MHSA INFORMATION TECHNOLOGY

Background

Within the framework of the Health Department Strategic Plan for Information Technology, the Behavioral Health and Recovery Services Division has been developing a comprehensive technology plan, with broad stakeholder input. We entered a new phase last year when we selected a vendor and negotiated a contract for the creation of an integrated business and clinical information system (called "eCinical Care" or "eCC") as well as ongoing technical support. This system will replace the legacy system currently used to support Behavioral Health and Recovery Services and the consumers and families it serves. This plan has received very positive feedback from the technology consultants to the State, and we have been eagerly awaiting the release of the MHSA guidelines for this component, which took place on March 19th.

This MHSA funding stream is two-fold, and it provides funding for Capital Facilities and Information Technology. We are moving forward with the Information Technology (IT) piece, as the State has approved the submission of separate proposals.

Subject:

Draft MHSA Component Proposal and Technological Needs Project Proposal.

Total Funds for 3-yr. Plan:

$3,323,580

Funds for Year 1:

$ 1,853,093

Expenditure Proposal:

Partial funding of eClinical Care system of the BHRS Technology Plan.

Action taken:

Mental Health Board released draft for 30-day public comment period on April 2nd, 2008. Public comment period will be closed on May 5th, 2008.

How you can provide input:

If you have comments, please send them to: Lorrie Sheets, BHRS IT Project Manager, 225 37th Ave., San Mateo, CA 94403, (650) 573-2213, lsheets@co.sanmateo.ca.us; or to Sandra Santana-Mora, MHSA Coordinator, 225 37th Ave., San Mateo, CA 94403, (650) 573-2889, ssantana-mora@co.sanmateo.ca.us.

After April 2nd, 2008 this draft proposal will be posted on our website: www.smhealth.org. Please look for the Behavioral Health and Recovery Services link, click on Mental Health Services, and scroll down to the Mental Health Services Act (MHSA) Homepage link. If you would like to receive a hard copy please contact Chantae Rochester at (650) 573.2544, crochester@co.sanmateo.ca.us.

eClinical Care System – Brief Overview

San Mateo County has reached agreement on a contract with software vendor Netsmart Technologies (www.ntst.com) for the eClinical Care (eCC) project implementation.

It is expected that the first pilot use of eCC will follow in twelve months. The team assembled together for this project will use the twelve months to configure and test the software. Immediate next steps involve:

- Transfer historical information from the existing information system to the new one;
- Gather and enter data to set up the software including registration, financials, billing, scheduling, authorizations and the electronic health record (EHR);
- Design and test administrative and clinical workflows;
- Test and certify billing and reporting with the State, Federal and other payers;
- Create and test forms and reports;
- Customize the Help system;
- Create training and support materials;
- Set up user support;
- Train the first pilot users.
- Establish security matrix to protect health information.

eCC is the building block of a future personal health record system.

SAN MATEO COUNTY
HEALTH DEPARTMENT
BEHAVIORAL HEALTH AND RECOVERY SERVICES DIVISION

Mental Health Services Act (MHSA)
TECHNOLOGICAL NEEDS PROJECT PROPOSAL

EXHIBIT 1 – FACE SHEET
FOR TECHNOLOGICAL NEEDS PROJECT PROPOSAL

County Name: San Mateo County

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

We have a strategy to modernize and 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 9 CCR Sections 3300, 3310, and 3315(b). The fraft 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 4310, non-supplant.

All documents in the attached Proposal are true and correct.

County Director
Name _____ Signed_____
Telephone _____
E-Mail _____ Date _____

Chief Information Officer
Name _____ Signed_____
Telephone _____
E-Mail _____ Date _____

HIPAA Privacy / Security Officer
Name _____ Signed_____
Telephone _____
E-Mail _____ Date _____

EXHIBIT 2 - TECHNOLOGICAL NEEDS ASSESSMENT

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:
   - VAX Client Information and Reporting System and Managed Care (ISCA FY07, p 7)
   - Accounts Receivable (ISCA FY07, p 8)
   - Progress Notes Application (ISCA FY07, p 10)

   List or attach a list of the hardware and software inventory to support current systems.

   1.2) Hardware:
   - 3 VAX 4700A computers that are clustered and running on OpenVMS 7.2
   - IBM platform server with Windows Network Operating System for A/R application
   - PC workstations to connect to VAX over WAN

   1.3) Software:
   - VAX Basic
   - Attachmate
   - Oracle
   - MS Access front end

   1.4) Support (i.e. maintenance and/or technical support agreements):

   Annual hardware support agreement for VAX
   Hardware support agreements for all servers and workstations. Maintained by County Information Services Department (ISD) for all County-owned hardware.

