's policies and procedures related to Privacy and Security for the Project as they may differ from general Privacy and Security processes.

Protecting Data Security and Privacy.

This project and the data residing on the servers will continue to be administered in such a way that meets or exceeds data security and privacy policies the department is current subject to including County, department, HIPAA, AB211, SB541, and any other State or Federal regulations. This includes maintaining the security and confidentiality of the data through physical, administrative, and technical safeguards such as the secure datacenter in which the servers reside, policies on who gets to see certain data, and access control systems within the application to enforce authentication. The County has a privacy and security committee consisting of members belonging to various departments whose purpose is to ensure that all data security and privacy standards are maintained at a meets or exceeds level. The department also continually scrutinizes all technology to ensure compliance with all applicable policies and regulations.

Operational Recovery Planning.

The department is currently evaluating software vendors and disaster recovery methods for a virtual infrastructure. As the project moves forward and infrastructure is deployed, a comprehensive operational recovery plan will be developed that will have a heavy emphasis on high availability and disaster recovery (HA/DR). This may include having a secondary disaster recovery location in place where a SAN to SAN virtual machine replication process takes place over a private, dedicated WAN link.

Business Continuity Planning.

The SBC-DBH has in place a Departmental Emergency Operations Plan (DEOP) which places emphasis on manual business processes of essential functions to use in place of technology wherever possible in an effort to restore the department's ability to provide client services in the shortest time frame possible. A copy of the DEOP is available upon request.

Emergency Response Planning.

The DEOP serves to provide guidance and procedures to prepare for and respond to significant or catastrophic natural, environmental, or conflict related risks/events that produce situations requiring a coordinated response. The primary goals of that plan are to protect life and property, preserve infrastructure, and continue the operations of government. As that relates to the Virtual Infrastructure server environment, IT categorizes that data system as critical to carrying out DBH functions and prioritizes accordingly that the assessment and preservation of business critical data systems must be achieved.

Health Information Portability and Accountability Act (HIPAA) Compliance.

The County and department have policies in place that ensure compliance with HIPAA requirements for maintaining the confidentiality and security of patient health information (PHI). These policies encompass physical, administrative, and technical safeguards.

State and Federal Laws and Regulations.

The department will ensure that the SharePoint environment maintains compliance with all applicable state, federal, and local laws, ordinances, and regulations regarding the security and privacy of PHI.

Project Sponsor(s) Commitments [Small Counties May Elect to not Complete this Section]**Sponsor(s) Name(s) and Title(s)**

Identify the Project Sponsor Name and Title. If multiple Sponsors, identify each separately.

Allan Rawland, Director
County of San Bernardino Department of Behavioral Health

Michael Day, IT Manager
Department of Behavioral Health Office of Information Technology

Commitment

Describe each Sponsor's commitment to the success of the Project, identifying resource and management commitment.

Allan Rawland, Director
County of San Bernardino Department of Behavioral Health

As Director of the County of San Bernardino Department of Behavioral Health (DBH), Mr. Rawland has overall responsibility for the implementation and administration of all MHSA programs within San Bernardino County. Additionally, he has overall responsibility for all MHSA component planning activities and is committed to the successful completion of the Technology Needs Projects. Mr. Rawland is fully committed to modernizing and transforming DBH clinical and administrative information systems in order to improve operational efficiency, quality of care, and cost effectiveness in support of the goals and objectives of the Mental Health Services Act (MHSA). He will ensure that identified project resources such as County and DBH Information Technology staff, supervisors, managers, program support staff, as well as information technology consultants and vendors are available to support the timely and successful completion of this project.

Michael Day, IT Manager
Department of Behavioral Health Office of Information Technology

Mr. Day has overall responsibility for the planning and implementation of technology related projects supporting MHSA within San Bernardino County. He is fully committed to ensuring that the technology implemented supports the goals and objectives of the MHSA including increasing client and family empowerment through providing the tools necessary for secure client and family access to health information that is culturally and linguistically competent within a variety of public and private settings. He envisions a future information systems infrastructure that is modernized and transformed to ensure quality of care, parity, operational efficiency, and cost effectiveness. In addition to high level oversight and guidance, Mr. Day will work closely with the project manager and implementation team to ensure that project goals are met and timely completion is achieved.

Approvals/Contacts

Please include separate signoff sheet with the Names, Titles, Phone, E-mail, Signatures, and Dates for:

Individual(s) responsible for preparation of this Exhibit, such as the Project Lead or Project Sponsor(s).

Signatures

Prepared By

Name: Michael Day Title: Business Applications Manager

Signature:  Date: 06-17-2009 Phone: (909) 382-3061

Email Address: mday@dbh.sbcounty.gov

Name: _____ Title: _____

Signature: _____ Date: _____ Phone: _____

Email Address: _____

Enclosure 3
Exhibit 4

Budget Summary

For Technological Needs Project Proposal

County Name: San Bernardino

Project Name: Virtual Desktop/Server Environment

(List Dollars in Thousands)

Category	(1) 08/09	(2) 09/10	(3) 10/11	(4) Future Years	(5) Total One-time Costs (1+2+3+4)	(6) Estimated Annual Ongoing Costs*
Personnel		181,418	181,418	181,418	544,254	181,418
Total Staff (Salaries and Benefits)		181,418	181,418	181,418	181,418	181,418
Hardware		500,000	370,000		870,000	
From Exhibit 2						
Total Hardware		500,000	370,000		870,000	
Software		100,000	75,000		175,000	
From Exhibit 2						
Total Software		100,000	75,000		175,000	
Contract Services (list services to be provided)						
Architectural Design		80,000	34,278		114,278	
Total Contract Services		80,000	34,278		114,278	
Administrative Overhead						
Other Expenses (Describe)						
Training		18,000	18,000		36,000	
Total Costs (A)		879,418	678,696	181,418	1,739,532	181,418
Total Offsetting Revenues (B) **						
MHSA Funding Requirements (A-B)		879,418	678,696	181,418	1,739,532	181,418
* Annual Costs are the ongoing costs required to maintain the technology infrastructure after the one-time implementation.						
** For Projects providing services to Multiple-Program Clients (e.g., Mental Health and Alcohol and Drug Program clients), Attach a Description of Estimated Benefits and Project Costs allocated to Each Program.						

Notes:

Enclosure 3
Exhibit 5

Stakeholder Participation For Technological Needs Project Proposal

County Name:

Project Name:

Counties are to provide a short summary of their Community Planning Process (for Projects), to include identifying stakeholder entities involved and the nature of the planning process; for example, description of the use of focus groups, planning meetings, teleconferences, electronic communication, and/or the use of regional partnerships.

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	08-06-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-01-2008
Clients, Family Members, and Clinicians	Community Public Forum	10-03-2008
General Public	Stakeholder Public Comment Period Enclosure 1 Exhibits were posted on the department's internet site for a 30 day comment period (11-5-2008 thru 12-5-2008)	11-05-2008
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	11-06-2008
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	11-20-2008

Stakeholder Type (e.g., Contract Provider, Client, Family Member, Clinician)	Meeting Type (e.g., Public Teleconference)	Meeting Date
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	01-28-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	03-16-2009
General Public	Stakeholder Public Comment Period Enclosure 3 Exhibits were posted on the department's internet site for a 30 day comment period (4-10-2009 thru 5-10-2009)	04-10-2009
Clients, Clinicians, Contract Providers, Various County Departments, Department Directors, and Service Program Representatives	Community Policy Advisory Committee (CPAC)	05-21-2009
Mental Health Commissioners, Department Directors, Clinicians, Contract Providers, Clients, and General Public	San Bernardino County Mental Health Commission	06-04-2009
Department Staff, Contract Providers, Clients, Clinicians, and County Information Service Department Representatives	Information Technology Steering Committee	06-04-2009

APPENDIX A – PROJECT RISK ASSESSMENT – Virtual Server & Desktop Infrastructure

Category		Factor	Rating	Score	
Estimated Cost of Project		Over \$5 million	6	2	
		Over \$3 million	5		
		Over \$500,00	2		
		Under \$ 500,000	1		
Project Manager Experience					
Like Projects Completed in a “key staff” role		None	3	2	
		One	2		
		Two or More	1		
Team Experience					
Like Projects Completed by at least 75% Of Key Staff		None	3	2	
		One	2		
		Two or More	1		
Elements of Project Type					
Hardware	New Install	Local Desktop/Server	1	3	
		Distributed/Enterprise Server	3		
	Update/Upgrade	Local Desktop/Server	1		
		Distributed/Enterprise Server	2		
	Infrastructure	Local Network Cabling	1		3
		Distributed Network	2		
Data Center/Network Operations Center		3			
Software	Custom Development-Application Service Provider		5	1	
	COTS* Installation	“Off-the-Shelf”	1		
		Modified COTS	3		
	Number of Users	Over 1,000	5		
		Over 100	3	5	
		Over 20	2		
		Under 20	1		
	*Commercial Off-The-Shelf Software	Architecture	Browser/thin client based	1	2
		Two-Tier (client/server)	2		
		Multi-Tier (client & web, database, application, etc. servers)	3		
Total Score				20	

Total Score	Project Risk Rating	
25 - 31	High	
16 - 24	Medium	✓
8 - 15	Low	

**San Bernardino County
MHSA Information Technology Plan**

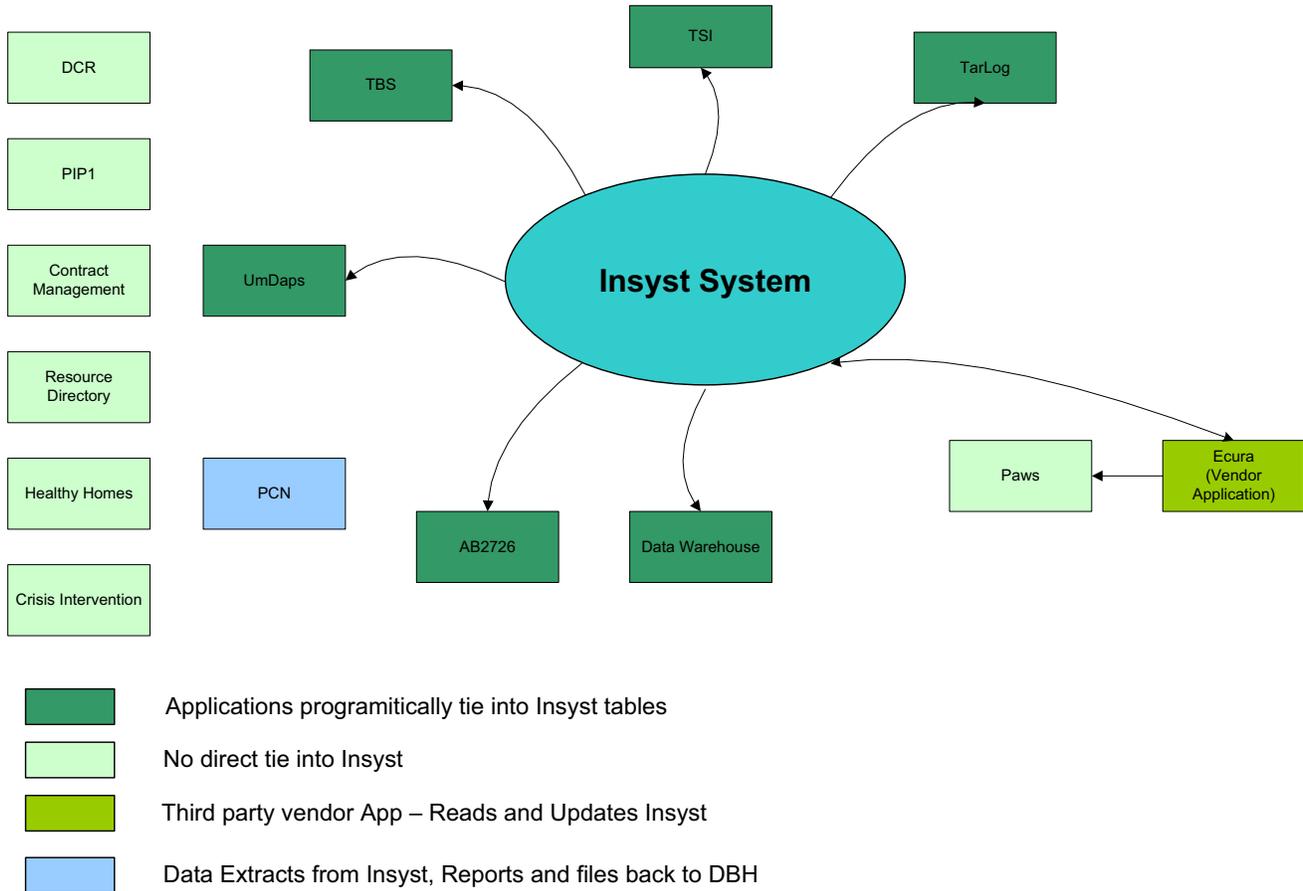
Addendums



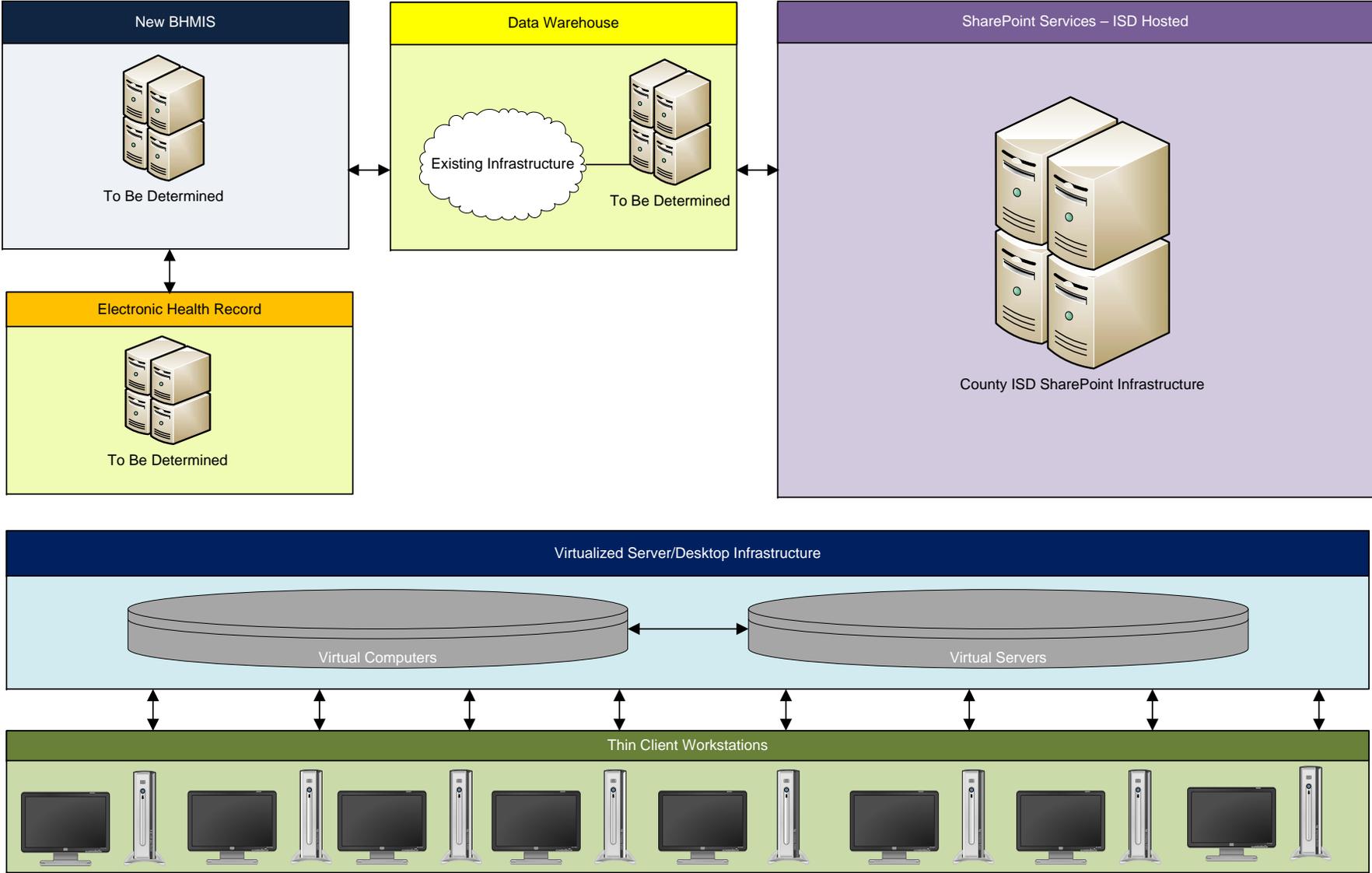
ADDENDUM 1.0 - DBH APPLICATIONS DIAGRAM

The following diagram displays the application interfaces with the Insyst System, including but not limited to San Bernardino County Information Services Department (ISD) - Application Development Division (ADD) developed applications, third party applications and applications or modules that have no direct interface with Insyst but indirectly may interface with Insyst.

DBH – Applications

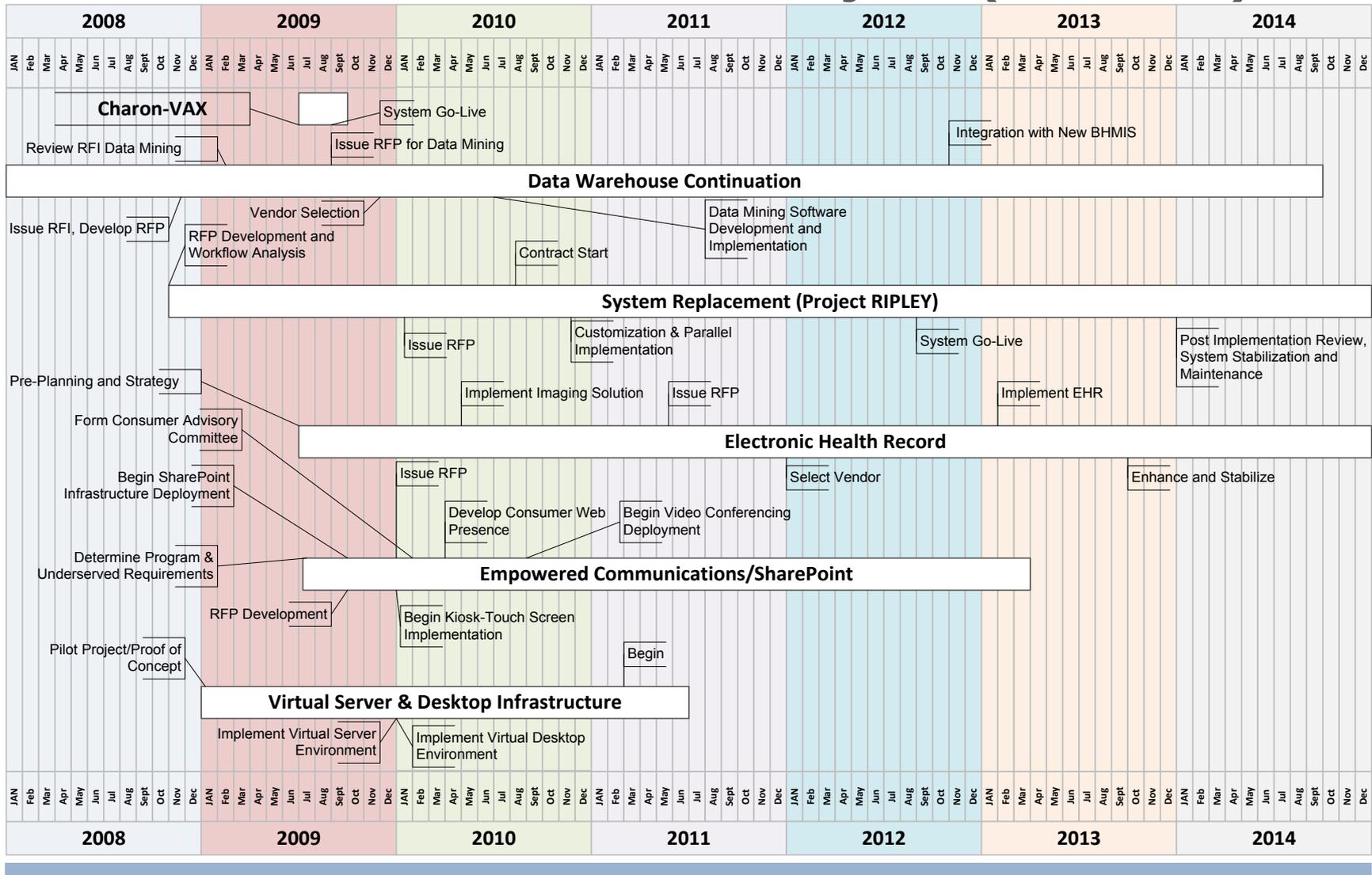


Addendum 1.1 – DBH Proposed IISI

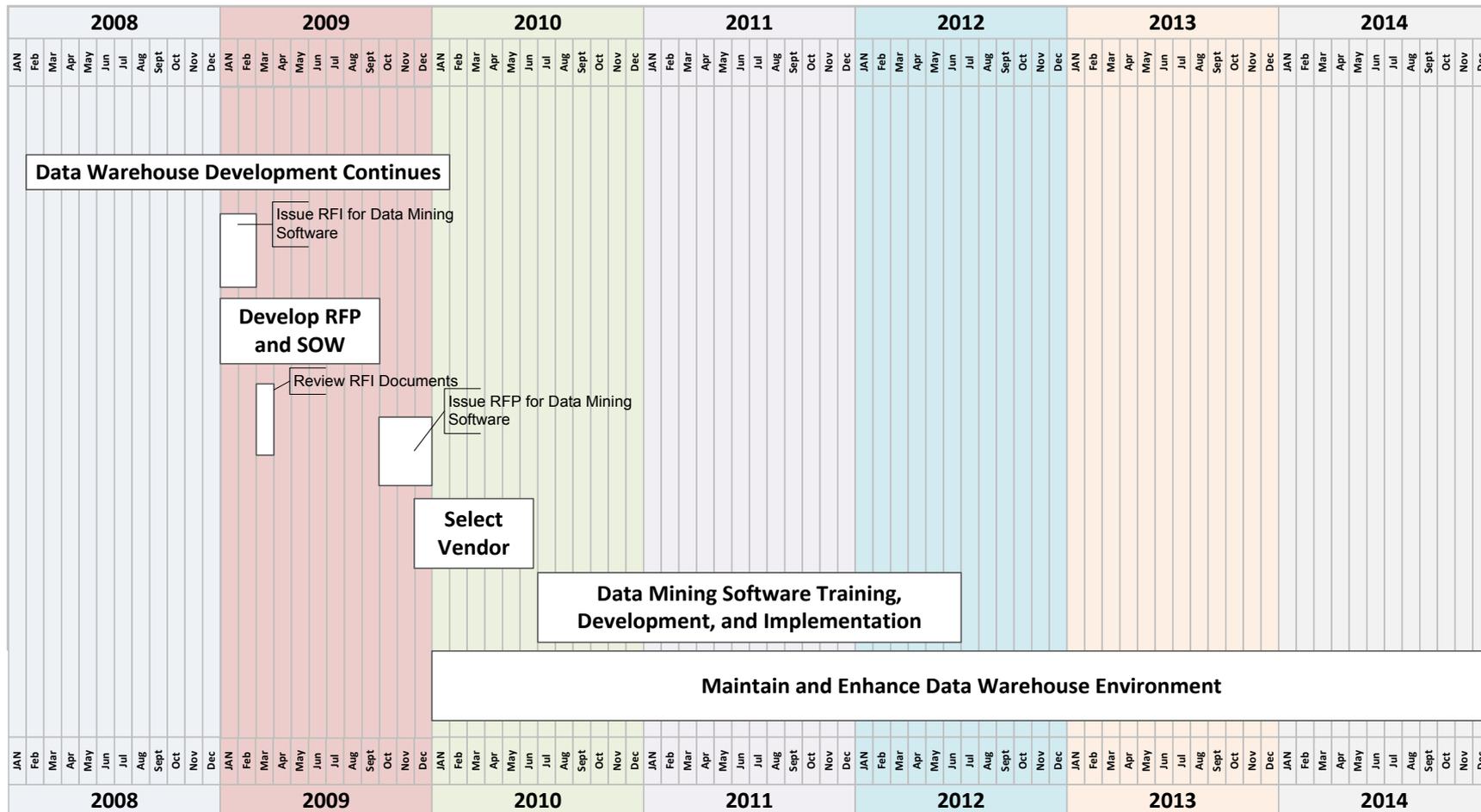




Addendum 2.0 - All MHSA Projects (Overview)