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:

As we explained in our Component Proposal, we aim at improving coordination of care and the delivery of mental health services in a manner consistent to the principles of MHSA, which are the guiding principles of our County's MHSA Plan. This includes, but is not limited to, providing increased funding, personnel and other resources to support our mental health programs and ensure progress toward statewide MHSA goals for children, transition age youth, adults, older adults and families, within a broad continuum of prevention, early intervention and service needs, as well as the necessary infrastructure, technology and training elements that will effectively support this system.

APPENDIX I of our Component Proposal (attached here as **ATTACHMENT 2.1.5**) provides an overview of the strategic alignment of the Technology project with our programmatic initiatives.

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

The County is planning a comprehensive implementation of an Electronic Health Record (EHR) and Clinical Decision Support system. We will achieve that goal through the purchase of Netsmart Technologies' Avatar software suite, a data mart/reporting server, eFax technology, document imaging and management and web services development. San Mateo Behavioral Health and Recovery Services (BHRS) is using the term "eClinical Care" or "eCC" to refer to the implementation project.

To support our software application goals, the County will purchase windows based servers in a configuration to support the service level agreement (SLA) with Netsmart of screen refresh times of 2 seconds or less. The Avatar software suite uses thin-client technology for workstation access. The County has a three year workstation replacement plan. The specifications for the oldest County workstations exceed Netsmart's minimum workstation specifications.

1.7) Note the Implementation Resources currently available:

Oversight Committee:	Yes X	No____
Project Manager:	Yes X	No____
Budget:	Yes X	No____
Implementation Staff in place:	Yes____	No X
Project Priorities determined:	Yes X	No____

1.8) Describe plan to complete resources marked no above:

Several project positions are in the process of being filled:

1) Clinical Implementer – The County identified the clinician who will join the implementation team. He will join the team after his replacement starts work. We expect him to join the team in June, 2008.
2) Administrative Implementer - The County identified the administative person who will join the implementation team. He will join the team after his replacement starts work. We expect him to join the team in May, 2008.
3) Software Trainer – The County is preparing to advertise for the Software Trainer position to join the implementation team. We will bring on this person as soon as possible.

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

The eCC project's goals are aligned with MHSA goals to implement an integrated information system with an EHR and clinical decision support. BHRS is doing that using software that supports industry standards (HL7, XML and web services), that promotes integration and interfaces with external sources. An added benefit of the project is that the implementation of this system is necessary to achieve another County goal – eventually making personal health records (PHR) available to the consumers and families we serve.

Our funding request includes dollars for document imaging to convert paper charts to electronic charts. This part of the eCC project has two aspects: 1) converting paper from charts of existing clients, and 2) ongoing scanning of documents into the EHR. BHRS plans to expand on existing supported employment of the County's Human Services Agency (HSA) to support our document imaging efforts. HSA employs consumers via the Vocational Rehabilitation Service to staff their document imaging center. BHRS has had preliminary discussions with HSA about using their imaging center to complete scanning of historical documents and to provide services for on-going scanning needs. HSA will be able to increase the number of VRS supported employment positions based on the volume of BHRS documents.

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):

eClinical Care (eCC) is the County's name for the project to implement our Integrated Information Systems Infrastructure. The eCC project plan is attached **(ATTACHMENT 2.2.1A)** and contains detailed information about our phased approach to implementation. Full implementation to all County and Contractor sites –with a total number of users of approximately 511- will take approximately 32 months.

Also attached is the County Health Department Information Technology Strategic Plan (ITSP) (**ATTACHMENT 2.2.1B)** effective June 2005. BHRS is participating in an update to the plan which is due in June, 2008. The replacement of the BHRS legacy system is a major component of the plan and the implementation of the new information system – eCC – is a major component of the updated plan.

Needs Assessment and RFP/Vendor Selection	Infrastructure	Practice Management	EHR "Lite" Clinical notes and history	Ordering	Full EHR	Fully Integrated EHR and PHR

2.2) Training and schedule (List or provide in timeline format, example below):

Training Schedule for 2008		Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec			
Basic System Nav		X																									
Admin Staff		X																									
Clinicians			X																								
Contract Providers				X																							
Client Look-Up						X																					

Training is included in our Project Plan **(ATTACHMENT 2.2.1A)**. The Plan includes training for the Implementation Team, "Train the Trainer" training, development of a training curriculum and end user training. The team will develop training classes for clinical, front desk, quality improvement, administrative, billing and finance staff. During implementation, end user training classes will happen the week before a site goes "live" (starts using the new software). Training classes will be offered on a continuing basis to train new staff and provide existing staff "brush-up" training as needed.

BHRS has several training rooms available to use for classes. All the rooms have twelve student workstations connected to the County WAN, an instructor workstation, a projector and white boards.