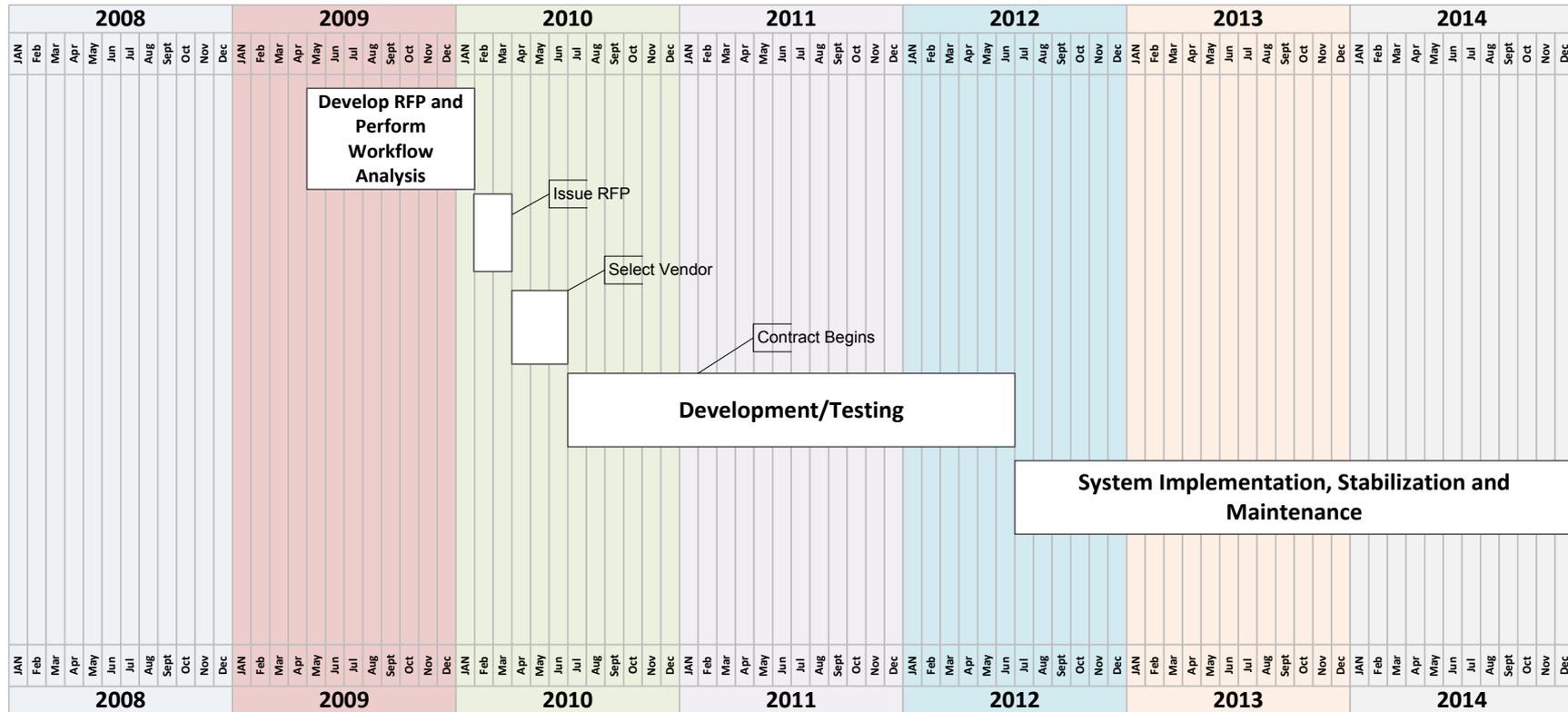


Addendum 2.2 - Data Warehouse Continuation

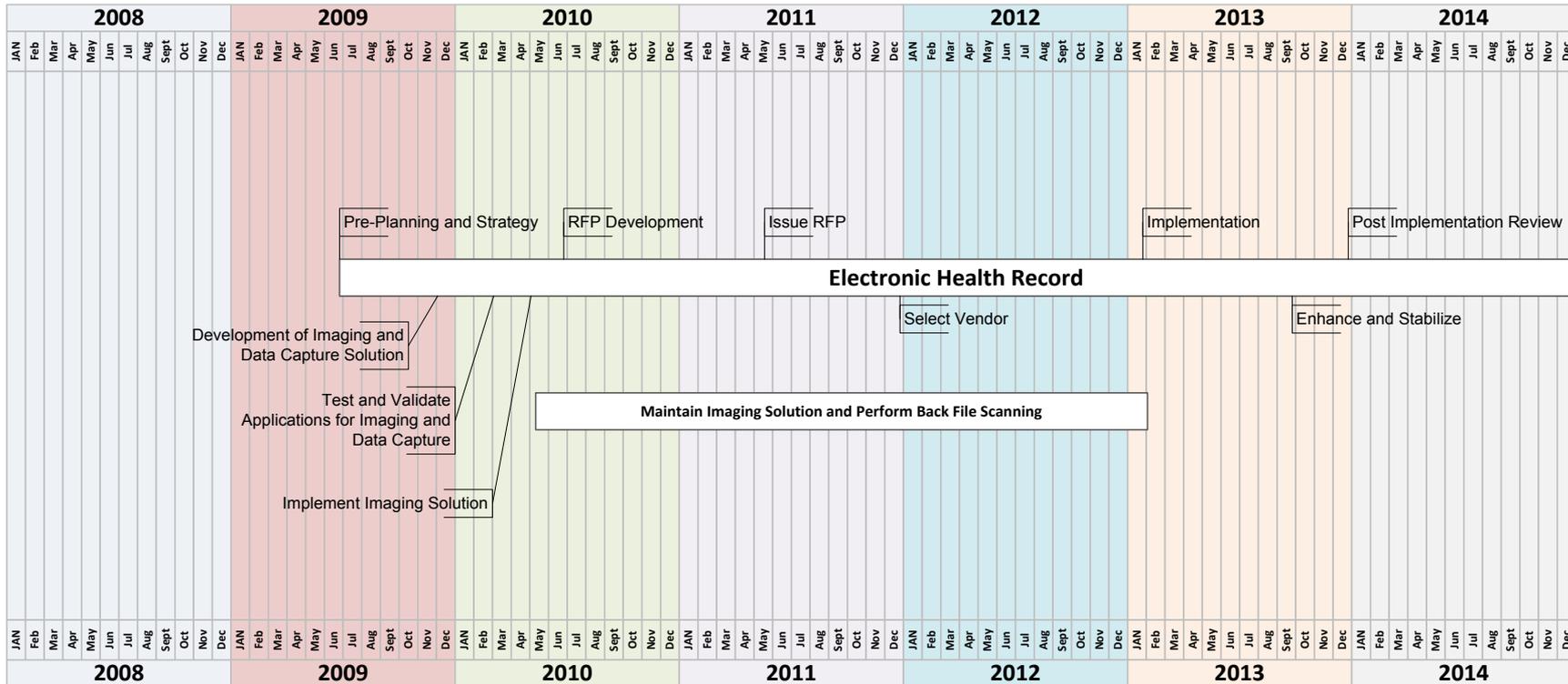




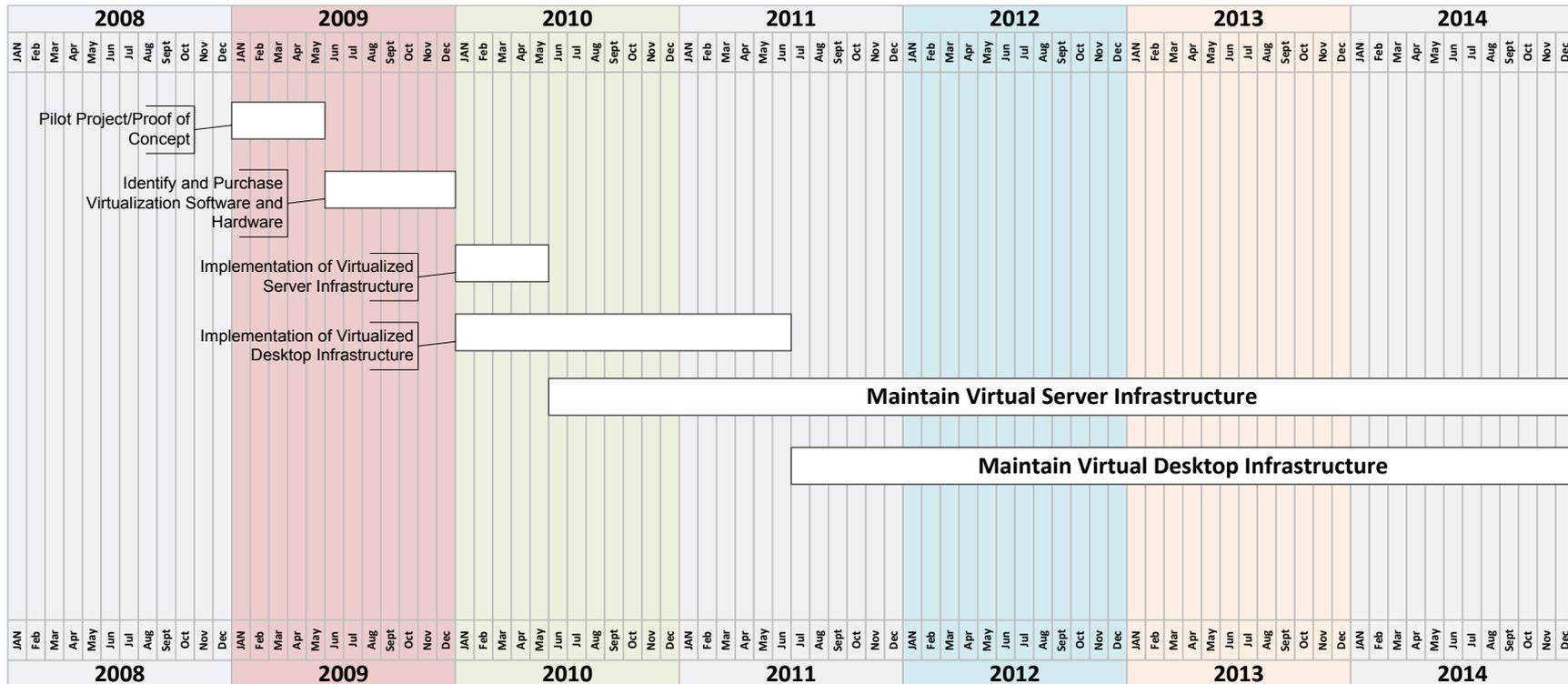
Addendum 2.3 - System Replacement (Project RIPLEY)



Addendum 2.4 - Electronic Health Record

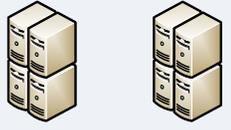


Addendum 2.6 - Virtual Server & Desktop Infrastructure



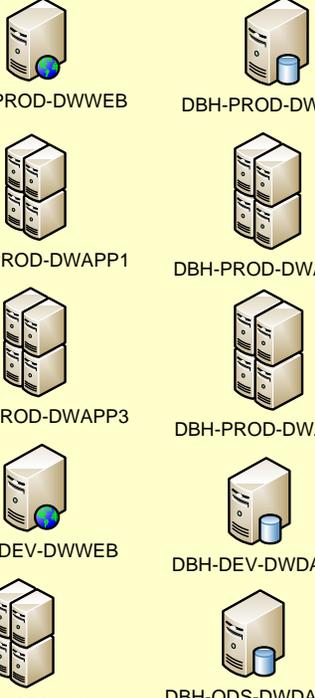
Addendum 3.0 – DBH Server Infrastructure

InSyst



ISDPEVMS1 (SIMON) ISDPEVMS1 (Laura)

Data Warehouse



DBH-PROD-DWWEB DBH-PROD-DWDATA

DBH-PROD-DWAPP1 DBH-PROD-DWAPP2

DBH-PROD-DWAPP3 DBH-PROD-DWAPP4

DBH-DEV-DWWEB DBH-DEV-DWDATA

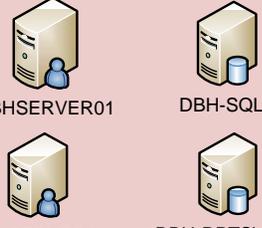
DBH-DEV-DWAPP1 DBH-ODS-DWDATA

Sharepoint Services



DBH-SP-APP1

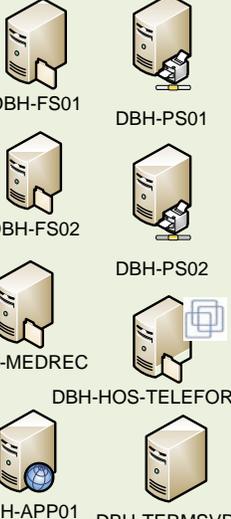
Appointment Scheduler



DBHSERVER01 DBH-SQL1

DBHSERVER02 DBH-RPTSVR01

Department Server Infrastructure



DBH-FS01 DBH-PS01

DBH-FS02 DBH-PS02

DBH-MEDREC DBH-HOS-TELEFORMV8

DBH-APP01 DBH-TERMSVR01

Development



DBH-HOS-DEVSQL1 DBH-VIRLAB

DBH-DEV-APP01

ISD Managed Hosting



DBH-SQLPROD1

Addendum 3.1 - DBH Server Infrastructure Detail View

Server Name	Status	Role	Model	OS	Location
DBH-EYES	Consolidate to DBH-FS01 and Retire	File Storage	Proliant M370	NT	ISD
DBHBUCKS	Consolidate to DBH-FS01 and Retire	File Storage	Proliant 1600R	NT	ISD
DBH-RDC (SADS)	Consolidate to DBH-FS01 and Retire	File Storage	Dell PE2850	2003	ISD
DBH-OPUS	Retire After Active Directory Migration	Primary Domain Controller	Proliant 1600R	NT	ISD
DBH-Wilbur	Retire After Active Directory Migration	Data Backup Server	Dell PE2550	2000	BHRC
DBH-FS01	Active/In-Use	Group File Server	HP DL385	2008	ISD
DBH-FS02	Active/In-Use	User File Server	HP DL385	2008	ISD
DBH-PS01	Active/In-Use	WIN Print Server	HP DL365	2008	ISD
DBH-PS02	Active/In-Use	RPM Print Server	HP DL365	2003	ISD
ISDPEVMS1 (SIMON)	Active/In-Use (ISD Managed Hosting)	Insyst Server	HP DL360	2003	ISD
ISDPEVMS2 (LAURA)	Active/In-Use (ISD Managed Hosting)	Insyst Server	HP DL360	2003	ISD
DBH-APP01	Active/In-Use	Application Server	HP DL360	2003	ISD
DBH-DEV-APP01	Testing/Development	VMWare Virtual Server	N/A	2003	VIRLAB
DBH-SQLPROD1	Active/In-Use (ISD Managed Hosting)	SQL Production Server	Dell PE2850	2003	ISD
DBH-HOS-DEVSQL1	Active/In-Use	SQL Development Server	HP DL585	2008	HOS
DBH-TERMSVR01	Active/In-Use	SQL and Terminal Server	Dell PE2950	2003	ISD
DBH-MEDREC	Active/In-Use	Application Server	Dell PE2550	2000	BHRC
DBH-VIRLAB	Active/In-Use	Virtual Development Server	Dell PE2950	2008	HOS
DBH-HOS-TELEFORMV8	Active/In-Use	VMWare Virtual Server	N/A	2003	VIRLAB
DBH-ODS-DWDATA	Active/In-Use	SQL Data Warehouse	HP DL585	2003	ISD
DBH-DEV-DWAPP1	Active/In-Use	Cognos Application Server	HP DL385	2003	ISD
DBH-DEV-DWDATA	Active/In-Use	SQL Data Warehouse	HP DL585	2003	ISD
DBH-DEV-DWWEB	Active/In-Use	Cognos Web Server	HP DL365	2003	ISD
DBH-PROD-DWAPP1	Active/In-Use	Cognos Application Server	HP DL385	2003	ISD
DBH-PROD-DWAPP2	Active/In-Use	Cognos Application Server	HP DL385	2003	ISD
DBH-PROD-DWAPP3	Active/In-Use	Cognos Application Server	HP DL385	2003	ISD
DBH-PROD-DWAPP4	Active/In-Use	Cognos Application Server	HP DL385	2003	ISD
DBH-PROD-DWDATA	Active/In-Use	SQL Data Warehouse	HP DL585	2003	ISD
DBH-PROD-DWWEB	Active/In-Use	Cognos Web Server	HP DL385	2003	ISD
DBH-SERVER01	Active/In-Use	Appt. Sched. Citrix Server	Dell PE2950	2003	ISD
DBH-SERVER02	Active/In-Use	Appt. Sched. Citrix Server	Dell PE2950	2003	ISD
DBH-SQL1	Active/In-Use	Appt. Sched. SQL Server	Dell PE2850	2003	ISD
DBH-RPTSVR01	Active/In-Use	SQL Reporting Services	Dell PE2950	2003	ISD
DBH-SP-APP1	Active/In-Use	SharePoint Application Serv	HP DL365	2008	ISD

Legend	
File Server	
Print Server	
Consolidating/Retiring	
Data Warehouse	
App. Scheduler	
Misc. Infrastructure Server	
Insyst (SIMON)	
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Addendum 4.0

San Bernardino County Department of Behavioral Health

Application Documentation





Document Revision Tracking

Name/Dept.	Revision Made / Reason for Change	Date Changed

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DBH Applications designed and maintained by ISD

TBS – Therapeutic Behavioral Services

Description:

The purpose of TBS is to provide mental health services to at-risk children and teenagers. Children’s Centralized Intensive Case Management Services (CCICMS) provides the oversight and assignment of clients. In almost all cases outside providers perform the actual services. The application is used to store client information as they progress through the course of treatment. The client must meet specific requirements to be admitted into the program.

Maintained by:

Information Systems Department

Inputs:

Paper forms for client admittance and treatment authorization.

Outputs:

Online list of referrals and discharges by provider and/or specific date ranges.

Quarterly statement of counts for referrals, episodes, and discharges – manually created by ISD.

Note- enhancements will be applied to provide additional online and hard copy reporting.

State or Governmental reporting:

No direct reporting or interfacing from the application - CCICMS manually creates a report that is sent to the state – the format can change depending on who is in charge at the state level at the time of the request.

DBH Department

CCICMS – Children’s Centralized Intensive Case Management Services

Primary Customer Contact:

Merida Saracho

Diane Terrones



Primary DBH Contact:

Peter Young

Rosa Granado-Dominguez

Primary ISD Contact:

Henry Mejia

Type of Application:

Web based application – all online no batching of information for processing.

Security Access:

Utilizes ISD ECM security

Outside Provider access:

Providers utilize VPN to gain access

Application language:

ASP .Net (VB code)

Third Party Components used:

None

File NET:

None

Desktop Operating System:

Standard windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2000 (migrating to 2005)



Data Base name:

DBHTBS

Data Base Connection Type:

ODBC

Web Server:

SBC-SHRWEB01 \ SBC-SHRWEB02

Data Base Server:

SBC-PRODSQL01

Insyst Data:

This application does not update Insyst data.

Read only to the Insyst database – reads Client table.

Data Items Extracted:

Client number

Client Name (first, last, middle)

Address (street number, street direction, street name, city, state, zip code)

Phone number

Ethnicity code

Hispanic origin code



DBH – Data Warehouse

Description:

The purpose of the data warehouse is to centralize Insyst information for creating dashboards, administration reports, management reports, and ad-hoc reporting. The application will extract specific Insyst data and create historical data as required. Additional processes to clean up data will be created as needed. The Cognos tool will be utilized on the backend for reporting purposes as well as data modeling the required data schema.

Maintained by:

Information Systems Department

Inputs:

Insyst data retrieved via data extraction processes, Data in Excel for diagnosis, provider, and procedure supplied by the Research and Evaluation Department.

Outputs:

Data Extractions to staging and conversion databases.

State or Governmental reporting:

None

DBH Department

DBH – Application Systems Group, Research & Evaluation Department

Primary Customer Contact:

None

Primary DBH Contact:

Michael Day

Keith Harris

Primary ISD Contact:

Henry Mejia



Type of Application:

Data extractions - Oracle processes & scheduled tasks, SQL processes and scheduled tasks, SSIS processes Web based application for maintaining user defined data.

Security Access:

Utilizes ISD ECM security.

Outside Provider access:

None

Application language:

Web application - ASP .Net (VB code)

Third Party Components used:

Cognos reporting software

File NET:

None

Desktop Operating System:

Standard Windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2005

Data Base name:

DBHDWStaging

DBHDWConvert

Data Base Connection Type:

ODBC



Web Server:

TBD or may use SBC-SHRWEB01 \ SBC-SHRWEB02

Data Base Server:

DBH-ODS-DWDATA – Development

DBH-PROD-DWDATA - Production

Insyst Data:

This application does not update Insyst data.

Read only to the Insyst database.

Extracts all data from the following tables:

Clients

Address Master

Episodes

Direct Services

Indirect Services

Provider Master

Diagnosis Master

Procedure

Region Master

Ethnicity Master

Sex Master

Marital Status

Preferred Language Master

Living Situation Master

Significant Other Master



UMDAPS – Universal Methods for Determining Ability to Pay System

Description:

The UMDAPS System is a web based tool used by the DBH Fiscal Group. This system creates an Account Summary Report for each DBH account that has a patient balance. Each report is a collection of the information used to create a Patient Bill. Members of the Fiscal Billing Group use the Account Summary Reports to resolve questions about patient bills. The use of these reports saves time by providing information on a single report that would otherwise require the use of several Simon screens. These reports also include some information that is not otherwise available. The UMDAPS System uses the InSyst database as its source of information, and stores the Account Summary Reports in a SQL Server 2000 database.

Maintained by:

Information Systems Department

Inputs:

Retrieves information from the Insyst Billing table, Client table and Direct Services table.

Outputs:

Online Account Summary report for each patient account that has an open balance.

Reports are stored on a database for viewing but can be printed if requested.

State or Governmental reporting:

None – internal reporting for DBH only

DBH Department

Accounting

Primary Customer Contact:

Sharyn Beemer

Primary DBH Contact:

Pam Garcia

Primary ISD Contact:

Ric Drucker



Type of Application:

Web based application – all online, no batching of information for processing.

Security Access:

Utilizes ISD ECM security

Outside Provider access:

None

Application language:

ASP 3.0
ADO
VB Script

Third Party Components used:

None

File NET:

None

Desktop Operating System:

Standard Windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2000 (migrating to 2005)

Data Base name:

DBHUMDAPS

Data Base Connection Type:

ODBC



Web Server:

SBC-SHRWEB01 \ SBC-SHRWEB02

Data Base Server:

SBC-PRODSQL01

Insyst Data:

This application does not update Insyst data.

Read only to the Insyst database – reads Client table, billing table, Direct Services Table

Data Items Extracted:

Client number

Account number

Client Name (first, last, middle)

Address (street number, street direction, street name, city, state, zip code)

Billing data (need fields)

Direct Services (need fields)



PAWS – Paperless Automated Workflow System

Description:

The purpose of the PAWS application is to allow DBH personnel to scan documents pertaining to a client and search and retrieve the documents within the application.

Maintained by:

Information Systems Department

Inputs:

Paper forms for treatment authorization, client information, and payment information.

Outputs:

All – online.

State or Governmental reporting:

None – internal to DBH

DBH Department

Access Unit

Primary Customer Contact:

Michael Day

Primary DBH Contact:

Michael Day

Primary ISD Contact:

Tim Berger / Ric Drucker

Type of Application:

Web based application – all online, no batching of information for processing



Security Access:

Utilizes ISD ECM security

Outside Provider access:

None

Application language:

VB6

Third Party Components used:

None

File NET:

Yes, utilizes capture application.

Desktop Operating System:

Standard Windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2000 (migrating to 2005)

Data Base name:

FNdbDBHAUControl

Data Base Connection Type:

ODBC

Web Server:

SBCIDM



Data Base Server:

SBC-FNPSQL1\PROD01

Insyst Data:

This application does not read or update Insyst data

This application pulls data from the Ecura Application

Data Items Extracted from Ecura:

Client number

Client Name (first, last, middle)



DCR – Data Collection Repository

Description:

The purpose of the DCR application is to track clients for the Full Service Partnership program administered by DBH.

Maintained by:

Information Systems Department

Inputs:

Various forms for the different classifications.

Outputs:

XML file to state – submitted by DBH, SQL reports for DBH internal use.

State or Governmental reporting:

Yes, XML file to state contains all data related to a client – adds, updates etc.

It is formatted according to a schema specified by the state and uploaded to a database via a state web application.

It is sent on a scheduled basis depending on the clients “partnership” date (periodic follow up reports etc).

DBH Department

DBH, external providers, TAY center

Primary Customer Contact:

Rosa Granado-Dominguez

Primary DBH Contact:

Rosa Granado-Dominguez

Primary ISD Contact:

Thomas Kleffel / Victor Arellano

Type of Application:

Web based application – all online, no batching of information for processing



Security Access:

Utilizes ISD ECM security

Outside Provider access:

Yes, access county web via VPN.

Application language:

ASP/VB .Net

Third Party Components used:

None

File NET:

No

Desktop Operating System:

Standard Windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2005

Data Base name:

DBHDataCollection

Data Base Connection Type:

ODBC

Web Server:

SBC-SHRWEB01 & SBC-SHRWEB02



Data Base Server:

SBC-PRODSQL501\PROD01

Insyst Data:

Does **NOT** access Insyst at this time.

Future plans call for interfacing to retrieve client information.



TSI - Touch Screen Interviewer

Description:

The TSI is a Web Application that administers and tracks online interviews with clients. The TSI maintains a database of questionnaires. It uses these questionnaires to conduct interviews through a touch screen interface. The progress and results of each interview are maintained in the TSI database. Authorized personnel can create and modify questionnaires using a series of questionnaire-maintenance Web Forms; clinicians can schedule interviews by using scheduling Web Forms. The results of interviews can be viewed online and printed as appropriate.

The TSI also supports the administration of autonomous interviews. An autonomous interview is one for which the identity of the individual being interviewed is unknown. A typical use of an autonomous interview is to request feedback from individuals leaving a DBH Facility. A kiosk near a facility's exit affords individuals an opportunity to evaluate the service they received at the facility.

The TSI database is a SQL Server 2000 Database.

Maintained by:

Information Systems Department

Inputs:

Responses from the touch screen

Outputs:

Online viewing, hard copy is possible by staff.

State or Governmental reporting:

None – for internal DBH use only.

DBH Department

Research & Evaluation

Primary Customer Contact:

Research & Evaluation (Keith Harris, Art Richardson, Keith Haig)

Primary DBH Contact:

R&E -Keith Harris, Art Richardson, Keith Haig (application), Jason Hill (hardware)



Primary ISD Contact:

Thomas Kleffel / Ric Drucker

Type of Application:

Web based application – all online, no batching of information for processing.

Security Access:

Utilizes ISD ECM security for staff members to maintain questionnaires and application related information.

Clients – stations are turned on in the morning, clients may take interviews anonymously or with an assigned code.

Outside Provider access:

None

Application language:

ASP/VB .Net

Third Party Components used:

None

File NET:

No

Desktop Operating System:

Standard Windows operating system

Special hardware:

TouchScreen Monitors and Kiosks

Data Base Version:

SQL Server 2005 (currently in migration process)

Data Base name:

DBHTSI



Data Base Connection Type:

ODBC

Web Server:

SBC-SHRWEB01 & SBC-SHRWEB02

Data Base Server:

SBC-PRODSQL501\PROD01

Insyst Data:

Application READS Insyst Client table

Insyst Data Retrieved:

Client Number

Client Name

Date-of-Birth



TARLOG – Treatment Authorization Request Log

Description:

The Tarlog System is a Web Application that tracks Treatment Authorization Requests. The tracking process begins with the data entry of a 24 Hour Notice into a Web Form, which creates an episode in the Tarlog Database. Additional information is added to the Tarlog episode as the patient's treatment progresses. The additional information documents the actual TAR created for the episode, as well as any appeals that are filed for the episode. A wide selection of reports can be created online to detail both individual Tarlog episodes, and, combinations of episodes. Online reports can be printed as needed. The Tarlog database is a SQL Server 2000 database.

Maintained by:

Information Systems Department

Inputs:

Treatment Authorization forms

Outputs:

Applications allows for various reports to be printed.

State or Governmental reporting:

None – for internal DBH use only

DBH Department:

Access Unit

Primary Customer Contact:

DBH

Primary DBH Contact:

DBH

Primary ISD Contact:

Ric Drucker



Type of Application:

Web based application – all online, no batching of information for processing

Security Access:

Utilizes ISD ECM security for staff members

Outside Provider access:

None

Application language:

ASP 3.0

Third Party Components used:

None

File NET:

Yes, uses capture component

Desktop Operating System:

Standard Windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2000 (to be migrated to2005)

Data Base name:

TarLog

Data Base Connection Type:

ODBC



Web Server:

SBC-SHRWEB01 & SBC-SHRWEB02

Data Base Server:

SBC-PRODSQL01

Insyst Data:

Application READS Insyst Client table - does not update



Healthy Homes

Description:

The Healthy Homes Program:

- A collaborative effort by the Department of Children's Services (DCS), the Department of Behavioral Health (DBH) by DCS referring foster children and other children in out-of-home care.
- There are five main DCS offices through which these referrals are made and the clerical staff has access to the Healthy Homes Log.
- Healthy Homes provides a basic mental health screening assessment for the children referred.

This program is designed to increase the:

- Early identification of treatment needs
- Stability of out-of-home placements
- Potential for reunification

A Healthy Homes Assessment provides an initial screening that identifies problem areas and service needs to enhance the child's adjustment and maximize their functioning in family, school, and community settings.

A DBH clinician conducts the Healthy Homes Assessment. The assessment may be completed in the DCS office, DBH Clinic or on a home visit. When possible, a joint home visit with the clinician and the DCS social worker functioning as a team is strongly encouraged.

Maintained by:

Front end – DBH IT (ASG) – Permissions, security, routing

Back End - DBH Research & Evaluation – Forms, reports, database

Inputs:

Universal DCS Children's Referral Form (URF 234)

Outputs:

Hard copy reports

State or Governmental reporting:

None



DBH Department

Healthy Homes

Primary Customer Contact:

Dr. Dianne Wolkenhauer

Primary DBH Contact:

Dr. Dianne Wolkenhauer

Primary ISD Contact:

N/A

Type of Application:

Access 2003 - Forms

Security Access:

Windows Authentication

Outside Provider access:

Yes, DCS (Department of Children Services – part of HSS) – through the WAN

Non-county employees at various locations

NOTE – the front end application is copied from a DBH shared directory onto the user's workstation – backend application resides on a shared directory on a DBH server

Application language:

Access 2000

Third Party Components used:

None

File NET:

N/A

Desktop Operating System:

Standard Windows operating system (Windows XP)



Special hardware:

N/A

Data Base Version:

Access 2003

Data Base name:

Front - End: Healthy Home_BE.mdb

Back - End: Healthy Homes.mdb

Data Base Connection Type:

ODBC (front end .mdb links to back end .mdb)

Web Server:

None

Data Base Server:

Front end: DBH-EYES .\\DBH_FS01\Department_share\Database Share\HealthyHomes

Back end: DBH-FS01 .\\DBH-Eyes\Healthy-Home (copy & paste to desktop only)

Insyst Data:

N/A



AB2726-TMRS – Tracking Monitoring Reporting System

Description:

Tracking of information related to specific services provided through the Mental Health portion of Special Education, commonly referred to as Chapter 26.5, AB3632, or AB2726.

Information collected includes, but not limited to:

- (1) identifying information of the students receiving services,
- (2) identifying current and maintained historical information of the school district in which the child is enrolled,
- (3) identifying information of the child’s school district of residence,
- (4) specifics regarding the referral process, including event tracking and response letter generation,
- (5) specifics regarding services provided to the student by DBH, separate sets of service codes for AB2726 services are used in both Medi-Cal billable and Medi-Cal non-billable service groups. (currently, services are not tracked by AB2726-TMRS)

Inputs:

User input from paper forms for Referral, IEP Assessment, Service Plan

Outputs:

Online list of registered cases with specifics

Online Referral details

Online IEP Assessment details

Online Service Plan details

Online and hard copy reporting

State or Governmental Reporting Requirements:

Monthly Report:

1. AB2726 Caseload Report – to state DMH
(Number of children participating in AB2727 program)

Quarterly Report:

1. AB2726 Services Report for Invoicing – to county schools
(Service specifics with cross referencing terminology utilized in special education)

Upon Demand Report:

Request by clinical and administrative staff

DBH Department

CCICMS – Children’s Centralized Intensive Case Management Services



Primary Customer Contact:

Dr. Tim Hougen

Cheryl Limbrick

Primary DBH Contact:

Peter Young

Type of Application:

SQL Server Client-Server application

Security Access:

SQL Server Authentication, SB County Internal Network Security, Application User Authentication

Outside Provider access:

None

Application language:

Visual Basic (front-end - user interface)

SQL Server 2005 (back-end database)

Third Party Components used:

None

File NET:

None

Desktop Operating System:

Standard Windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2005



Data Base name:

AB2726TMRS

Data Base Connection Type:

ODBC

Web Server:

None – application (front end) is loaded onto user's workstation.

Data Base Server:

DBH-PRODSQL01

Insyst Data:

This application does not update Insyst data

Read only to the Insyst database – reads Client table, Direct Service table

Data Items Extracted:

Client number

Client Name (first, last, middle)

Service procedure code, duration, RU, staff



Crisis Intervention Team

Description:

This is an ASP.NET web application that will automate the actions involved in the day to day business process of creating and generating reports. These applications provide the functionality to the CIT-members with the ability to input data to the system and continue with the business process. The CIT-admin member will generate the report as a result.

Maintained By:

Database: ISD

Host the Application: ISD

Enhance/Fixing: DBH-IT

Inputs:

The only type of input data that goes into the database is *plain text data* that is entered by the CIT-members. No attachment form is involved in this application.

Outputs:

This application allows the CIT-members to maintaining the client's record. They have the ability to track and check each cases status. The CIT-members (Admin) can generate the report; this can be done all online. The output file is .PDF; the user can either print or save to their local machine.

State or Governmental reporting:

N/A

DBH Department

The DBH-Forensic primary responsibility of using this application is to maintain the client's record and protect the data from spreading.

Primary Customer Contact:

- a. David Denkers
- b. Lisa Hamilton
- c. Donna Kennedy

Primary DBH Contact:

- a. Michael Day
- b. Jason Hill
- c. Chu Le



Primary ISD Contact:

N/A

Type of Application:

These are ASP.NET web base server applications that utilize the Visual Studio 2005, and SQL 2005 tools. This application also uses third party components as well, such as Ajax, Anthem, Atlas and etc

Security Access:

This application is implemented with the anonymous access authentication. The administrator in this application will grant authorization, and provide the user with a User Name and Password to login to the system. The security module (Login Page) will detect if the user has the permission to process and login to the system. If not they have to request authentication from the web administrator.

Outside Provider access:

This application is built and run in the Intranet, and only authorize user will have access to login to the system. They Web Administrator must provide a User name and password.

Application language:

This application is in VB.NET programming language using the ASP.NET technology.

Third Party Components used:

The third party components that are used in this application are, Ajax, Anthem and Atlas. All of these are Microsoft product components; therefore, there are no additional costs.

File NET:

N/A

Desktop Operating System:

Standard Windows operating system

Special hardware:

N/A

Data Base Version:

The database that supports this application is SQL 2005 v 9.0.3



Data Base name:

DBHCIT

Data Base Connection Type:

The items that are required to connect to the database are Server Name, User Name and Password.

Web Server:

Yes, this application is currently run on the production environment.

Here is the link: <http://countyline/dbh/cit/>

Data Base Server:

The current hosting production environment is sbc-prodsq1501\prod01

These databases also exist on the Dev and Test environments.

Insyst Data:

Does the application read or update Insyst tables?

N/A

If so, identify what tables and fields are read updated?



PIP1 – Performance Improvement Project 1

Description:

The PIP1 is Web Application that maintains a database of client appointments at DBH Clinics. Authorized personnel at DBH Clinics use the PIP1 System to schedule appointments for clients. Each appointment is subsequently updated to document whether or not the client “showed up” for the appointment, or, was a “no show”. The PIP1 creates online reports that detail the occurrence and disposition of client appointments at the various DBH Clinics.

The design and functionality of the PIP1 System is based upon an existing Microsoft Access based system that was being used by individual DBH Clinics. The PIP1 System is a standardized, Web Based System, that uses a common database. The PIP1 System replaced the Microsoft Access based system.

The PIP1 database is a SQL Server 2000 database.

Maintained By:

Information Services Department

Inputs:

Appointment information for a client

Outputs:

On line displays and reports; printed copies may be requested.

State or Governmental Reporting Requirements:

N/A

DBH Department

DBH Clinics

Primary Customer Contact:

Keith Harris

Primary DBH Contact:

Keith Harris

Primary ISD Contact:

Ric Drucker



Type of Application:

Web based

Security Access:

This Application has its own security database - Authorized users login and have predefined levels of access.

Outside Provider access:

None

Application language:

ASP 3.0

Third Party Components used:

None

File NET:

None

Desktop Operating System:

Standard windows operating system

Special hardware:

None

Data Base Version:

SQL Server 2000

Data Base name:

DBHPIP1

Data Base Connection Type:

SQLOLEDB



Web Server:

SBC-SHRWEB01/SBC-SHRWEB02

Data Base Server:

SBC-PRODSQL01

Insyst Data:

This application does not update Insyst data – may possibly use the SIMON number as input but is not tied directly to the SIMON database. This application does not read the Insyst database.



CSR – Client Services Reports

Description:

The Client Service Reports System is a web based tool used by the DBH Fiscal Group. This System creates reports that document services provided by DBH providers. More specifically, the CSR System creates 21 different reports, which collate information from 12 categories of DBH providers. Some of the reports present information summarized at the level of Reporting Units; some of the reports detail information at the Client level. Each report presents data for a user specified timeslot of 1 or more days. Typical report timeslots are monthly, quarterly and yearly. The reports use InSyst data that has been loaded into a SQL Server 2000 database.

Maintained By:

Information Services Department

Inputs:

The contents of the SIMON E2 (Drug & Alcohol) DB, copied into a DASRPT SQL Server DB on DBH-SQLPROD1

Outputs:

Hard copy reports which can be printed as needed.

State or Governmental Reporting Requirements:

None

DBH Department

Fiscal Department

Primary Customer Contact:

Laura Dean

Primary DBH Contact:

Laura Dean

Primary ISD Contact:

Ric Drucker



Type of Application:

Web based application

Security Access:

ECM

Outside Provider access:

None

Application language:

Visual Basic

Third Party Components used:

No

File NET:

No

Desktop Operating System:

Standard county windows OS

Special hardware:

None

Data Base Version:

SQL Server 2000

Data Base name:

DASRPT

Data Base Connection Type:

SQLOLEDB



Web Server:

sbc-shrweb01 / sbc-shrweb02

Data Base Server:

DBH-SQLPROD01

Insyst Data:

Direct_Services table:

Client_number
Co_therapist
Hours
Minutes
Number_in_group
Procedure_group
Reporting_unit
Service_date

Clients Table:

Client_name
Social_security_number

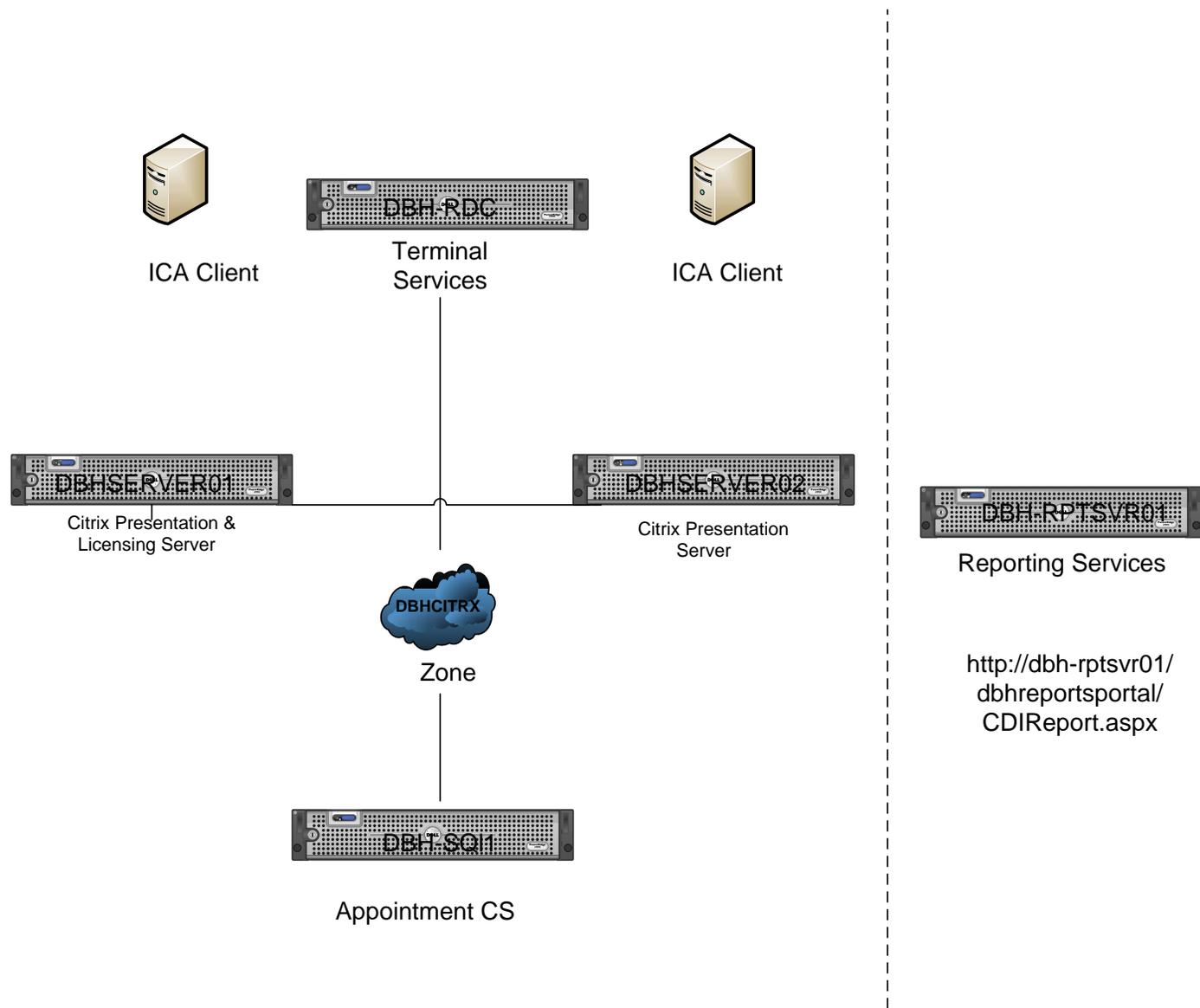
Provider_masrter table:

Short_provider_name

Indirect_services_2:

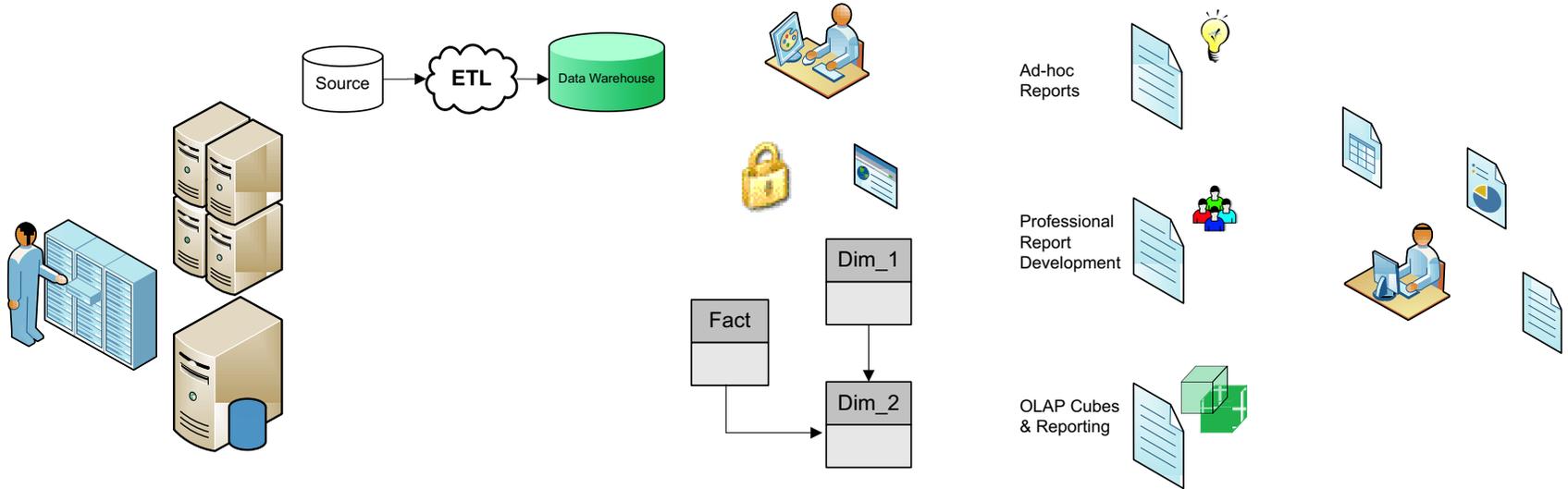
Hours
Minutes
Procedure_code
Reporting_Unit
Service_date

Addendum 5.0 - DBH Spectrasoft Appointment Scheduler Architecture



Addendum 5.1 - Data Warehouse | Cognos Business Intelligence 8 Roles and Security Levels

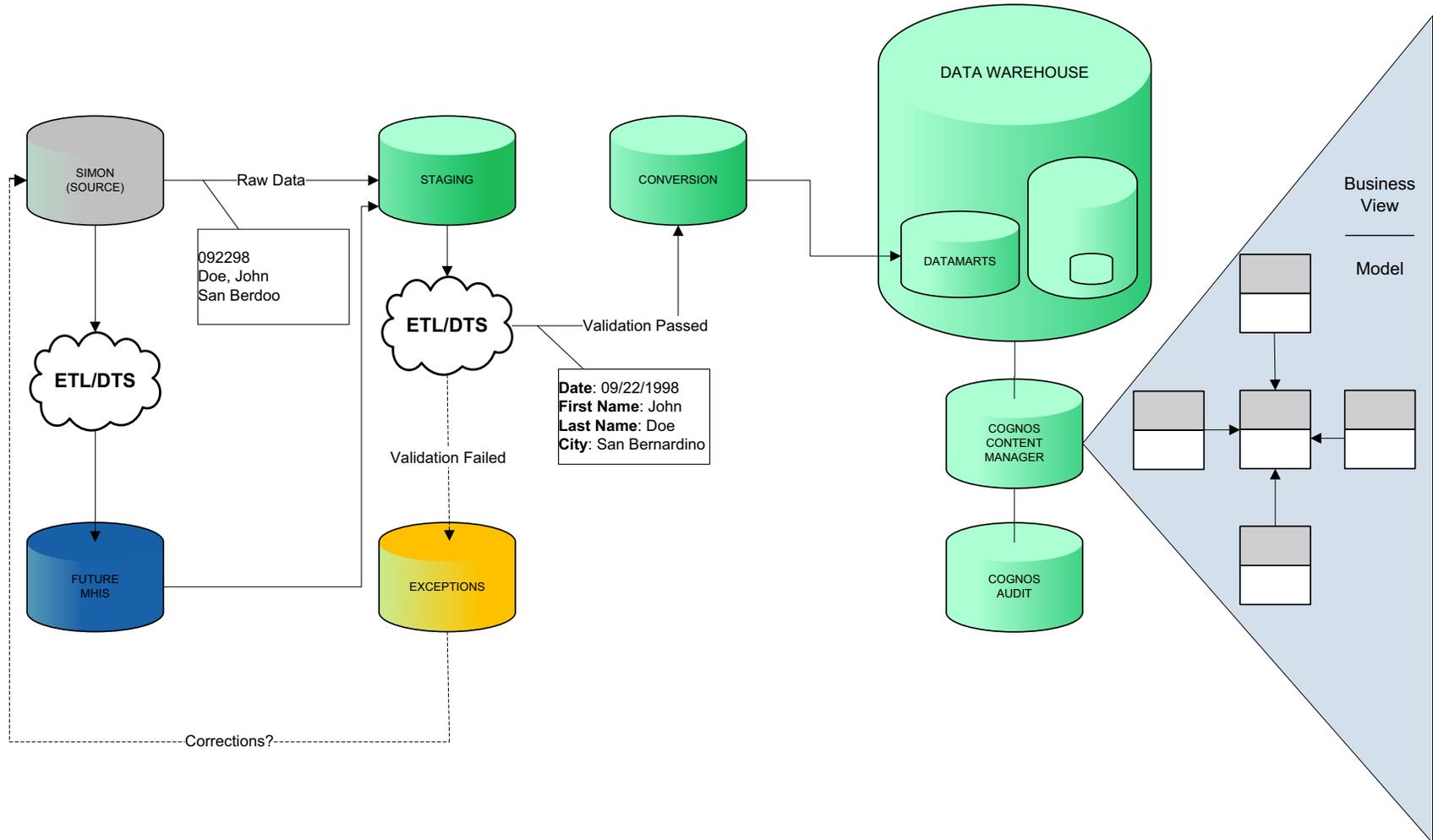
Server Admins	ETL/DTS Admins	Application and Framework Admins	Developers	Report Consumers
<p>Roles</p> <ul style="list-style-type: none"> Installation Configuration System Optimization Hardware Support System Monitoring Backup and Recovery 	<p>Roles</p> <ul style="list-style-type: none"> Extract, Transform, Load Data 	<p>Roles</p> <ul style="list-style-type: none"> Set Hierarchical Definitions Maintain Security Content Administration Portal Administration Create and Manage Data Model 	<p>Roles</p> <ul style="list-style-type: none"> Develop report functions Develop report algorithms Author ad-hoc reports Author managed reports Write Queries 	<p>Roles</p> <ul style="list-style-type: none"> Run and Consume Reports



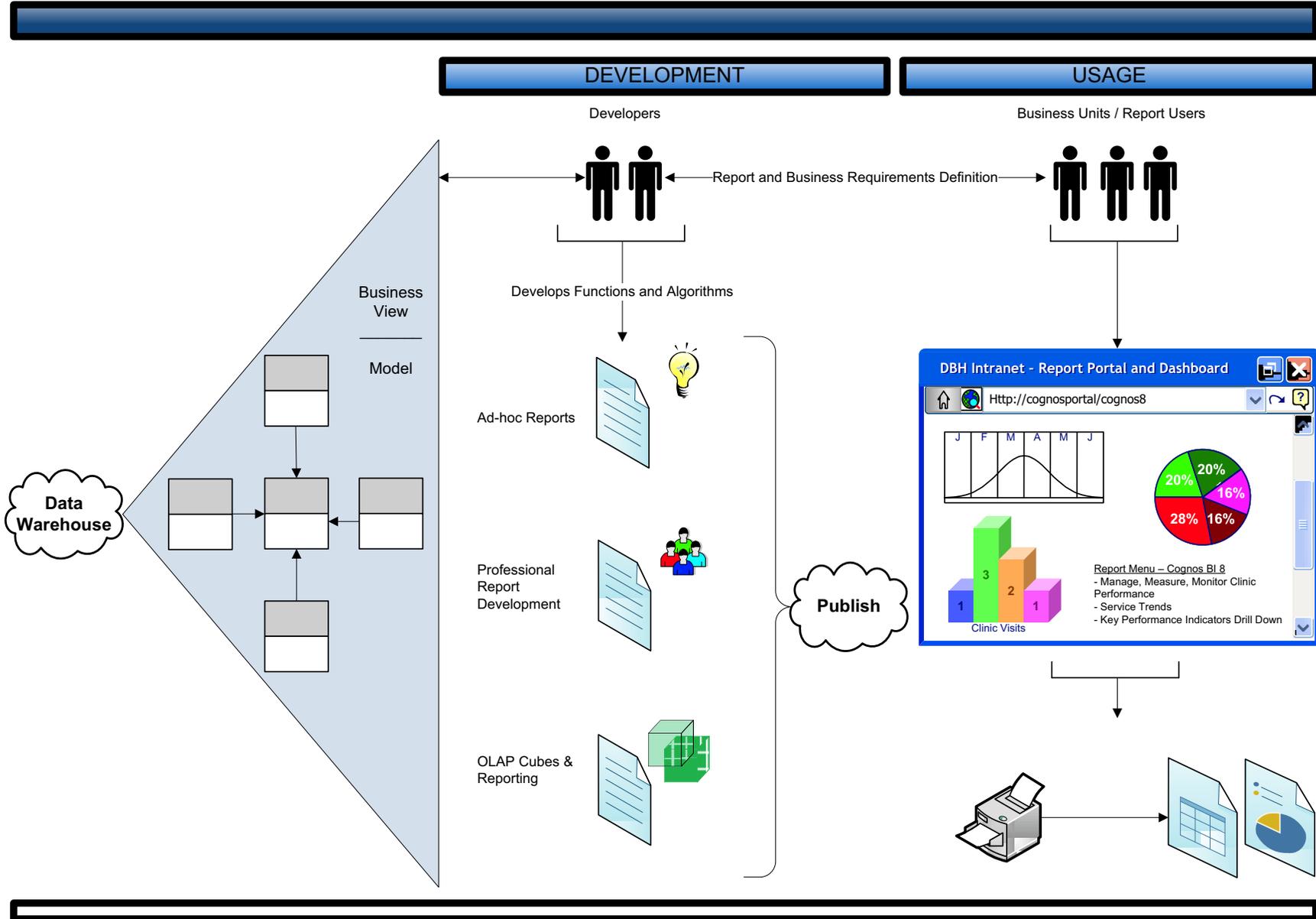
Addendum 5.2 - Data Warehouse | Cognos Business Intelligence 8 Reporting Flow

EXTRACT, TRANSFORMATION, LOAD (ETL)

MODELING (FRAMEWORK MANAGER)



Addendum 5.3 - Data Warehouse | Cognos Business Intelligence 8 Reporting Flow (Continued)



Addendum 5.4

Virtual Server & Desktop Infrastructure Proposal

Addendum 5.4 - Virtual Server & Desktop Infrastructure Proposal

Introduction

This proposal will cover the possible implementation of a virtual server and desktop infrastructure for the Department of Behavioral Health. This proposal will cover virtual technology and the benefits of deploying this infrastructure for the Department of Behavioral Health.

What is Virtualization?

Virtualization is a proven software technology that is rapidly transforming the IT landscape and fundamentally changing the way that people compute.

Today's powerful x86 computer hardware was originally designed to run only a single operating system and a single application, but virtualization breaks that bond, making it possible to run multiple operating systems and multiple applications on the same computer at the same time, increasing the utilization and flexibility of hardware.

Virtualization is a technology that can benefit anyone who uses a computer, from IT professionals and Mac enthusiasts to commercial businesses and government organizations. Millions of people around the world who use virtualization to save time, money and energy while achieving more with the computer hardware they already own.

How Does Virtualization Work?

In essence, virtualization lets you transform hardware into software. Use software such as VMware ESX Server to transform or "virtualize" the hardware resources of an x86-based computer—including the CPU, RAM, hard disk and network controller—to create a fully functional virtual machine that can run its own operating system and applications just like a "real" computer.

Multiple virtual machines share hardware resources without interfering with each other so that you can safely run several operating systems and applications at the same time on a single computer.

Discover the Value of Virtualization

Virtualization is a technology that can benefit anyone who uses a computer. Millions of people and thousands of organizations around the world—including all of the Fortune 100—use VMware virtualization solutions to reduce IT costs while increasing the efficiency, utilization and flexibility of their existing computer hardware. Read below to discover how virtualization can benefit your organization.

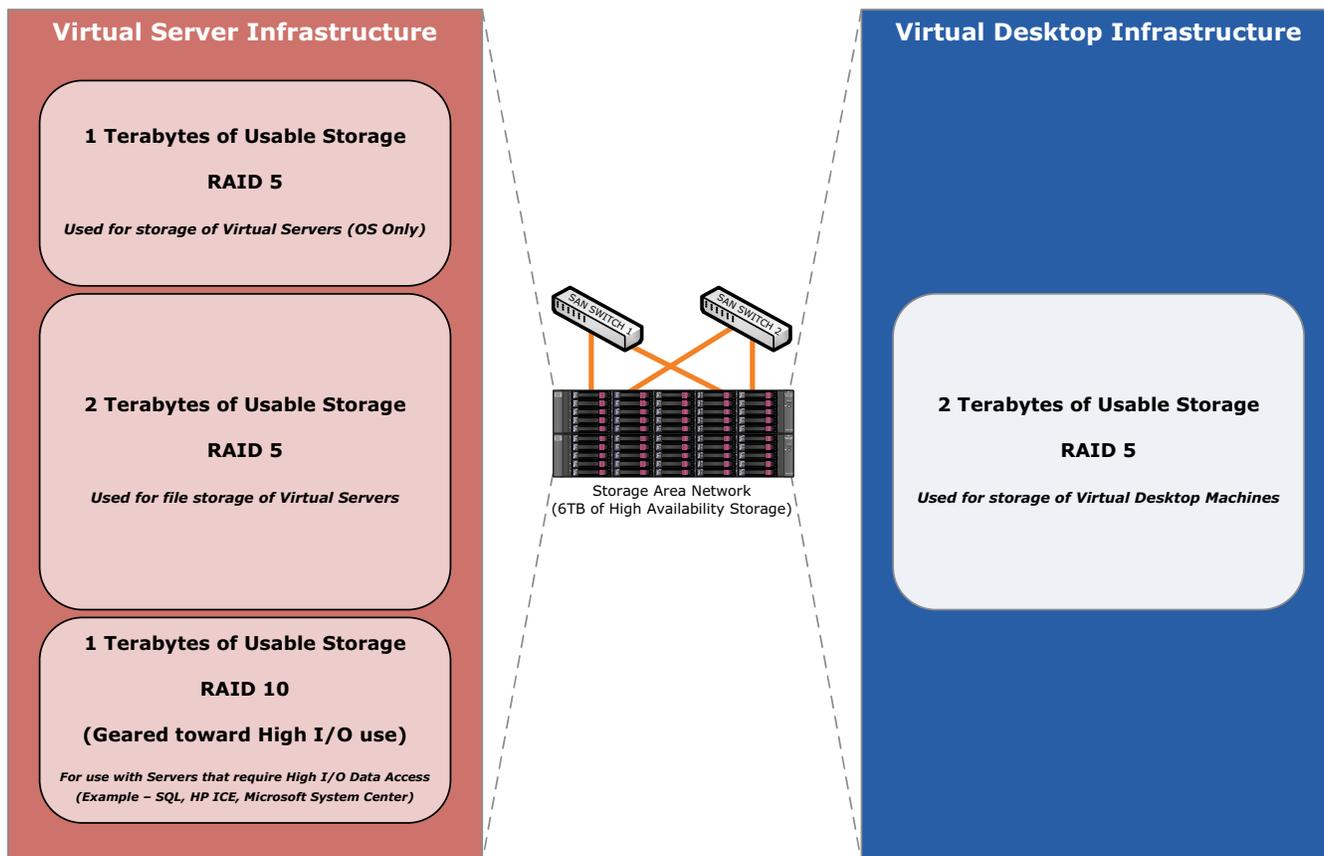
Top 5 Reasons to Adopt Virtualization Software

- **Server Consolidation and Infrastructure Optimization:** Virtualization makes it possible to achieve significantly higher resource utilization by pooling common infrastructure resources and breaking the legacy "one application to one server" model.
- **Physical Infrastructure Cost Reduction:** With virtualization, you can reduce the number of servers and related IT hardware in the data center. This leads to reductions in real estate, power and cooling requirements, resulting in significantly lower IT costs.
- **Improved Operational Flexibility & Responsiveness:** Virtualization offers a new way of managing IT infrastructure and can help IT administrators spend less time on repetitive tasks such as provisioning, configuration, monitoring and maintenance.
- **Increased Application Availability & Improved Business Continuity:** Eliminate planned downtime and recover quickly from unplanned outages with the ability to securely backup and migrate entire virtual environments with no interruption in service.
- **Improved Desktop Manageability & Security:** Deploy, manage and monitor secure desktop environments that end users can access locally or remotely, with or without a network connection, on almost any standard desktop, laptop or tablet PC.

Proposed Virtual Server and Desktop Infrastructure

DBH Information Technology has developed a plan to implement a Virtual Server and Desktop Infrastructure to improve service offerings to the department and consumers, while saving money by utilizing all purchased resources from server hardware, and maximizing uptime.

The first component of the Virtual Server and Desktop Infrastructure is the Storage back-end. DBH will utilize the County’s Information Services Storage Area Network for the storage of the virtual machines. This storage would consist of six terabytes of high availability fiber channel storage. This storage would be used by the virtual server and desktop infrastructure to host machines for all the virtual machines in the server and desktop environment. Below is a diagram of the proposed division of storage for the virtual server and desktop infrastructure.



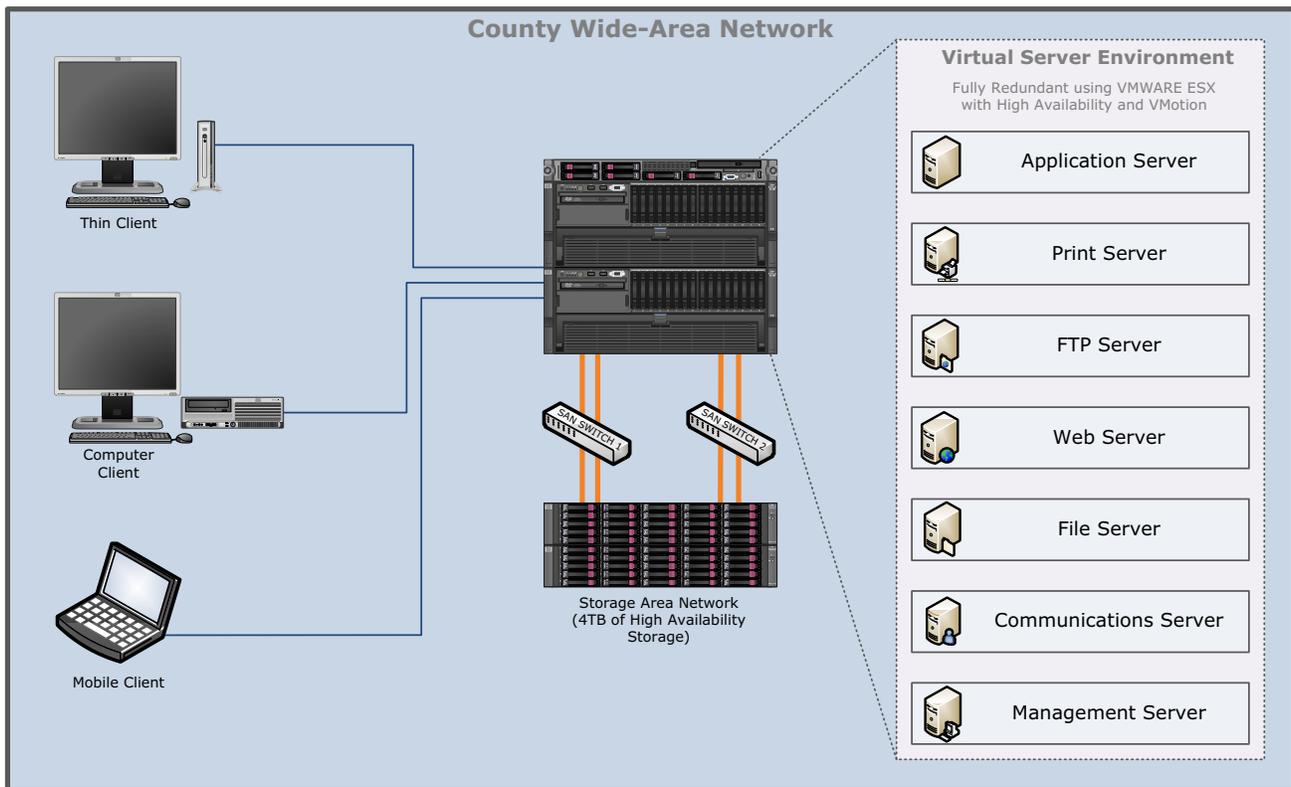
ISD utilizes a high speed Hitachi Storage Area Network. This storage area network provides for multiple redundancies to ensure for constant uptime and reliability. The storage area network also has a large backup infrastructure, which includes, one large array of tier two disks and two large StorageTek tape libraries attached for backups from disk to disk to tape, decreasing backup times and allowing for performance even during backups.

Overall, the use of the storage area network is essential in being able to provide reliable, redundant storage to the virtual server and desktop infrastructure.

Proposed Virtual Server Infrastructure

DBH Information Technology has developed a plan to implement a Virtual Server improve service offerings to the department and consumers, while saving money by utilizing all purchased resources from server hardware, and maximizing uptime.

The second component of this proposal is the server infrastructure. With the proposed infrastructure, DBH will be allowed to utilize 100 percent of server resources available to this infrastructure while maintaining a redundant, highly available environment. While saving money on hardware costs and being able to provide solid uptimes, DBH will also reduce the cost of administration and provide quicker deployment times on new servers. Below is a diagram of the proposed virtual server infrastructure.



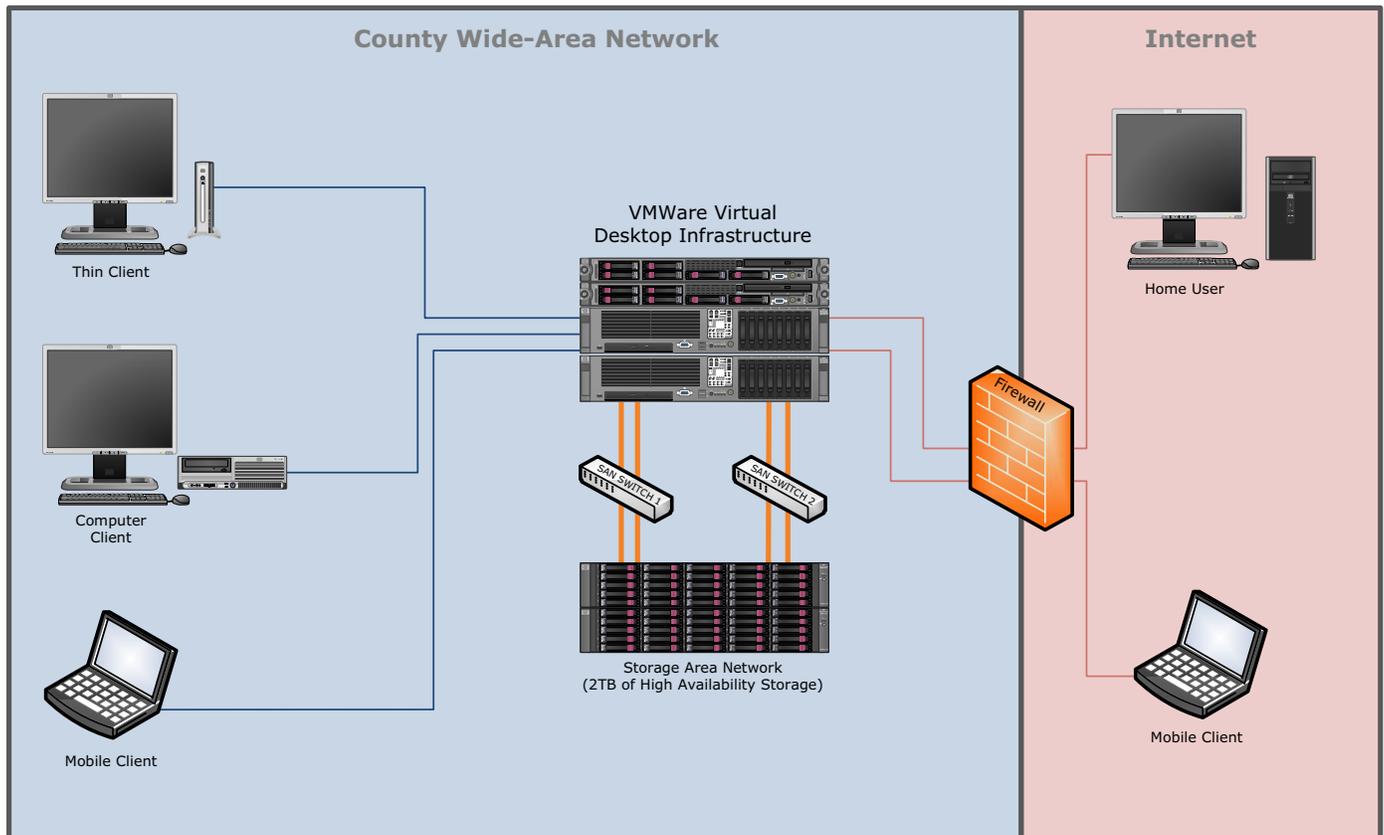
Existing Server Consolidation

After DBH establishes the virtual server infrastructure, DBH can then start to put into place new servers and applications to service the department and the consumers. The time frame to put new servers into place are greatly reduced from months to days. DBH can also utilize this infrastructure to consolidate current departmental servers into the virtual server infrastructure. By doing so, DBH can utilize all server resources, reduce cost on administration of hardware, and provide improved service uptimes due to this high availability environment. DBH then can utilize the reclaimed servers to increase the resources in the virtual server infrastructure. Overall DBH would be able to increase its reliability and utilize all system resources available.

Proposed Virtual Desktop Infrastructure

DBH Information Technology has developed a plan to implement a Virtual Server improve service offerings to the department and consumers, while saving money by utilizing all purchased resources from server hardware, and maximizing uptime.

The third component of this proposal is the desktop infrastructure. With the proposed infrastructure, DBH will be allowed to utilize 100 percent of server resources available to this infrastructure while maintaining a redundant, highly available environment. While saving money on hardware costs and being able to provide solid uptimes, DBH will also reduce the cost of administration and desktop deployment time from hours to minutes. Below is a diagram of the proposed virtual desktop infrastructure.

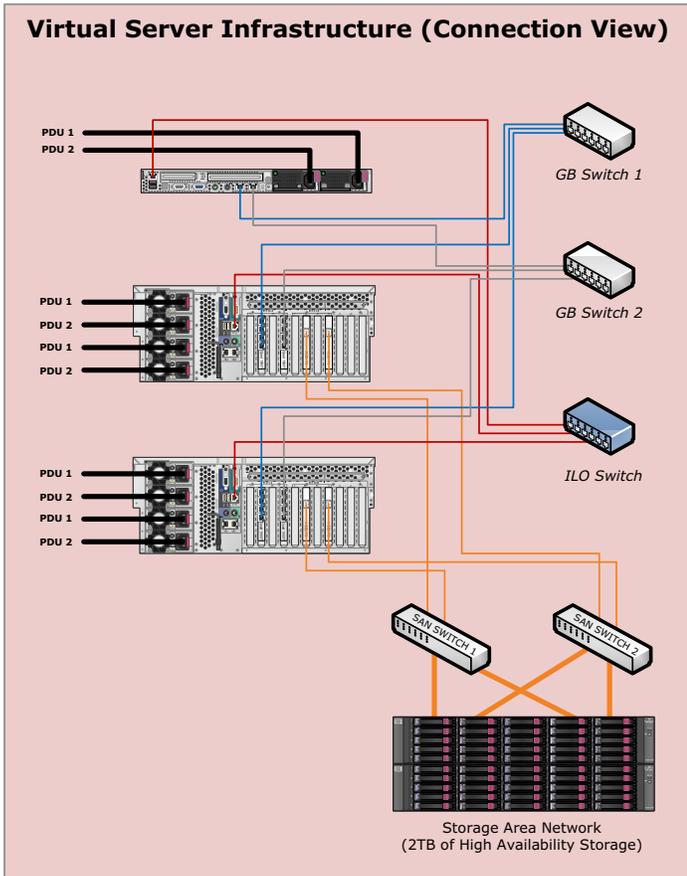


Increased Security

DBH Information Technology has a goal to provide the highest level of security possible. To do so, IT has come up with a plan to deploy thin clients to standard users and some mobile users with defined work processes. This environment would allow for IT to restrict Patient Health Information (PHI) or other types of data to be saved on local hard disks. In this environment, users are not working on local computers, they are utilizing a desktop infrastructure that is stored in a datacenter. This insures high availability and prevents the loss of PHI. This will also allow certain users to be able to access their virtual machine from home utilizing VPN technology.

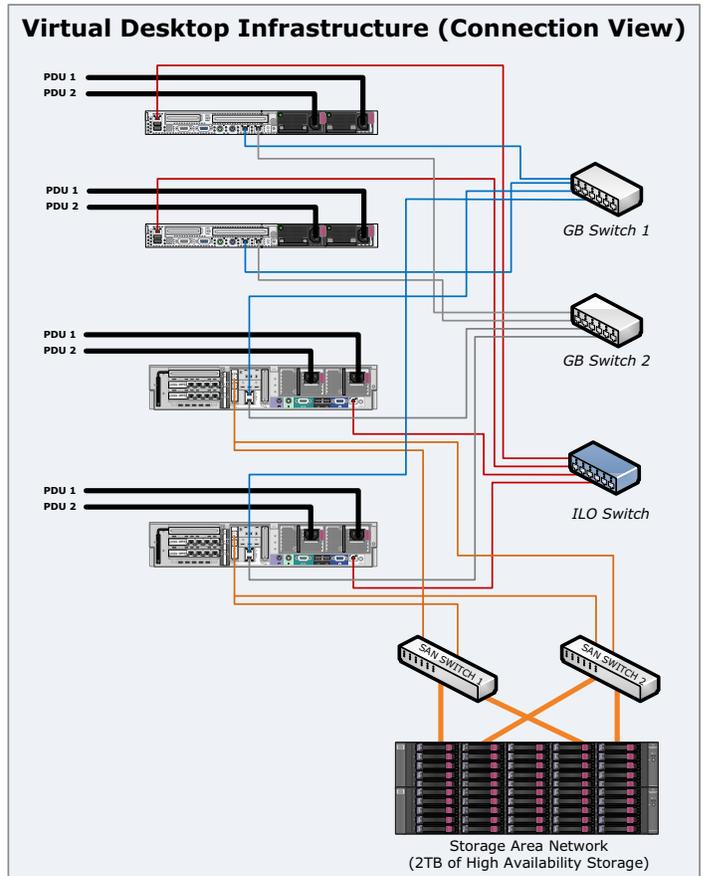
High Availability

Virtual Server Infrastructure (Connection View)



In the picture on the left, you will see the redundant connections for each one of the servers in the Virtual Server Infrastructure. Each server has a different path for power, network, and storage area network connectivity, this is to ensure that the server has as much redundancy as possible to maintain server uptimes.

Virtual Desktop Infrastructure (Connection View)



In the picture on the right, you will see the redundant connections for each one of the servers in the Virtual Desktop Infrastructure. Each server has a different path for power, network, and storage area network connectivity, this is to ensure that the server has as much redundancy as possible to maintain server uptimes. This will allow Behavioral Health Personnel to access this system whenever needed.

Summary

In this proposal, you have been shown what a Virtual Server Infrastructure and a Virtual Desktop Infrastructure is, and how it would benefit the Department of Behavioral Health. You have seen how DBH could utilize all resources in a server while improving server uptimes and availability. You have been shown how redundant the infrastructure has been planned out, and how this could improve application availability to the department.

This document has shown you how the department can be improved by utilizing virtual technology, but it can also save money as well. By utilizing all server resources and going away from the traditional one application per server method, DBH can reduce overall administration and hardware purchase costs within the organization. The administration costs go down due to the deployment of new servers into the environment going from taking months to purchase and deploy servers, to days due to not having to go through the purchasing process for new hardware because you are utilizing free resources on servers.

Below is the top five reasons to adopt and deploy virtualization in the Department of Behavioral Health.

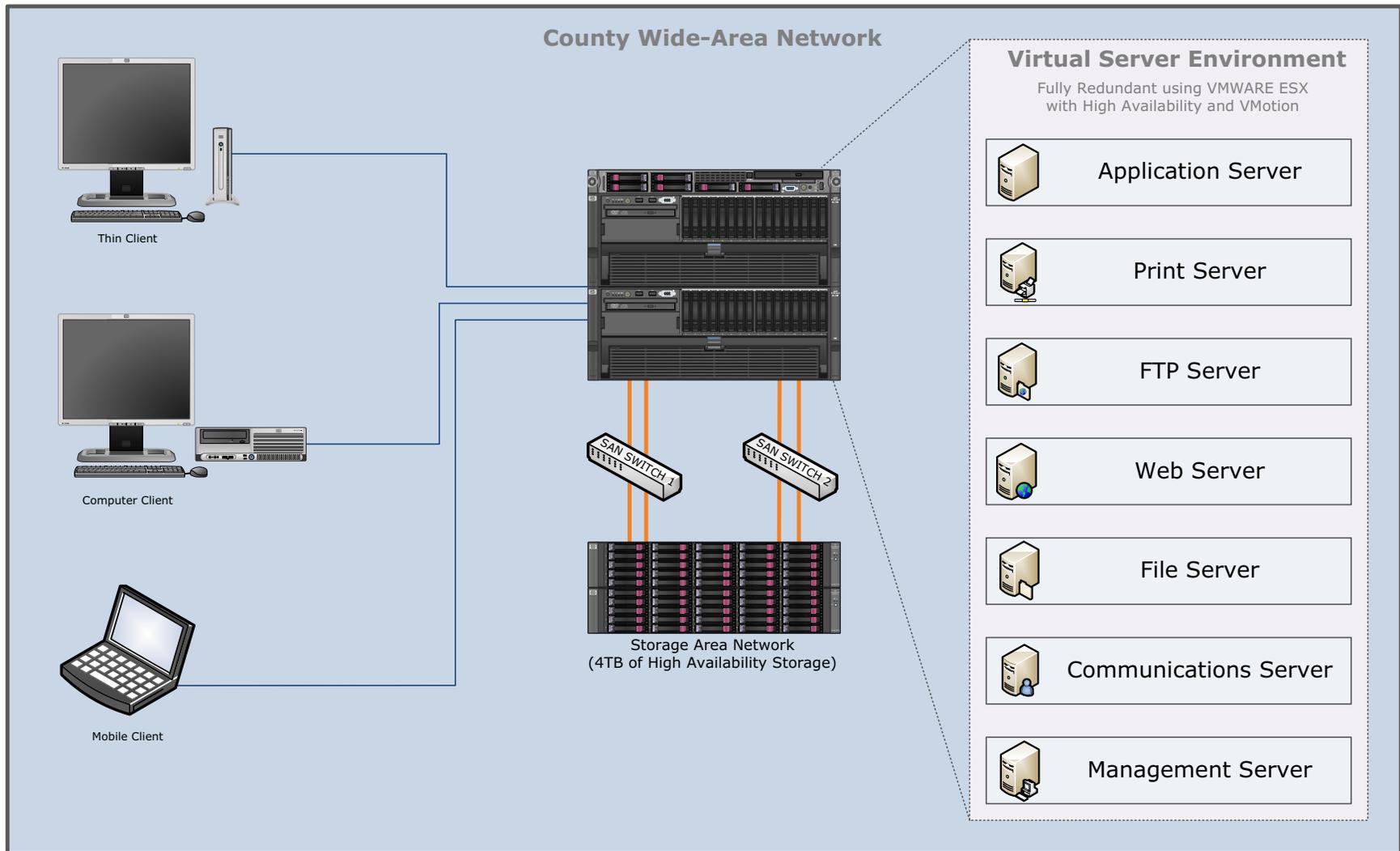
Top 5 Reasons to Adopt Virtualization Software

- **Server Consolidation and Infrastructure Optimization:** Virtualization makes it possible to achieve significantly higher resource utilization by pooling common infrastructure resources and breaking the legacy "one application to one server" model.
- **Physical Infrastructure Cost Reduction:** With virtualization, you can reduce the number of servers and related IT hardware in the data center. This leads to reductions in real estate, power and cooling requirements, resulting in significantly lower IT costs.
- **Improved Operational Flexibility & Responsiveness:** Virtualization offers a new way of managing IT infrastructure and can help IT administrators spend less time on repetitive tasks such as provisioning, configuration, monitoring and maintenance.
- **Increased Application Availability & Improved Business Continuity:** Eliminate planned downtime and recover quickly from unplanned outages with the ability to securely backup and migrate entire virtual environments with no interruption in service.
- **Improved Desktop Manageability & Security:** Deploy, manage and monitor secure desktop environments that end users can access locally or remotely, with or without a network connection, on almost any standard desktop, laptop or tablet PC.

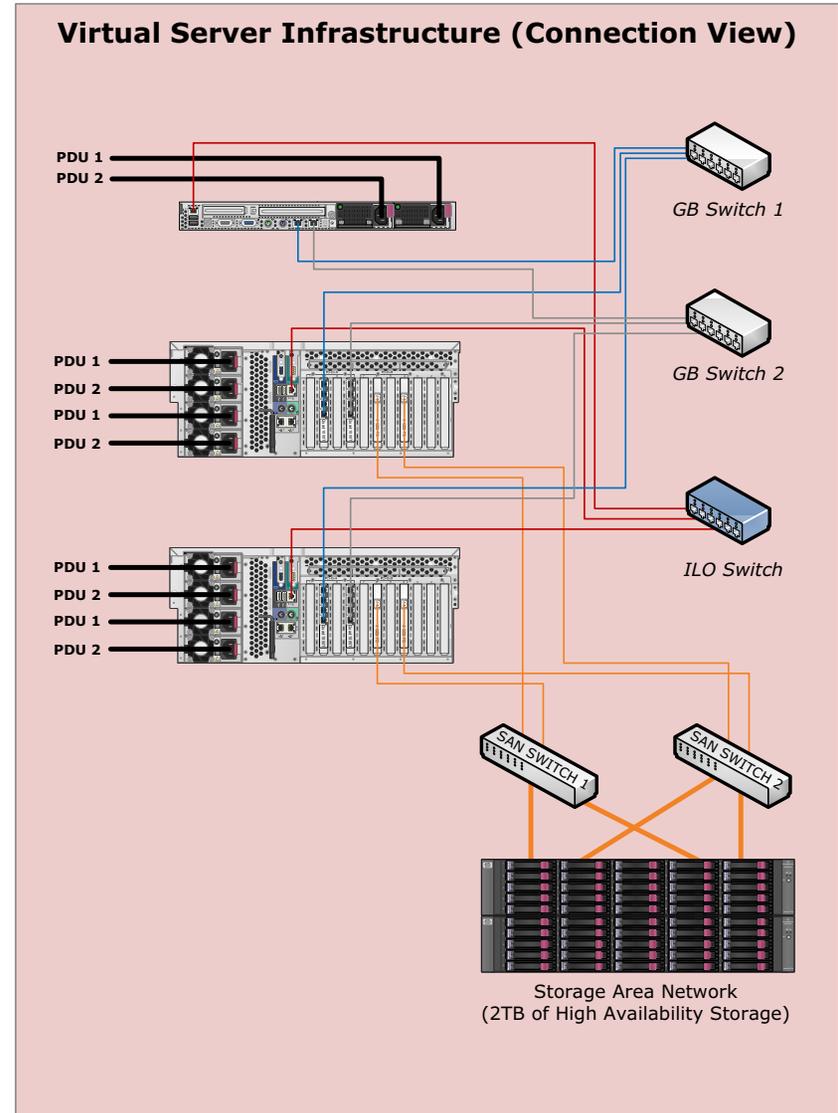
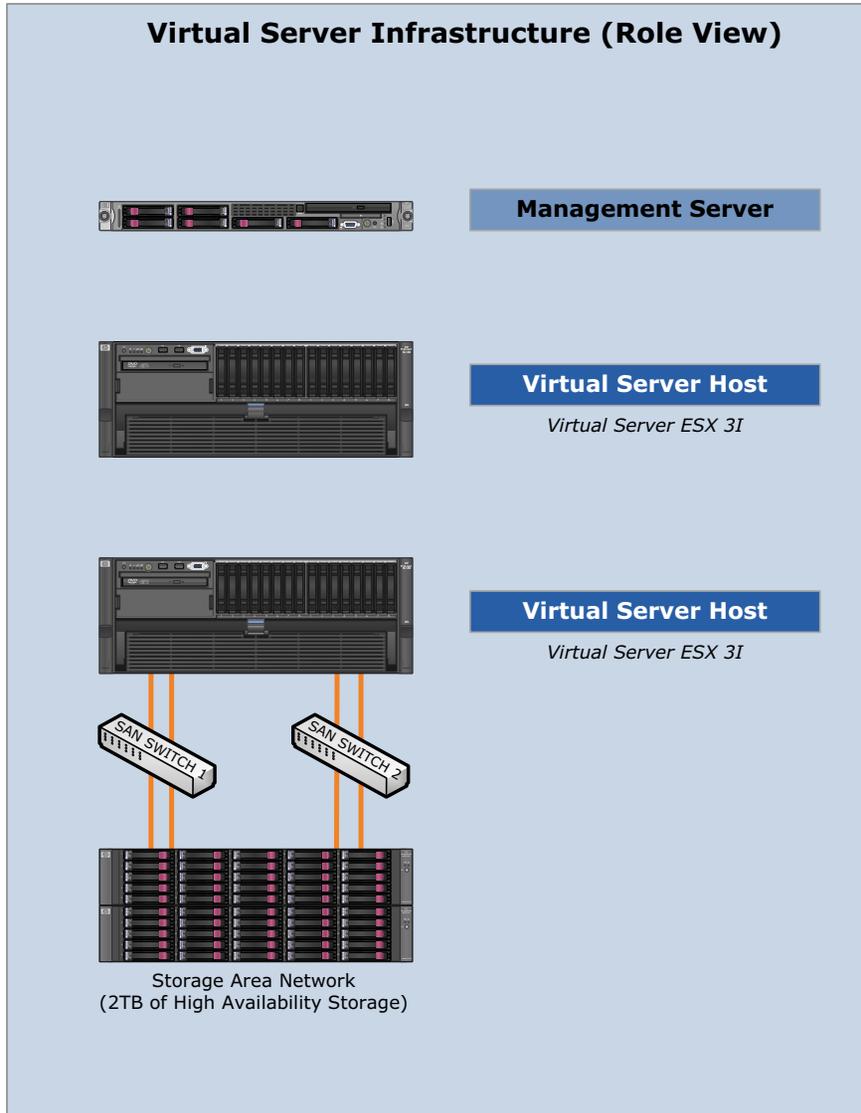
The Department of Behavioral Health's Information Technology unit strives to be responsible with tax payers money by deploying reliable equipment and applications to service our customers. The IT groups goal with this project is to utilize all resources available and to save the Department money during the tight budget years ahead. Deploying this proposal will allow IT to use all resources available, lower costs of administration, provide high availability, and most of all, secure patient health information within the Department of Behavioral Health's server infrastructure.

Addendum 5.5 Virtual Server & Desktop Environment Project

Addendum 5.5 - Virtual Server & Desktop Environment Project

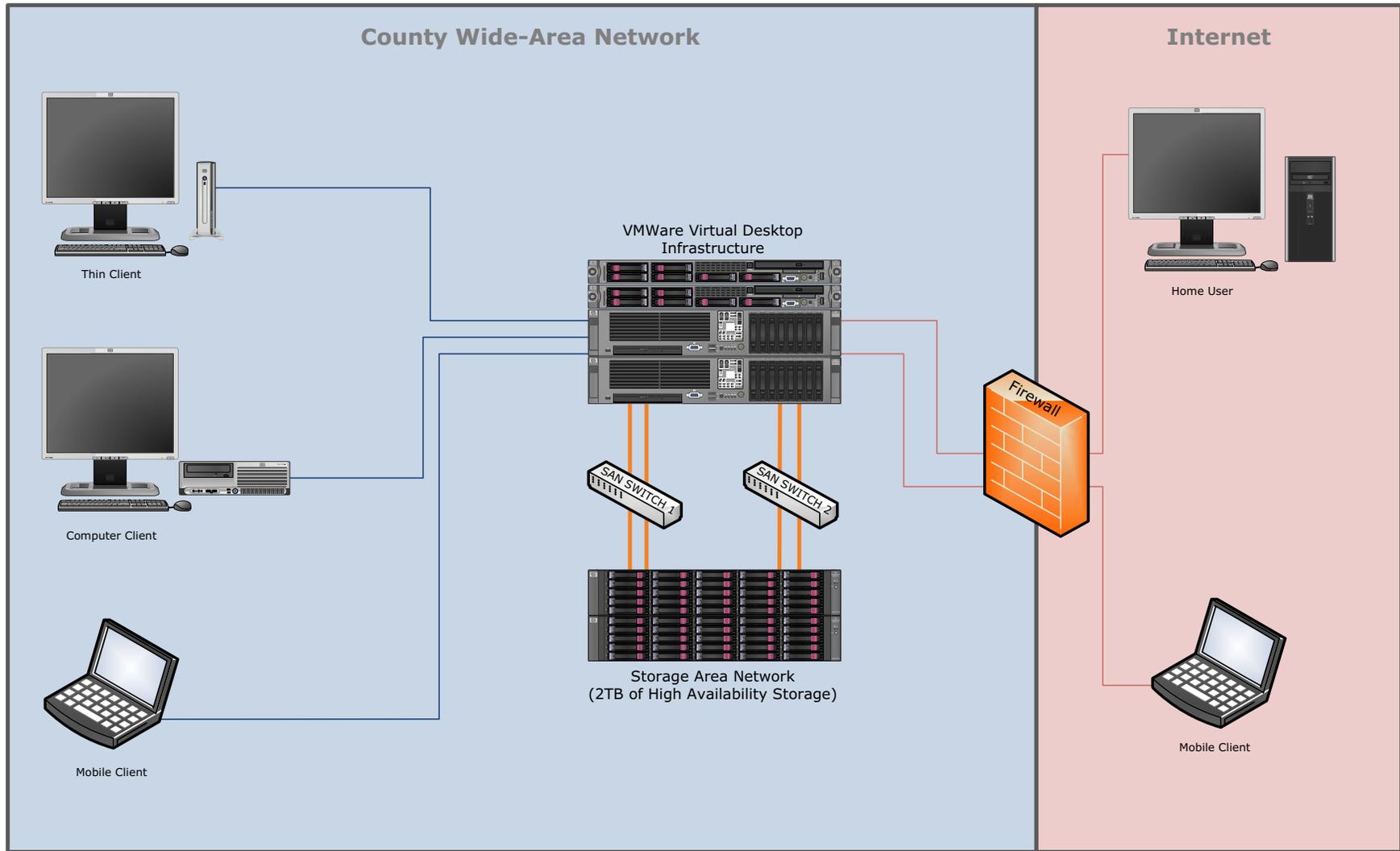


Addendum 5.5 - Virtual Server & Desktop Environment Project

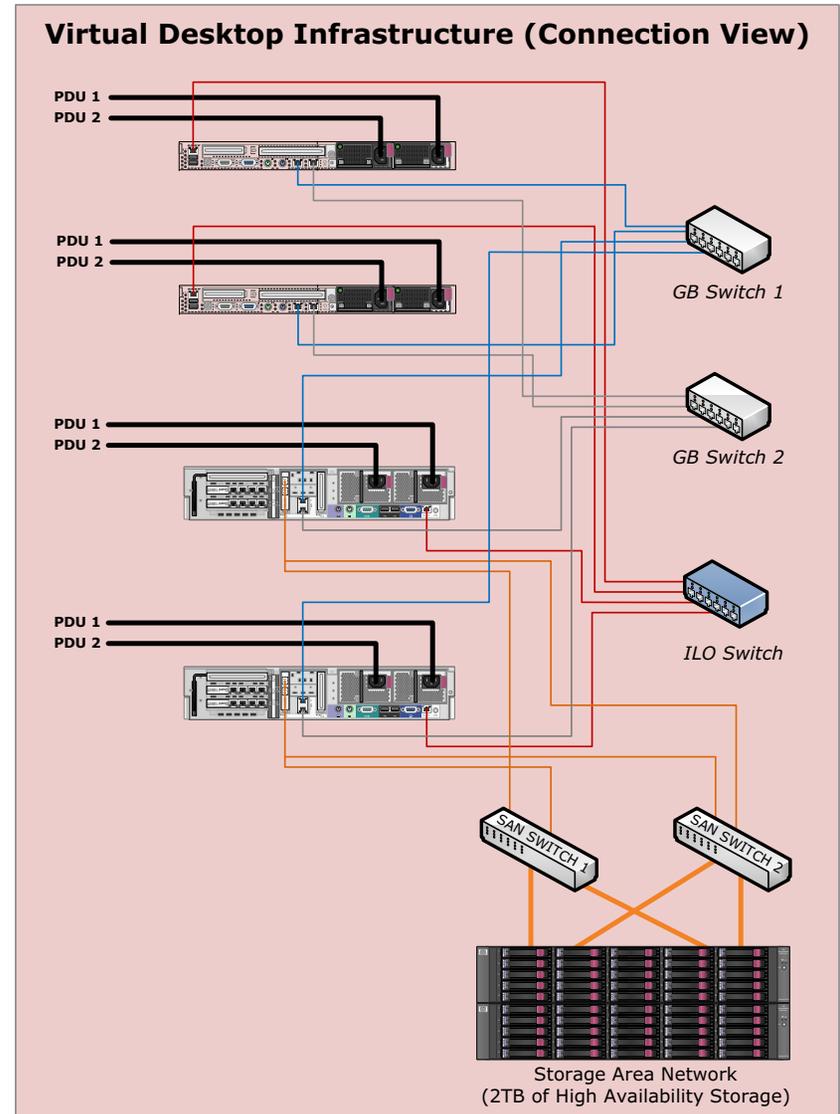
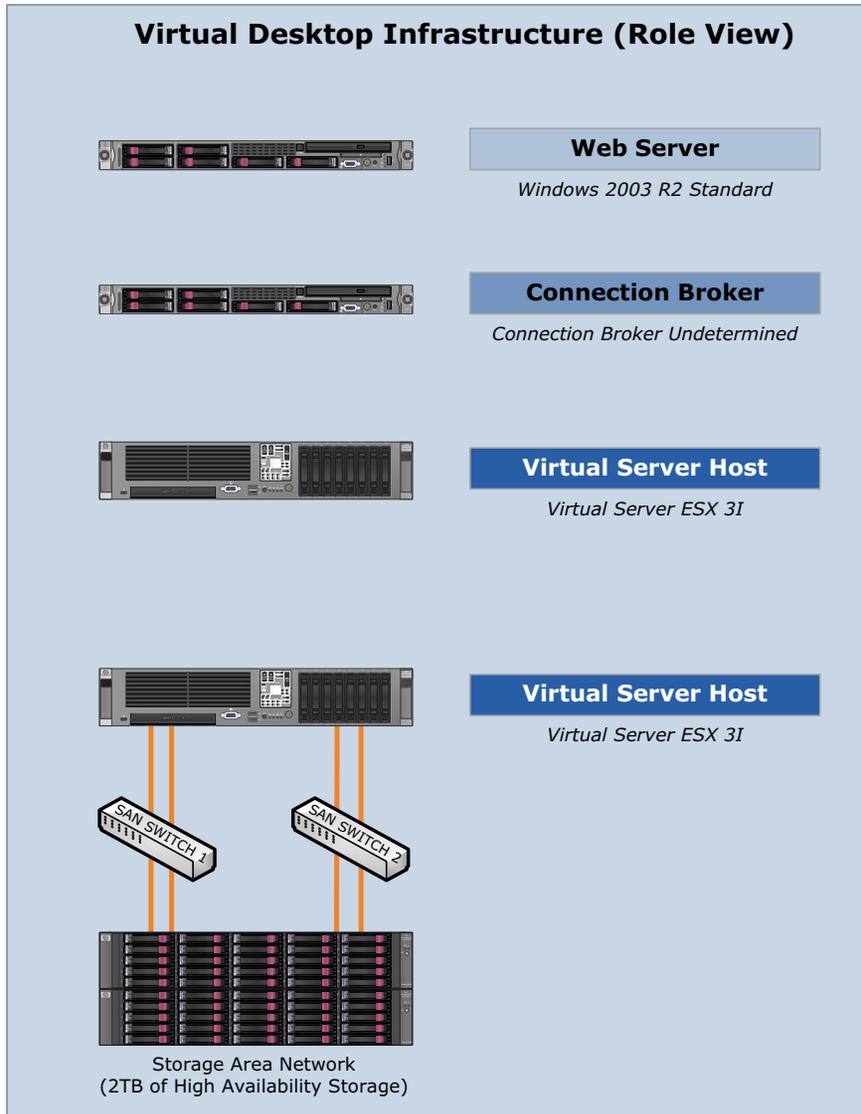


Addendum 5.5 - Virtual Server & Desktop Environment Project

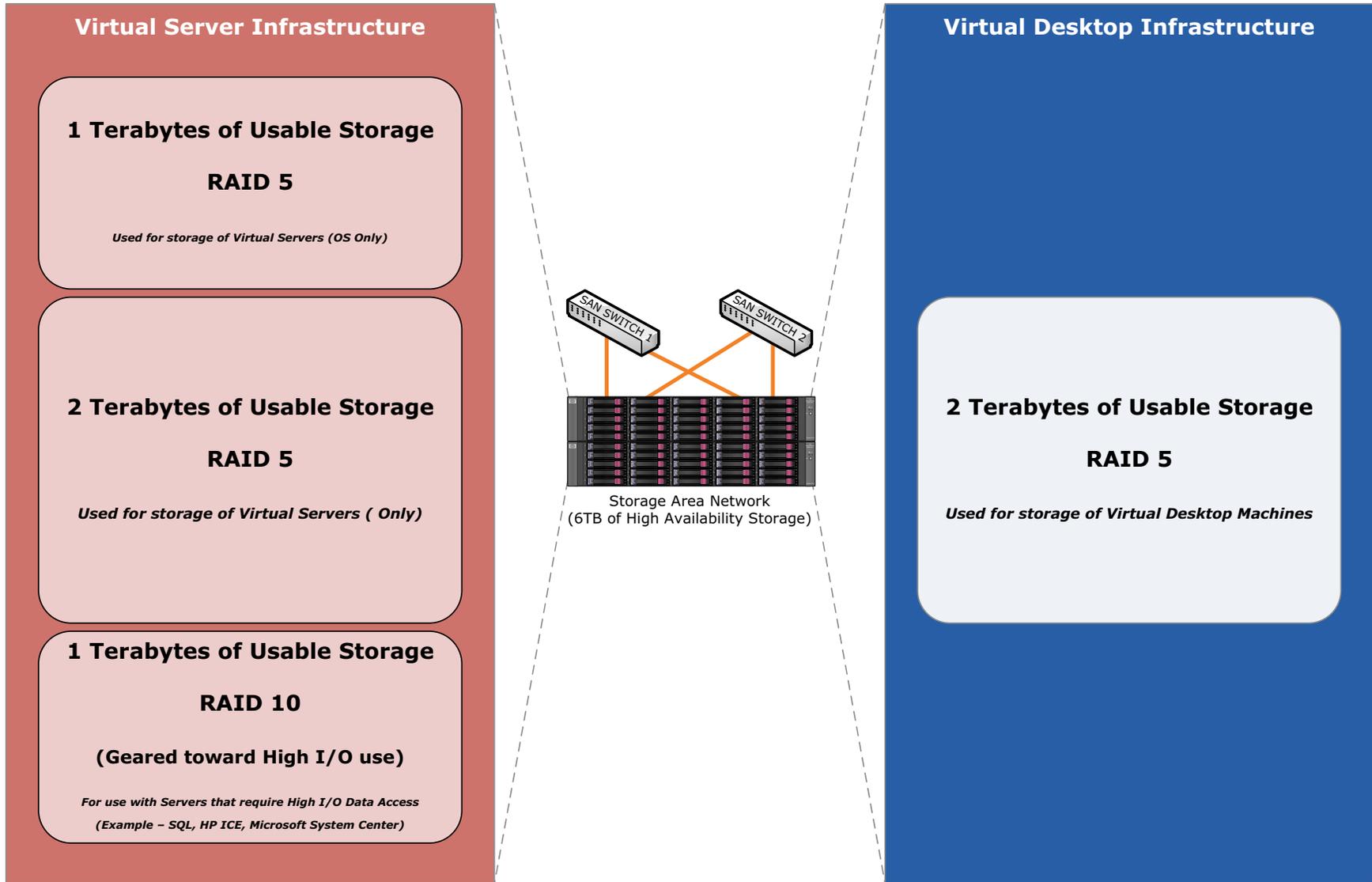
Virtual Desktop Infrastructure – Conceptual Layout



Addendum 5.5 - Virtual Server & Desktop Environment Project



Addendum 5.5 - Virtual Server & Desktop Environment Project



Addendum 6.0 - CHARON-VAX Server Upgrade

ID	Task Name	Resource Names
1	Addendum 6.0 CHARON-VAX SERVER UPGRADE	
2		
3	Server Set-up	
4	Order Equipment	DBH-IT
5	Install and configure for environment	ISD
6		
7	Laura - Test System	
8	Install emulation software on server	ISD
9	Install system disk	ISD
10	Transfer production data	ISD
11	Test/Benchmark InSyst application	DBH-IT
12	Validation concurrence	DBH-IT
13	Move to real-time environment	ISD
14	Reload current production data	ISD
15	Disconnect retired hardware	ISD
16		
17	Simon - Test System	
18	Install emulation software on server	ISD
19	Install system disk	ISD
20	Transfer production data	ISD
21	Test/Benchmark InSyst application	DBH-IT
22	Validation concurrence	DBH-IT
23	Move to real-time environment	ISD
24	Reload current production data	ISD
25	Disconnect retired hardware	ISD

Addendum 6.1

ID	Task Name	Resource Group
1	San Bernardino Co. DBH Billing System RFP & System Selection Project	
2	Execute Contract	OA,DBH
3	Schedule Project Kick-off Meeting	OA,DBH
4	Conduct Project Kick-off Meeting	DBH
5	Phase 1: RFP Solicitation Document	
6	Organize and Plan Project	
7	Initial Planning meeting between DBH & OA	OA,DBH,ISD
8	Review RFP format & Evaluation Tool with DBH	DBH,OA
9	Obtain approval on RFP format & Evaluation Tool	DBH
10	Project Work Plan (Deliverable 1)	
11	Develop project work plan	OA
12	Review project work plan	DBH,OA
13	Revise project work plan	OA
14	<i>Milestone / Deliverable: Project Work Plan</i>	
15	Develop other Project documentation	DBH
16	Develop project organization chart	DBH,OA
17	Develop project charter	PCC
18	Develop project communication plan	DBH
19	Develop issue resolution plan	DBH
20	Discuss project risks and risk management	DBH
21	Requirements Document (Deliverable 2)	
22	Prepare requirements documents for review	OA
23	Prepare workgroup materials	OA
24	Develop workgroup invitation	OA
25	Develop workgroup information sheet	OA
26	Identify workgroup members	DBH
27	Schedule requirement validation workgroups	DBH
28	Conduct requirements validation session	OA,FRW,TRW
29	Revise requirements documents	OA
30	Final review of requirements	DBH,OA,FRW,TRW
31	Obtain approval of requirements	DBH
32	Revise requirements	OA
33	<i>Milestone / Deliverable: Requirements Document</i>	
34	Vendor Response Evaluation & Scoring Tool (Deliverable 3)	
35	Prepare Scoring Tool	OA
36	Prepare weighting sheets	OA
37	Identify responsibility for weighting requirements tools	DBH
38	Conduct session to weight requirements	OA,EC,FRW,TRW
39	Identify Evaluation Committee members	DBH
40	Schedule Evaluation Team Training	DBH
41	Invite Evaluation Team members	DBH,OA
42	Conduct training session for evaluation team members	OA,EC
43	Revise Scoring Tool	OA
44	<i>Milestone / Deliverable: Vendor Response Evaluation Tool</i>	
45	<i>Milestone / Deliverable: Evaluation Team Training on Evaluation Tool</i>	
46	Draft Solicitation Document (Deliverable 4)	
47	Establish approval process	DBH,OA
48	Develop potential vendor list for distribution	DBH,OA
49	Draft RFP Document	OA,RFP,FC
50	Develop Background & Overview Section	OA,DBH
51	Develop Vendor Instructions and Selection Methodology Section	OA
52	Develop Vendor Requirements Section	OA
53	Develop Functional Requirements Section	OA
54	Develop Reporting Section	OA
55	Develop Technical Requirements Section	OA
56	Develop Technical Questions Section	OA
57	Develop Implementation and Training Section	OA,DBH
58	Develop Cost Proposal	OA,DBH
59	Develop Acknowledgement Section	OA,DBH
60	Develop Statement of Work	DBH
61	Develop Exhibits	OA,DBH
62	<i>Milestone / Deliverable: Draft RFP Document</i>	
63	Review RFP Document	OA,DBH,RFP
64	Obtain Approval of RFP	DBH,ISD,OA
65	Issue RFP	
66	Complete Functional & Technical Requirements	
67	Phase 2: Vendor Evaluation & System Selection	
68	Vendor Evaluations, Scores, & Finalists (Deliverable 5)	
69	Receive Vendor Responses	
70	Score Vendor Responses	
71	Prepare analysis & summary worksheet for evaluators	

Addendum 6.1

ID	Task Name	Resource Group
72	Facilitate Evaluation Committee Meetings	
73	EC Meeting 1	EC
74	EC Meeting 2	
75	Prepare Selection Report & determine finalists	
76	Present results to Steering Committee	
77	Obtain approval on finalist list	
78	Milestone / Deliverable: Selection of Finalists & documentation	
79	Workflow Analysis (Deliverable 6)	
80	Review existing workflows	
81	Validate current workflows	
82	Analyze current workflows	
83	Identify process improvement opportunities	
84	Revise workflows to incorporate process improvements	
85	Validate revised workflows	
86	Milestone / Deliverable: Revised workflow documents	
87	Phase 2.b Vendor Evaluation & System Selection	
88	On-site System Demonstrations and Results (Deliverable 7)	
89	Develop product demonstration tools	
90	Develop detailed scenarios for demonstrations	EC
91	Develop demonstration schedule & communications	EC
92	Train Evaluation Committee on demo tools	EC
93	Notify & schedule vendors	
94	Conduct product demonstrations for finalists	EC
95	Product Demo 1	
96	Product Demo 2	
97	Product Demo 3	
98	Milestone / Deliverable: Evaluations tools and sample scenarios	
99	Milestone / Deliverable: Summary Report of Scores on product demos	
100	Reference Check Summary (Deliverable 8)	
101	Develop reference check questionnaire	EC
102	Train staff on use of reference check tool	EC
103	Schedule reference calls	
104	Conduct reference checks	EC
105	Compile and review reference check response forms	
106	Prepare summary of results	
107	Milestone / Deliverable: Reference check questionnaire	
108	Milestone / Deliverable: Training on reference check tool	
109	Milestone / Deliverable: Summary report of results of reference checks	
110	Site Visit Summary (Deliverable 9)	
111	Identify site visit targets	
112	Develop schedules, plans, agendas	
113	Schedule site visits	
114	Develop evaluation tools	EC
115	Train team on evaluation tools	EC
116	Conduct site visits	EC
117	Site visit 1	
118	Site visit 2	
119	Site visit 3	
120	Compile and review site visit response forms	
121	Prepare summary of results	
122	Milestone / Deliverable: Site visit evaluation tool	
123	Milestone / Deliverable: Train team on tool	
124	Milestone / Deliverable: Site visit 1	
125	Milestone / Deliverable: Site visit 2	
126	Milestone / Deliverable: Summary report of results of site visits	
127	Vendor Selection (Deliverable 10)	
128	Develop summary documentation	
129	Conduct selection meeting with Evaluation Team	EC
130	Document selection process & selected vendor	
131	Present selection to Steering Committee	EC
132	Obtain approval on selection	
133	Milestone / Deliverable: Summary documentation on finalists	
134	Milestone / Deliverable: Vendor selection meeting	
135	Milestone / Deliverable: Presentation to Steering Committee	
136	Recommendations for Contract (Deliverable 11)	
137	Develop recommendations and issues for contract negotiations	
138	Review contract exceptions	
139	Advise Negotiation Team on issues	
140	Milestone / Deliverable: Recommendations for contract negotiations report	

Addendum 6.2 - EHR Project 20090312

ID	Task Name
1	EHR Project
2	1.0 Develop EHR Project Organizational Strategy and Structure
3	Establish Project Structure
4	Form Project Steering Committee
5	Identify Internal Project Manager
6	Identify Clinical Project Leader
7	Identify Project Team Members (IT and Business Owners)
8	Develop Project Organization Chart
9	Establish Centralized Project Files
10	Identify location to store project documents
11	Set up files / naming conventions
12	Document project documentation plan
13	Post project documentation plan
14	Establish Project Charter
15	Develop Project Charter
16	Document Project Charter
17	Post Project Charter
18	Establish Project Communication Plan
19	Develop method and means of communication to all parties
20	Document Communication Plan
21	Post Communication Plan
22	Establish Project Management Processes
23	Establish Issues Management Process
24	Develop issues management process
25	Document issues management process
26	Post issues management process
27	Establish Decision Making Process for System Configuration and Standardization
28	Develop decision making process
29	Document decision making process
30	Post decision making process
31	Establish Change Control Process
32	Develop change control process
33	Document change control process
34	Post change control process
35	Determine External Resource Needs for the project
36	Identify Support Needed
37	Determine Project Management support needed
38	Determine RFP development support needed
39	Determine workflow analysis support needed
40	Determine implementation support needed
41	
42	2.0 Assessment
43	Assess Organizational Vision and Leadership Readiness
44	Review DBH Strategic Plan
45	Review IT Strategic Plan

Addendum 6.2 - EHR Project 20090312

ID	Task Name
46	Review QI Plan
47	Determine if above Plans are up to date
48	Determine if above Plans have clear business goals
49	Update Plans if needed
50	Assess Quality Improvement Readiness
51	Review QI Measures
52	Review other Performance Measures
53	Determine how current technology supports these measures
54	Review Clinical Guidelines
55	Determine if Measures, technology and guidelines are adequate
56	Update Measures and guidelines if needed
57	Assess People Readiness
58	Review existing technology training programs
59	Review existing technology skills
60	Determine if baseline computer classes are necessary
61	Determine if training design needs modification
62	Update training if necessary
63	Assess Process Readiness
64	Review existing policies and procedures
65	Review existing workflows
66	Determine if policies and procedures are current
67	Determine if workflows are current and complete
68	Update policies and procedures if necessary
69	Updated Workflows if necessary
70	Assess Financial Readiness
71	Review budgets by department
72	Review IT budget
73	Determine if budgets are current and accurate
74	Determine if budget updates are needed
75	Update Budgets if necessary
76	Assess Technical Capacity Readiness
77	Assess current infrastructure
78	Assess current IT processes
79	Determine if updates are needed to infrastructure and processes
80	Update if necessary
81	Assess Market Environment
82	Determine what other area or like clinics are doing about EHR
83	
84	3.0 Envisioning
85	Define EHR Vision and Goals
86	Complete a Workflow and Staffing Analysis
87	Gather Any Existing Workflow Documents
88	Obtain existing workflow documents
89	Catalogue existing workflow documents by functional area
90	Develop Workflow Workgroup Teams (Subject Matter Experts and IT)

Addendum 6.2 - EHR Project 20090312

ID	Task Name
91	Identify and Notify Workgroup Team Members for Functional Areas
92	Identify clinic workflow Workgroup Team members
93	Identify billing workflow Workgroup Team members
94	Identify QI workflow Workgroup Team members
95	Schedule 3 Workgroup Meetings for Each Workgroup, each 2 weeks apart
96	Schedule Meeting #1
97	Schedule Meeting #2
98	Schedule Meeting #3
99	Distribute Existing Workflows to Each Workgroup as appropriate
100	Send workflows and instructions to Team members
101	Convene Meeting #1 - Review and Validate Existing Workflows
102	Review inventory of existing workflows
103	Develop inventory of missing workflows
104	Review existing workflow documents
105	Validate existing workflows are current state
106	Update workflows to reflect actual current state
107	Complete Meeting #1 Post Meeting Activities: Update Workflows and Redistribute
108	Update workflows in Visio
109	Distribute updated workflows to team members
110	Convene Meeting #2: Develop Missing Workflows
111	Create new workflows where necessary
112	Complete Meeting #2 Post Meeting Activities: Develop Workflows and Distribute
113	Create the new workflows in Visio
114	Distribute new workflows to Team members
115	Convene Meeting #3 - Analyze Workflows
116	Review new workflows
117	Validate existing workflows are current state
118	Analyze workflows to identify areas of inefficiency
119	Identify process improvement opportunities
120	Revise workflows to incorporate process improvements
121	Complete Meeting #3 Post Meeting Activities: Update Workflows and Redistribute
122	Update workflows in Visio
123	Validate All Updated Workflows
124	Send updated workflows to Team members for final validation
125	Review and make final comments
126	Finalize workflows
127	Determine Requirements for new system
128	Determine functional requirements
129	Determine technical requirements
130	Prioritize requirements
131	
132	4.0 Evaluating
133	Develop Solicitation Document for New System
134	Develop RFP document for new system
135	Develop Scope statement

Addendum 6.2 - EHR Project 20090312

ID	Task Name
136	Develop background & overview sections
137	Develop vendor instructions and selection methodology section
138	Develop vendor requirements section
139	Develop functional requirements section
140	Develop reporting section
141	Develop technical requirements section
142	Develop technical questions section
143	Develop implementation and training section
144	Develop cost proposal
145	Develop acknowledgement section
146	Develop statement of work (SOW)
147	Develop exhibits
148	Review and Approve RFP
149	Review RFP
150	Obtain approval of RFP
151	Distribute RFP
152	Develop potential vendor list for distribution
153	Issue RFP
154	Develop Vendor Proposal Evaluation Methodology
155	Develop Scoring Approach
156	Develop weighting methodology
157	Develop scoring methodology
158	Develop Scoring Tool
159	Develop RFP scoring tool
160	Develop demonstration scenarios
161	Develop site visit assessment tools
162	Develop reference check tools
163	Complete scoring tool
164	Select Evaluation Team
165	Develop evaluation team guidelines
166	Identify evaluation team members
167	Notify evaluation team members
168	Train Evaluation Team
169	Draft instructional tools for evaluation team
170	Conduct training session for evaluation team
171	Select a Vendor
172	Conduct a Vendor Conference
173	Schedule meeting logistics (Date is determined in RFP)
174	Convene meeting
175	Record questions
176	Develop responses to questions
177	Notify vendors of responses
178	Open Vendor Responses
179	Open responses
180	Review responses for minimum requirements
181	Notify disqualified vendors

Addendum 6.2 - EHR Project 20090312

ID	Task Name
182	Evaluate and Score Vendor Responses
183	Review RFP Responses
184	Score responses
185	Tally scores
186	Conduct Vendor Reference checks
187	Conduct reference checks
188	Score responses
189	Tally scores on reference checks
190	Determine Finalists
191	Tally scores from evaluation using evaluation tool
192	Identify finalists
193	Notify non-finalist vendors
194	Conduct finalist demonstrations
195	Notify finalists
196	Provide demonstration scenarios to vendors
197	Schedule vendor demonstrations
198	Attend demonstrations
199	Score demonstrations
200	Tally scores on demonstrations
201	Conduct on-site visits
202	Schedule visits to customer sites
203	Conduct on-site visits
204	Score customer site visits
205	Tally scores on site visits
206	
207	5.0 Selecting
208	Select Vendor
209	Convene Evaluation Committee
210	Review finalist scores
211	Make a final selection
212	Prepare vendor selection report
213	Obtain approval on vendor selection report
214	DBH Leadership
215	Other
216	Notify selected vendor
217	Prepare award letter & runner-up letter
218	Issue award letter & runner-up letter
219	Notify non-selected vendors
220	Prepare rejection letters
221	Issue rejection letters
222	Develop Proposed Agreement, SOW and Exhibits
223	Prepare Contract
224	Prepare Contract body
225	Prepare Statement of Work
226	Prepare Contract exhibits

Addendum 6.2 - EHR Project 20090312

ID	Task Name
227	Prepare other related documents
228	Obtain Approval on Contract
229	Obtain Counsel approval
230	Obtain other required approvals
231	Negotiate Contract
232	Conduct negotiations with selected vendor
233	Exchange documents, review, revise
234	Select negotiation team
235	Develop negotiation strategy
236	Obtain preliminary approval of contract by stakeholders
237	Legal Counsel review
238	Contracts review
239	Other required reviews
240	Obtain vendor signature on contract
241	Submit final contract to vendor for signature
242	Vendor signs contract
243	Obtain Board approval of contract
244	
245	6.0 Implementing
246	Develop Implementation Plan for System Implementation
247	Develop Preliminary Implementation Strategy
248	Discuss and Evaluate Data Conversion Options
249	Evaluate conversion of demographic data
250	Evaluate conversion of clinical data
251	Document preliminary data conversion options
252	Discuss and Evaluate Go-Live Options
253	Evaluate phased-in functionality (EMR, then CPOE, then PHR)
254	Evaluate deploying the system in a pilot site
255	Document preliminary Go Live strategy
256	Evaluate Vendor Implementation Strategy
257	Review Vendor implementation strategy
258	Review initial internal implementation strategy
259	Identify inconsistencies between strategies
260	Finalize Implementation Strategy and Timeline
261	Develop a Final Implementation Strategy and Plan
262	Decide on Final Implementation Strategy and Plan
263	Determine Go-Live Dates
264	Determine EHR Go-Live date
265	Determine CPOE Go-Live date
266	Determine PHR Go-Live date
267	Determine provider portal Go-Live date
268	Determine client portal Go-Live date
269	Document Final Implementation Strategy and Plan
270	Communicate Final Implementation Strategy and Plan
271	Identify Temporary Staffing and Provider Needs

Addendum 6.2 - EHR Project 20090312

ID	Task Name
272	Determine Temporary Staffing Needs based on Implementation Strategy and Timeline
273	Determine additional staffing needs
274	Determine additional provider needs
275	Evaluate Options
276	Evaluate solutions for temporary staffing needs
277	Evaluate temporary hire options
278	Evaluate agency hire options
279	Evaluate other options
280	Decide how to obtain additional staffing
281	Hire/Procure Additional Staffing Resources
282	Recruit new staff and providers
283	Select new staff and providers
284	Orient new staff and providers
285	Identify Super Users to Assist with Configuration, Training and Ongoing Support
286	Determine Super User roles and responsibilities
287	Document Super User roles and responsibilities
288	Identify Super Users
289	Provide complete system overview to super users
290	Develop a Training Strategy and Plan
291	Determine Training Needs
292	Identify users needing basic computer skills training
293	Identify Super Users training needs
294	Identify end user training needs
295	Determine Training Approach
296	Determine number and type of employees needing training
297	Determine method(s) of training
298	Determine logistical requirements
299	Identify "Back-fill" Requirements to Assure Well Attended Training
300	Develop Training Material
301	Review vendor training materials
302	Determine training materials needed by role
303	Determine training needed by phase
304	Determine Training Documentation Format
305	Create Training Documentation Materials
306	Create EHR training materials
307	Create ePrescribing Training Materials
308	Create PHR training materials
309	Create Provider Portal training materials
310	Create Client Portal training materials
311	Test/QA training documentation
312	Design Training Sessions
313	Design training sessions
314	Determine equipment needs
315	Determine facility needs
316	Schedule Training

Addendum 6.2 - EHR Project 20090312

ID	Task Name
317	Develop schedule management process
318	Schedule Training Sessions
319	Schedule EHR Training Sessions
320	Schedule pilot training sessions
321	Schedule all staff training sessions
322	Schedule ePrescribing Training Sessions
323	Schedule pilot training sessions
324	Schedule all staff training Sessions
325	Schedule EHR Training Sessions
326	Schedule pilot training sessions
327	Schedule all staff training sessions
328	Schedule Provider Portal Training Sessions
329	Schedule pilot training sessions
330	Schedule all staff training sessions
331	Schedule Client Portal Training Sessions
332	Schedule pilot training sessions
333	Schedule all staff training sessions
334	Schedule PHR Training Sessions
335	Schedule Pilot Training Sessions
336	Schedule all staff training sessions
337	Conduct Training (Super User/ End User Training inc in Phase Detail)
338	Conduct basic computer skills training
339	Upgrade Hardware / Network Infrastructure
340	Determine Hardware Needs
341	Meet with vendor
342	Review system hardware requirements
343	Determine hardware upgrade purchase needs
344	Determine network infrastructure upgrade needs
345	Procure Hardware and Network Components
346	Determine purchasing options
347	Purchase needed components
348	Receive needed components
349	Install and Test Upgraded Hardware and Network Infrastructure Components
350	Install components
351	Test installation
352	Install the Practice Management System/EHR
353	Install and Configure Software
354	Install Software
355	Install Software
356	Create test environment
357	Create production environment
358	Install software
359	Test software installation
360	Configure Components
361	Configure Scheduling Appointment Types and Templates

Addendum 6.2 - EHR Project 20090312

ID	Task Name
362	Train Super Users
363	Determine decisions needed to configure
364	Make decisions needed to configure
365	Configure scheduling
366	Configure Demographic/Registration
367	Train Super Users
368	Determine decisions needed to configure
369	Make decisions needed to configure
370	Configure demographics and registration
371	Configure Billing
372	Train Super Users
373	Determine decisions needed to configure
374	Make decisions needed to configure
375	Configure billing
376	Configure Progress Note Templates
377	Train Super Users
378	Determine decisions needed to configure
379	Make decisions needed to configure
380	Configure templates
381	Build Interfaces (Lab, I2iTracks)
382	Install and Configure Interfaces
383	Develop lab interfaces
384	Test lab interfaces
385	Develop other interfaces
386	Test other interfaces
387	Test System
388	Develop Testing Plan
389	Determine types of tests and timelines
390	Write test scenarios
391	Define test sign off requirements
392	Conduct Tests
393	Conduct unit testing
394	Conduct system testing
395	Conduct integration testing
396	Conduct load testing
397	Accept System Software
398	Convert Data
399	Determine Data Conversion Strategy
400	Contact appropriate vendors
401	Conduct kickoff meeting
402	Determine data integrity
403	Make corrections to ensure data quality
404	Design Data Conversion
405	Determine/Confirm data to be converted
406	Extract raw datasets of convert data - sample data

Addendum 6.2 - EHR Project 20090312

ID	Task Name
407	Obtain dataset layouts of converted data
408	Complete data mapping
409	Develop specifications
410	Obtain signoff on conversion specifications
411	Develop test plan
412	Build Data Conversion
413	Program conversion
414	Perform unit testing
415	Review/Revise process documentation
416	Test Data Conversion - Vendor Test
417	Perform integration test
418	Perform reprogramming cycle 1
419	Perform integration test 2
420	Obtain vendor signoff
421	Test Data Conversion - In House
422	Perform integration test
423	Obtain business owner signoff
424	Implement Data Conversion
425	Move code, scripts to production environment
426	Perform vendor integration test
427	Obtain vendor signoff
428	Perform client integration test
429	Obtain process-owner signoffs
430	Train Staff
431	Go-Live on Practice Management System/EHR Lite
432	Implement ePrescribing
433	Install and Configure ePrescribing
434	Install ePrescribing components in test environment
435	Test software installation
436	Build necessary interfaces
437	Test interfaces
438	Configure ePrescribing Components
439	Train Super Users
440	Determine decisions needed to configure
441	Make decisions needed to configure
442	Configure ePrescribing
443	Test ePrescribing
444	Develop Testing Plan
445	Determine types of tests and timelines
446	Write test scenarios
447	Define test signoff requirements
448	Conduct Tests
449	Conduct unit testing
450	Conduct system testing
451	Conduct integration testing
452	Conduct load testing

Addendum 6.2 - EHR Project 20090312

ID	Task Name
453	Accept System Software
454	Train Staff on ePrescribing
455	Go-Live on ePrescribing
456	Implement Patient Portal
457	Install and Configure Portal
458	Install portal software
459	Test portal software
460	Develop interfaces
461	Test interfaces
462	Configure Portal
463	Train Super Users
464	Determine decisions needed to configure
465	Make decisions needed to configure
466	Configure portal
467	Test Portal
468	Develop Testing Plan
469	Determine types of tests and timelines
470	Write test scenarios
471	Define test signoff requirements
472	Conduct Tests
473	Conduct unit testing
474	Conduct system testing
475	Conduct integration testing
476	Conduct load testing
477	Accept System Software
478	Train Staff on Portal
479	Perform outreach to educate clients on portal
480	Go-Live on Client Portal
481	
482	7.0 Stabilizing and Enhancing
483	Review Implementation of EHR
484	Convene workshop sessions with end users
485	Gather feedback from users
486	Identify modifications to process or configuration, if needed
487	Evaluate options to introduce modifications
488	Implement modifications, as needed
489	Review Implementation of ePrescribing
490	Convene workshop sessions with end users
491	Gather feedback from users (for all implementations to date)
492	Identify modifications to process or configuration, if needed
493	Evaluate options to introduce modifications
494	Implement modifications as needed
495	Review Implementation of Client Portal
496	Convenes workshop sessions with end users
497	Gather feedback from users (for all implementations to date)
498	Identify modifications to process or configuration, if needed

Addendum 6.2 - EHR Project 20090312

ID	Task Name
499	Evaluate options to introduce modifications
500	Implement modifications as needed



Addendum 6.3 - Virtual Server/Desktop Infrastructure Project



ID	Task Name	Duration	Start	Finish
1	Virtual Server / Desktop Project	431 days?	Fri 5/4/07	Fri 12/26/08
2				
3	Plan and Implement Virtual Server Pilot	51 days?	Fri 5/4/07	Fri 7/13/07
4	Procure Server for Testing	1 day?	Fri 5/4/07	Fri 5/4/07
5	Take Delivery of Server for Testing	1 day?	Tue 7/10/07	Tue 7/10/07
6	Create Documentation Layout	1 day?	Tue 7/10/07	Tue 7/10/07
7	Install Server into Communications Room (4th Floor)	1 day?	Wed 7/11/07	Wed 7/11/07
8	Install Operating System	1 day?	Wed 7/11/07	Wed 7/11/07
9	Install Security Patches	1 day?	Wed 7/11/07	Wed 7/11/07
10	Install Anti-Virus Software	1 day?	Wed 7/11/07	Wed 7/11/07
11	Install Microsoft Virtual Server 2005	1 day?	Wed 7/11/07	Wed 7/11/07
12	Configure Management Portal	1 day?	Thu 7/12/07	Thu 7/12/07
13	Configure Management Board (DRAC)	1 day?	Thu 7/12/07	Thu 7/12/07
14	Finalize Documentation	1 day?	Fri 7/13/07	Fri 7/13/07
15				
16	Create Virtual Machines for Pilot (MS Virtual Server)	6 days?	Mon 7/16/07	Mon 7/23/07
17	Create a Windows Vista Virtual Machine for Pilot	1 day?	Mon 7/16/07	Mon 7/16/07
18	Create a Windows 2003 Server for Pilot	1 day?	Tue 7/17/07	Tue 7/17/07
19	Create a Windows XP Virtual Machine for Pilot	1 day?	Tue 7/17/07	Tue 7/17/07
20	Download and Implement some Virtual Demos from Microsoft	1 day?	Mon 7/23/07	Mon 7/23/07
21				
22	Virtual Environment Testing (MS Virtual Server)	95 days?	Mon 7/23/07	Fri 11/30/07
23	Test Windows SharePoint Services in Virtual Environment	95 days?	Mon 7/23/07	Fri 11/30/07
24	Test Windows Server 2003 in Virtual Environment	95 days?	Mon 7/23/07	Fri 11/30/07
25	Test Windows 2008 (DEMO) in Virtual Environment	95 days?	Mon 7/23/07	Fri 11/30/07
26	Test SQL 2005 (DEMO) in Virtual Environment	95 days?	Mon 7/23/07	Fri 11/30/07
27	Test OPManager in Virtual Environment	95 days?	Mon 7/23/07	Fri 11/30/07
28				
29	Uninstall Microsoft Virtual Server 2005	1 day?	Mon 12/3/07	Mon 12/3/07
30	Uninstall Microsoft Virtual Server 2005	1 day?	Mon 12/3/07	Mon 12/3/07
31	Delete all Virtual Machines	1 day?	Mon 12/3/07	Mon 12/3/07
32				
33	Install VMWare Virtual Server	1 day?	Tue 12/4/07	Tue 12/4/07
34	Download VMWare Virtual Server 1.6	1 day?	Tue 12/4/07	Tue 12/4/07
35	Install VMWare Virtual Server	1 day?	Tue 12/4/07	Tue 12/4/07
36	Configure Virtual Networks	1 day?	Tue 12/4/07	Tue 12/4/07
37	Verify Installation	1 day?	Tue 12/4/07	Tue 12/4/07
38				
39	Create Virtual Machines for Pilot (VMWare)	3 days?	Wed 12/5/07	Fri 12/7/07
40	Create a Windows 2003 Server	1 day?	Wed 12/5/07	Wed 12/5/07
41	Create a Windows 2008 Server	1 day?	Thu 12/6/07	Thu 12/6/07
42	Create and Windows XP workstation	1 day?	Fri 12/7/07	Fri 12/7/07
43				



Addendum 6.3 - Virtual Server/Desktop Infrastructure Project



ID	Task Name	Duration	Start	Finish
44	Virtual Environment Testing (VMWare)	192 days?	Mon 12/10/07	Tue 9/2/08
45	Test Windows SharePoint Services	192 days?	Mon 12/10/07	Tue 9/2/08
46	Test Windows Server 2003	192 days?	Mon 12/10/07	Tue 9/2/08
47	Test SQL 2005	192 days?	Mon 12/10/07	Tue 9/2/08
48	Test OPManager	192 days?	Mon 12/10/07	Tue 9/2/08
49				
50	Pilot Findings	1 day?	Tue 9/2/08	Tue 9/2/08
51	VMWare is a viable solution to reduce cost	1 day?	Tue 9/2/08	Tue 9/2/08
52	VMWare is a viable solution to secure data	1 day?	Tue 9/2/08	Tue 9/2/08
53				
54	VMWare Virtual Server put into production	24 days?	Tue 9/2/08	Fri 10/3/08
55	Create Virtual Machines for SharePoint Project (QA)	18 days?	Tue 9/2/08	Thu 9/25/08
56	Create Virtual Machines for SharePoint (DEV)	18 days?	Tue 9/2/08	Thu 9/25/08
57	Create Windows SharePoint Services Test Machine	18 days?	Tue 9/2/08	Thu 9/25/08
58	Create Windows XP Workstation for OPManager	2 days?	Thu 10/2/08	Fri 10/3/08
59	Create Windows XP for Spotlight on Windows	2 days?	Thu 10/2/08	Fri 10/3/08
60				
61	Work with Management on acquiring MHPA Technology Funds for Virtual Project	7 days?	Thu 12/18/08	Fri 12/26/08
62	Presented to ????	1 day?	Fri 12/26/08	Fri 12/26/08
63	Presented to Mental Health Commission	1 day?	Fri 12/26/08	Fri 12/26/08
64	Presented to ACBO Committee	1 day?	Fri 12/26/08	Fri 12/26/08
65	Enclosure submitted to State	1 day?	Thu 12/18/08	Thu 12/18/08
66				
67	Work with County Vendor to Plan out Virtual Environment	37 days?	Mon 11/3/08	Tue 12/23/08
68	Selected GOVPlace to assist with initial planning	1 day?	Mon 11/3/08	Mon 11/3/08
69	Storage Area Network Demo	1 day?	Wed 11/5/08	Wed 11/5/08
70	Conference Call with HP and GOVPlace	1 day?	Thu 12/18/08	Thu 12/18/08
71	VDI and Virtual Infrastructure Demo	1 day?	Tue 12/23/08	Tue 12/23/08
72				
73				
74	VMWare Virtual Server 2.0 Installation	2 days?	Tue 11/25/08	Wed 11/26/08
75	Make backup up all virtual machines	2 days?	Tue 11/25/08	Wed 11/26/08
76	format system partition	2 days?	Tue 11/25/08	Wed 11/26/08
77	Load Windows 2008 Standard x64	2 days?	Tue 11/25/08	Wed 11/26/08
78	Configure Networking	2 days?	Tue 11/25/08	Wed 11/26/08
79	Install Security Patches	2 days?	Tue 11/25/08	Wed 11/26/08
80	Join to Active Directory	2 days?	Tue 11/25/08	Wed 11/26/08
81	Install VMWare Virtual Server 2.0	2 days?	Tue 11/25/08	Wed 11/26/08
82	Join Virtual Machines to Server	2 days?	Tue 11/25/08	Wed 11/26/08
83	Configure Virtual Networks	2 days?	Tue 11/25/08	Wed 11/26/08
84	Test Virtual Machines	2 days?	Tue 11/25/08	Wed 11/26/08
85				
86	Installation Phase - Storage Area Network (ISD Datacenter)	8 days?	Mon 7/6/09	Wed 7/15/09



Addendum 6.3 - Virtual Server/Desktop Infrastructure Project



ID	Task Name	Duration	Start	Finish
87				
88	Installation of Storage Area Network (ISD Datacenter)	5 days?	Mon 7/6/09	Fri 7/10/09
89	Install SAN Controller	5 days?	Mon 7/6/09	Fri 7/10/09
90	Install Drive Enclosure	5 days?	Mon 7/6/09	Fri 7/10/09
91	Install Fiber Channel Drives	5 days?	Mon 7/6/09	Fri 7/10/09
92	Configure Storage Area Network	5 days?	Mon 7/6/09	Fri 7/10/09
93	Train IT Staff for Administration	5 days?	Mon 7/6/09	Fri 7/10/09
94				
95	Configure SAN for Virtual Server Infrastructure	6 days?	Wed 7/8/09	Wed 7/15/09
96	Create Virtual Disks for Virtual Server Environment	3 days?	Wed 7/8/09	Fri 7/10/09
97	Create Virtual Disks for Management	3 days?	Wed 7/8/09	Fri 7/10/09
98	Create Virtual Disk for Swap Files	3 days?	Wed 7/8/09	Fri 7/10/09
99				
100	Install Blade Server Environment	3 days?	Mon 7/13/09	Wed 7/15/09
101	Install HP c7000 Blade System Enclosure	3 days?	Mon 7/13/09	Wed 7/15/09
102	Install Interconnects	3 days?	Mon 7/13/09	Wed 7/15/09
103	Install HP Proliant BL680c G5 Server #1	3 days?	Mon 7/13/09	Wed 7/15/09
104	Install HP Proliant BL680c G5 Server #2	3 days?	Mon 7/13/09	Wed 7/15/09
105	Install HP Proliant BL680c G5 Server #3	3 days?	Mon 7/13/09	Wed 7/15/09
106	Install HP Proliant BL680c G5 Server #4	3 days?	Mon 7/13/09	Wed 7/15/09
107	Install HP Proliant BL460c Blade Server for Management	3 days?	Mon 7/13/09	Wed 7/15/09
108				
109	Implement Virtual Server Environment (ISD Datacenter)	14 days?	Thu 7/16/09	Tue 8/4/09
110				
111	Setup and Configure Physical Server for Virtual Center	1 day?	Thu 7/16/09	Thu 7/16/09
112	Install Windows 2008	1 day?	Thu 7/16/09	Thu 7/16/09
113	Load Microsoft Security Patches form Microsoft Update	1 day?	Thu 7/16/09	Thu 7/16/09
114	Load Trend Micro Antivirus	1 day?	Thu 7/16/09	Thu 7/16/09
115	Setup Service Account in Active Directory for SQL	1 day?	Thu 7/16/09	Thu 7/16/09
116	Load Microsoft SQL 2008 Standard	1 day?	Thu 7/16/09	Thu 7/16/09
117	Patch Microsoft SQL 2008 to Latest Security Fixes	1 day?	Thu 7/16/09	Thu 7/16/09
118	Install VMWare Virtual Center for ESX 3.5	1 day?	Thu 7/16/09	Thu 7/16/09
119	Configure Commvault Backup for File System	1 day?	Thu 7/16/09	Thu 7/16/09
120	Configure Commvault Backup for SQL Backup	1 day?	Thu 7/16/09	Thu 7/16/09
121				
122	Install VMWare ESX 3.5	2 days?	Thu 7/16/09	Fri 7/17/09
123	Install VMWare ESX 3.5 on Blade #1	2 days?	Thu 7/16/09	Fri 7/17/09
124	Install VMWare ESX 3.5 on Blade #2	2 days?	Thu 7/16/09	Fri 7/17/09
125	Install VMWare ESX 3.5 on Blade #3	2 days?	Thu 7/16/09	Fri 7/17/09
126	Install VMWare ESX 3.5 on Blade #4	2 days?	Thu 7/16/09	Fri 7/17/09
127				
128	Add Blade Servers to Virtual Center Management Console	2 days?	Thu 7/16/09	Fri 7/17/09
129	Add Blade #1 to Virtual Center	2 days?	Thu 7/16/09	Fri 7/17/09



Addendum 6.3 - Virtual Server/Desktop Infrastructure Project



ID	Task Name	Duration	Start	Finish
130	Add Blade #2 to Virtual Center	2 days?	Thu 7/16/09	Fri 7/17/09
131	Add Blade #3 to Virtual Center	2 days?	Thu 7/16/09	Fri 7/17/09
132	Add Blade #4 to Virtual Center	2 days?	Thu 7/16/09	Fri 7/17/09
133				
134	Present Storage to Blade Servers	2 days?	Thu 7/16/09	Fri 7/17/09
135	Present LUNs to Blade #1	2 days?	Thu 7/16/09	Fri 7/17/09
136	Present LUNs to Blade #2	2 days?	Thu 7/16/09	Fri 7/17/09
137	Present LUNs to Blade #3	2 days?	Thu 7/16/09	Fri 7/17/09
138	Present LUNs to Blade #4	2 days?	Thu 7/16/09	Fri 7/17/09
139				
140	Configure Virtual Center for Server Infrastructure	2 days?	Thu 7/16/09	Fri 7/17/09
141	Configure Dynamic Resource Scheduling settings	2 days?	Thu 7/16/09	Fri 7/17/09
142	Configure Notification settings	2 days?	Thu 7/16/09	Fri 7/17/09
143	Configure Virtual Network Settings	2 days?	Thu 7/16/09	Fri 7/17/09
144				
145	Virtual Server Infrastructure - Physical to Virtual Conversions	7 days?	Mon 7/27/09	Tue 8/4/09
146				
147	Planning Stage	1 day?	Mon 7/27/09	Mon 7/27/09
148	Conduct meeting to determine order of conversion process	1 day?	Mon 7/27/09	Mon 7/27/09
149	Compose Schedule for Physical to Virtual Conversion	1 day?	Mon 7/27/09	Mon 7/27/09
150	Notify ISD Change Control of Physical to Virtual Conversion Process	1 day?	Mon 7/27/09	Mon 7/27/09
151	Choose Server for testing to Physical to Virtual Conversion	1 day?	Mon 7/27/09	Mon 7/27/09
152				
153	Testing Phase	2 days?	Mon 8/3/09	Tue 8/4/09
154	Conduct Physical to Virtual Test on Test Server	2 days?	Mon 8/3/09	Tue 8/4/09
155				
156	Virtual Desktop Infrastructure (Workforce Education & Training)	126 days?	Fri 12/26/08	Fri 6/19/09
157				
158	Installation of Storage Area Network (Workforce Education & Training)	3 days?	Mon 6/15/09	Wed 6/17/09
159	Install SAN Controller	3 days?	Mon 6/15/09	Wed 6/17/09
160	Install Drive Enclosure	3 days?	Mon 6/15/09	Wed 6/17/09
161	Install Fiber Channel Drives	3 days?	Mon 6/15/09	Wed 6/17/09
162	Configure Storage Area Network	3 days?	Mon 6/15/09	Wed 6/17/09
163	Train IT Staff for Administration	3 days?	Mon 6/15/09	Wed 6/17/09
164				
165	Configure SAN for VDI	2 days?	Wed 6/17/09	Thu 6/18/09
166	Create Virtual Disks for VDI Environment	2 days?	Wed 6/17/09	Thu 6/18/09
167	Create Virtual Disks for Management	2 days?	Wed 6/17/09	Thu 6/18/09
168	Create Virtual Disk for Swap Files	2 days?	Wed 6/17/09	Thu 6/18/09
169	Create Virtual Disks for Brokers	2 days?	Wed 6/17/09	Thu 6/18/09
170				
171	Install Blade Server Environment	2 days?	Thu 6/18/09	Fri 6/19/09
172	Install HP c3000 Blade System Enclosure	2 days?	Thu 6/18/09	Fri 6/19/09



Addendum 6.3 - Virtual Server/Desktop Infrastructure Project



ID	Task Name	Duration	Start	Finish
173	Install Interconnects	2 days?	Thu 6/18/09	Fri 6/19/09
174	Install HP Proliant BL460c Blade Server #1	2 days?	Thu 6/18/09	Fri 6/19/09
175	Install HP Proliant BL460c Blade Server #2	2 days?	Thu 6/18/09	Fri 6/19/09
176	Install HP Proliant BL460c Blade Server #3	2 days?	Thu 6/18/09	Fri 6/19/09
177	Install HP Proliant BL460c Blade Server #4	2 days?	Thu 6/18/09	Fri 6/19/09
178				
179				
180	Install VMWare ESX for VDI	1 day?	Fri 12/26/08	Fri 12/26/08
181				
182				
183				
184				
185				
186	Installation Phase - Virtual Desktop Infrastructure (ISD Datacenter)	1 day?	Fri 12/26/08	Fri 12/26/08
187				
188	Configure SAN for VDI	1 day?	Fri 12/26/08	Fri 12/26/08
189	Create Virtual Disks for VDI Environment	1 day?	Fri 12/26/08	Fri 12/26/08
190	Create Virtual Disk for Swap Files	1 day?	Fri 12/26/08	Fri 12/26/08
191	Create Virtual Disks for Brokers	1 day?	Fri 12/26/08	Fri 12/26/08
192				
193	Install Blade Server Environment	1 day?	Fri 12/26/08	Fri 12/26/08
194	Install HP c7000 Blade System Enclosure	1 day?	Fri 12/26/08	Fri 12/26/08
195	Install Interconnects	1 day?	Fri 12/26/08	Fri 12/26/08
196	Install HP Proliant BL460c Blade Server #1	1 day?	Fri 12/26/08	Fri 12/26/08
197	Install HP Proliant BL460c Blade Server #2	1 day?	Fri 12/26/08	Fri 12/26/08
198	Install HP Proliant BL460c Blade Server #3	1 day?	Fri 12/26/08	Fri 12/26/08
199	Install HP Proliant BL460c Blade Server #4	1 day?	Fri 12/26/08	Fri 12/26/08
200	Install HP Proliant BL460c Blade Server #5	1 day?	Fri 12/26/08	Fri 12/26/08
201	Install HP Proliant BL460c Blade Server #6	1 day?	Fri 12/26/08	Fri 12/26/08
202	Install HP Proliant BL460c Blade Server #7	1 day?	Fri 12/26/08	Fri 12/26/08
203	Install HP Proliant BL460c Blade Server #8	1 day?	Fri 12/26/08	Fri 12/26/08
204	Install HP Proliant BL460c Blade Server #9	1 day?	Fri 12/26/08	Fri 12/26/08
205	Install HP Proliant BL460c Blade Server #10	1 day?	Fri 12/26/08	Fri 12/26/08
206	Install HP Proliant BL460c Blade Server #11	1 day?	Fri 12/26/08	Fri 12/26/08
207	Install HP Proliant BL460c Blade Server #12	1 day?	Fri 12/26/08	Fri 12/26/08
208	Install HP Proliant BL460c Blade Server #13	1 day?	Fri 12/26/08	Fri 12/26/08
209	Install HP Proliant BL460c Blade Server #14	1 day?	Fri 12/26/08	Fri 12/26/08
210	Install HP Proliant BL460c Blade Server #15	1 day?	Fri 12/26/08	Fri 12/26/08
211	Install HP Proliant BL460c Blade Server #16	1 day?	Fri 12/26/08	Fri 12/26/08
212				
213	Install VMWare ESX	1 day?	Fri 12/26/08	Fri 12/26/08
214				
215				



Addendum 6.3 - Virtual Server/Desktop Infrastructure Project



ID	Task Name	Duration	Start	Finish
216				
217				
218				
219				
220				
221				
222				
223				
224	Installation of Storage Area Network (ISD Datacenter)	1 day?	Fri 12/26/08	Fri 12/26/08

Addendum 6.4 - Data Warehouse-Mining Conceptual Project Plan

Conceptual Project Plan (To be refined during Analysis phase)

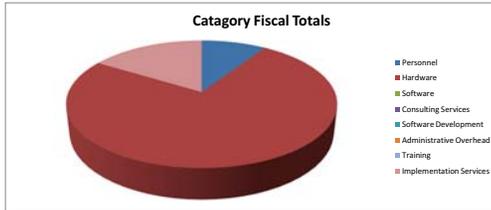
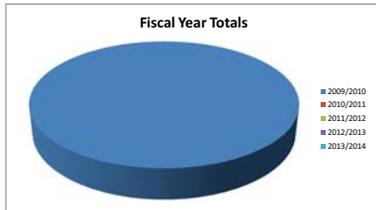
Analyze	
	<ul style="list-style-type: none"> Conduct Readiness Assessment <ul style="list-style-type: none"> Project Kick-off Train Project Team (Overview) Review High Level Business Requirements Assess Source Data Structures & State Assess Existing Platform & Environment Analyze Solution Scope <ul style="list-style-type: none"> Gather & Develop Phase 1 Business Requirements Analyze Gaps With Respect to Data, Products, Timing, Priority, etc. Create Solution Scope Definition Detailed Requirements Document <ul style="list-style-type: none"> Orient Team Members on Project Strategy Determine Data Source Requirements Determine Infrastructure Requirements Review Prioritization Determine Strategy Refine Solution Scope and Update Project Plan and Effort Finalize & Agree Solution Scope and Project Plan Validate, Approve and Transition
Design	
	<ul style="list-style-type: none"> Plan & Setup Development Environment Validate Source Systems Prototype Solution <ul style="list-style-type: none"> Design Schema Design Logical Data Model Finalize Report Specs Create Design Document Change Management Plan Update Project Plan Validate, Approve & Transition
Build	
	<ul style="list-style-type: none"> Install Production Environment Build Solution Build Data Mart <ul style="list-style-type: none"> Build Necessary Inbound Data Routines Create Physical Data Model ETL Dimension Table Loads ETL Fact Table Loads Build Automation Scripts Data Mart Validation & Testing Build Business Intelligence Layer <ul style="list-style-type: none"> Import & Create Relationships & Meta Data Create Presentation Layer Develop Standard Reports Develop Head Start Templates Configure Portal Production Environment Security Test System Validate, Approve & Transition
Deploy	
	<ul style="list-style-type: none"> Prepare Production Environment Migrate Solutions to Production Validate Production Environment Finalize Documentation End-User Training Promote Solution to Production Status (Go Live)
Post Rollout Assessment	
	<ul style="list-style-type: none"> Misc. End User Support Gather feedback

Addendum 7.0

Charon-Vax Server Upgrade

	2009/2010				2010/2011				2011/2012				2012/2013				2013/2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Personnel	\$ 2,836.00	\$ 2,836.00																		
Hardware	\$ 45,700.00																			
Software																				
Architecture Consulting Services																				
Consulting Services																				
Software Development																				
Administrative Overhead																				
Training																				
Implementation Services	\$ 10,000.00																			
Totals	\$ 58,536.00	\$ 2,836.00	\$ -																	

Fiscal Year	Total
2009/2010	\$ 61,372.00
2010/2011	\$ -
2011/2012	\$ -
2012/2013	\$ -
2013/2014	\$ -
Project Total	\$ 61,372.00



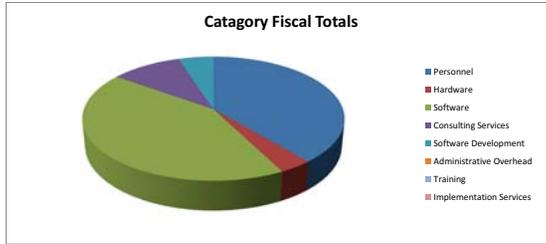
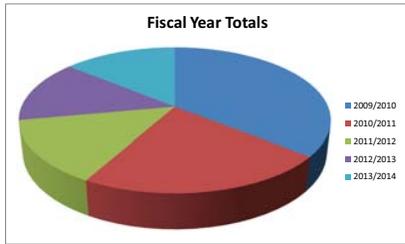
Addendum 7.1

Data Warehouse Continuation

	2009/2010				2010/2011				2011/2012				2012/2013				2013/2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Personnel																				
Database Administrator	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00	\$ 22,509.00
Data Modeler	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00
Report Writer/Developer	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00	\$ 24,577.00
Hardware		\$ 14,000.00						\$ 120,000.00												
Software																				
Reporting Software Maintenance					\$ 30,000.00				\$ 30,000.00				\$ 30,000.00				\$ 30,000.00			
Data Mining Software Purchase				\$ 650,000.00																
Data Mining Software Maintenance								\$ 200,000.00				\$ 200,000.00				\$ 200,000.00				\$ 200,000.00
Consulting Services - Data Modeling	\$ 31,250.00	\$ 31,250.00	\$ 31,250.00	\$ 31,250.00																
Consulting Services - Data Mining Integration					\$ 62,500.00	\$ 62,500.00	\$ 62,500.00													
Software Development	\$ 45,924.00	\$ 45,924.00	\$ 45,924.00	\$ 45,924.00																
Administrative Overhead																				
Training																				
Implementation Services																				
Totals	\$ 148,837.00	\$ 162,837.00	\$ 148,837.00	\$ 861,337.00	\$ 164,163.00	\$ 134,163.00	\$ 134,163.00	\$ 391,663.00	\$ 101,663.00	\$ 71,663.00	\$ 71,663.00	\$ 271,663.00	\$ 101,663.00	\$ 71,663.00	\$ 71,663.00	\$ 271,663.00	\$ 101,663.00	\$ 71,663.00	\$ 71,663.00	\$ 271,663.00

Fiscal Year	Total
2009/2010	\$ 1,321,848.00
2010/2011	\$ 824,152.00
2011/2012	\$ 516,652.00
2012/2013	\$ 516,652.00
2013/2014	\$ 516,652.00
Project Total	\$ 3,695,956.00

Category	Total
Personnel	\$ 1,433,260.00
Hardware	\$ 134,000.00
Software	\$ 1,570,000.00
Consulting Services	\$ 375,000.00
Software Development	\$ 183,696.00
Administrative Overhead	\$ -
Training	\$ -
Implementation Services	\$ -



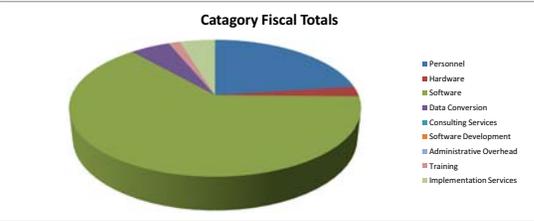
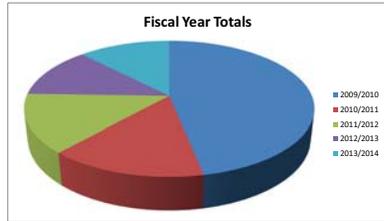
Addendum 7.2

BHMS Replacement

	2009/2010				2010/2011				2011/2012				2012/2013				2013/2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Personnel																				
Project Manager (.50)	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60	\$ 17,344.60
Systems Manager (.50)	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64
Business Systems Analyst (.50)	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64	\$ 12,288.64
Business Systems Analyst Level II (.35)	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23
Business Systems Analyst Infrastructure (.35)	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23	\$ 9,965.23
Hardware																				
Servers	\$ 65,000.00																			
Storage Area Network	\$ 36,000.00																			
Software																				
BHMS Software	\$ 750,000.00																			
Server/Infrastructure Software Licensing	\$ 62,000.00																			
Parallel Testing	\$ 250,000.00																			
Integration Engine/Data Broker	\$ 100,000.00																			
Software Enhancements				\$ 35,000.00					\$ 35,000.00				\$ 35,000.00				\$ 35,000.00			
Software Maintenance				\$ 350,000.00					\$ 350,000.00				\$ 350,000.00				\$ 350,000.00			
Data Conversion	\$ 275,000.00																			
Consulting Services																				
Software Development																				
Administrative Overhead																				
Training (Operational and Administrative)	\$ 65,000.00																			
Implementation Services	\$ 300,000.00																			
Totals	\$ 1,814,852.34	\$ 61,852.34	\$ 61,852.34	\$ 61,852.34	\$ 446,852.34	\$ 61,852.34	\$ 61,852.34	\$ 61,852.34	\$ 436,887.11	\$ 51,887.11	\$ 51,887.11	\$ 51,887.11	\$ 419,542.51	\$ 34,542.51	\$ 34,542.51	\$ 34,542.51	\$ 419,542.51	\$ 34,542.51	\$ 34,542.51	\$ 34,542.51

Fiscal Year	Total
2009/2010	\$ 2,000,409.35
2010/2011	\$ 632,409.36
2011/2012	\$ 592,548.44
2012/2013	\$ 523,170.04
2013/2014	\$ 523,170.04
Project Total	\$ 4,271,707.24

Category	Total
Personnel	\$ 978,707.24
Hardware	\$ 101,000.00
Software	\$ 2,702,000.00
Data Conversion	\$ 275,000.00
Consulting Services	\$ -
Software Development	\$ -
Administrative Overhead	\$ -
Training	\$ 65,000.00
Implementation Services	\$ 200,000.00

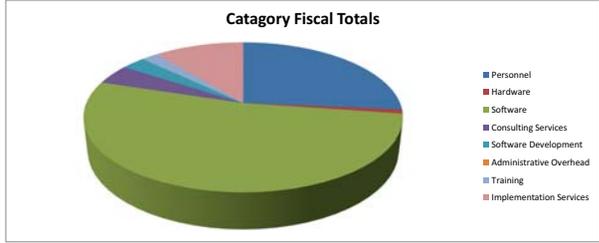
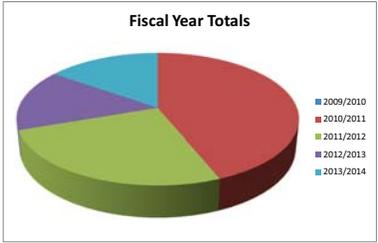


Addendum 7.3

Electronic Health Record (EHR)

	2009/2010				2010/2011				2011/2012				2012/2013				2013/2014					
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Personnel																						
Research Staff Analyst									\$ 14,939.60	\$ 14,939.60	\$ 14,939.60	\$ 14,939.60										
Research Systems Analyst									\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76		
IT Systems Analyst									\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76	\$ 22,509.76		
Hardware																						
Software					\$ 20,000.00																	
Software Maintenance					\$ 700,000.00																	
Consulting Services						\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00	\$ 25,000.00												
Software Development						\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00	\$ 8,125.00		
Administrative Overhead																						
Training						\$ 45,000.00																
Implementation Services						\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00	\$ 31,000.00		
Totals	\$ -	\$ -	\$ -	\$ -	\$ 804,125.00	\$ 64,125.00	\$ 64,125.00	\$ 64,125.00	\$ 64,125.00	\$ 289,084.12	\$ 99,084.12	\$ 99,084.12	\$ 99,084.12	\$ 210,019.52	\$ 45,019.52	\$ 45,019.52	\$ 45,019.52	\$ 45,019.52	\$ 210,019.52	\$ 45,019.52	\$ 45,019.52	\$ 45,019.52

Fiscal Year	Total
2009/2010	\$ -
2010/2011	\$ 996,500.00
2011/2012	\$ 586,336.48
2012/2013	\$ 345,078.08
2013/2014	\$ 345,078.08
Project Total	\$ 2,272,992.64



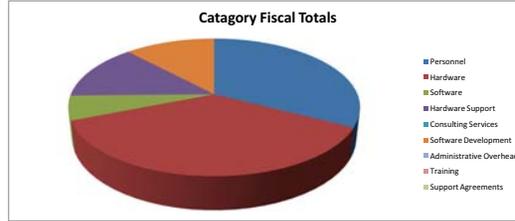
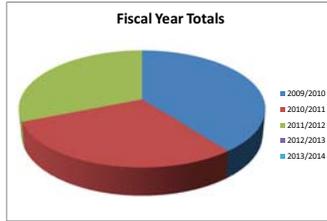
Category	Total
Personnel	\$ 599,992.64
Hardware	\$ 20,000.00
Software	\$ 1,195,000.00
Consulting Services	\$ 100,000.00
Software Development	\$ 65,000.00
Administrative Overhead	\$ -
Training	\$ 45,000.00
Implementation Services	\$ 248,000.00

Addendum 7.4

Empowered Communications

	2009/2010				2010/2011				2011/2012				2012/2013				2013/2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Personnel	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00	\$ 29,500.00				
Hardware	\$ 90,000.00	\$ 45,000.00	\$ 45,000.00	\$ 29,500.00	\$ 32,500.00	\$ 32,500.00	\$ 32,500.00	\$ 32,500.00	\$ 21,250.00	\$ 21,250.00	\$ 21,250.00	\$ 21,250.00								
Software	\$ 10,000.00	\$ 5,000.00	\$ 10,000.00		\$ 5,000.00	\$ 2,500.00	\$ 2,500.00	\$ 2,500.00	\$ 10,000.00	\$ 5,000.00	\$ 5,000.00	\$ 5,000.00								
Hardware Support	\$ 18,750.00	\$ 18,750.00	\$ 18,750.00	\$ 18,750.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00								
Consulting Services																				
Software Development	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 7,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00	\$ 17,500.00								
Administrative Overhead																				
Training																				
Support Agreements																				
Totals	\$ 155,750.00	\$ 105,750.00	\$ 110,750.00	\$ 55,750.00	\$ 82,000.00	\$ 79,500.00	\$ 79,500.00	\$ 79,500.00	\$ 88,250.00	\$ 83,250.00	\$ 83,250.00	\$ 83,250.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Fiscal Year	Total
2009/2010	\$ 428,000.00
2010/2011	\$ 320,500.00
2011/2012	\$ 338,000.00
2012/2013	\$ -
2013/2014	\$ -
Project Total	\$ 1,086,500.00



Addendum 7.5

Virtual Desktop/Server Infrastructure

	2009/2010				2010/2011				2011/2012				2012/2013				2013/2014			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Personnel	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50	\$ 45,354.50								
Hardware	\$ 300,000.00	\$ 200,000.00			\$ 270,000.00	\$ 100,000.00														
Software	\$ 50,000.00	\$ 50,000.00			\$ 75,000.00															
Architecture Consulting Services																				
Consulting Services																				
Software Development																				
Administrative Overhead																				
Training	\$ 9,000.00	\$ 9,000.00			\$ 9,000.00	\$ 9,000.00														
Implementation Services	\$ 40,000.00	\$ 40,000.00			\$ 34,278.00															
Totals	\$ 444,354.50	\$ 344,354.50	\$ 45,354.50	\$ 45,354.50	\$ 433,632.50	\$ 154,354.50	\$ 45,354.50	\$ -												

Fiscal Year	Total
2009/2010	\$ 879,418.00
2010/2011	\$ 678,696.00
2011/2012	\$ 181,418.00
2012/2013	\$ -
2013/2014	\$ -
Project Total	\$ 1,739,532.00

Category	Total
Personnel	\$ 544,254.00
Hardware	\$ 870,000.00
Software	\$ 175,000.00
Architecture Consulting Services	\$ -
Consulting Services	\$ -
Software Development	\$ -
Administrative Overhead	\$ -
Training	\$ 36,000.00
Implementation Services	\$ 114,278.00