BHRS leadership recognizes that some members of our workforce are unaccustomed to

and/or uncomfortable using computers and that these staff will have difficulty transitioning to an EHR. To support these employees, the Software Trainer (costs for that position are included in our proposal) will meet with each person that signs up for this training at his/her work site. Together they will develop a training plan and continue to work regularly to attain a level of competence and confidence with technology. BHRS management is working with supervisors to identify candidates that wish to receive this training. Training and some practice time will be during work hours and each person's productivity expectaions will be adjusted as needed.

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

The Stakeholder Communication plan in Draft form is attached **(ATTACHMENT 2.2.3).** The implementation team expects to have a finished plan by the end of May, 2008.

2.4) *Inventory of Current Systems: (may include system overview provided in County Technology Strategic Plan):*

- VAX Client Information and Reporting System and Managed Care **(ATTACHMENT 2.2.4)**
- Accounts Receivable **(ATTACHMENT 2.2.4)**
- Progress Notes Application **(ATTACHMENT 2.2.4)**

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):*

County BHRS worked with System Analysts from the County's Information Services Department (ISD) to complete the "as-is" workflow. The project proposal is attached **(ATTACHMENT 2.2.5).** As of March 31, 2008, the project was completed. The "as-is" workflows will be used by implementation workgroups as the baseline to create "to-be" workflows.

2.6) *Proposed EHR component purchases: (may include information on Project Proposal(s)):*

The list below represents all the software and hardware the County will purchase to implement the full scope of our new eCC system. The County is requesting MHSA funds to purchase a portion of the software and hardware.

SOFTWARE
Netsmart Software Modules:

RADPlus	Document Management and Imaging
Avatar Cal-PM	Electronic Signature
Avatar CWS	Infoscriber
Avatar MSO	Data Warehouse Middleware
Avatar Mobile	HL7 Interfaces
Avatar Test Server	Web services

Additional Software
Intersystems Cache database
Crystal Reports Server
LANFax software
Kofax scanning software
Citrix server licenses

HARDWARE
Windows based blade servers to support our software configuration (Netsmart software, reporting server, fax server, secure Citrix access to EHR)
Topaz signature pads
Production scanners
PC based workstations to support scanning

2.7) Vendor selection criteria: (such as Request for Proposal):

The County was a member of the state-wide California Behavioral Systems Coalition and the RFP process. In September, 2005, San Mateo issued a third RFP to the finalist candidate vendors. Netsmart Technologies was selected as the apparently successful vendor. San Mateo's Agreement with Netsmart Technologies was approved by the County Board of Supervisors on Feb 28, 2008.

2.8) Cost estimates associated with achieving the Integrated Information Systems Infrastructure: **$3,310,078.00**

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	# FTE estimated to meet need in addition to # FTE authorized
(1)	(2)	(3)	(4)
A. Information Technology Staff (direct service):			
BHRS Chief Technology / Information Officer / Project Manager	1	1	0
Hardware Specialist – County ISD Server Support, Network Support and Desktop Support divisions	Multiple in existing IS department		
Software Specialist - County ISD analysts	2	1	0
Other Technology staff			
Sub-total, A	3		
B. Project Managerial and Supervisory:			
CEO or manager above direct supervisor – ISD Relationship Manager	1	1	0
Supervising Project Manager – ISD Project Manager	1	1	0
Project Coordinator			
Other Project Leads			
Sub-total, B	2		
C. Technology Support Staff:			
Analysts, tech support, quality assurance	5	1	0
Education and training	1.5	?	1.5
Clerical, secretary, administrative assistants			
Other support staff (non-direct services)			
Sub-total, C	6.5		1.5
TOTAL COUNTY TECHNOLOGY WORKFORCE (A+B+C)	11.5		

EXHIBIT 3 - TECHNOLOGICAL NEEDS PROJECT PROPOSAL DESCRIPTION

Date: April 2, 2008 County: San Mateo County

Project Title: eClinical Care

• ***Please check at least one box from each group that describes this MHSA Technological Needs Project***

X New system
☐ Extend the number of users of an existing system
☐ Extend the functionality of an existing system
X Supports goal of modernization/transformation
X Supports goal of client and family empowerment

• ***Please indicate the type of MHSA Technological Needs Project***

❖ **Electronic Health Record (EHR) System Projects (check all that apply**
X Infrastructure, Security, Privacy
X Practice Management
X Clinical Data Management
X Computerized Provider Order Entry
X Full Electronic Health Record (EHR) with Interoperability Components (for 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
X Data Warehousing Projects / Decision Support
X Imaging / Paper Conversion Projects
☐ Other

• ***Please 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 _____

☐ Product Installation
Name of Vendor _____

X Software Installation
Name of Vendor : Netsmart Technologies

Project Management Overview

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*
- *Integration Management*
- *Scope Management*
- *Time Management*
- *Cost Management*
- *Quality Management*
- *Human Resource Management (Consultants, Vendor, In-House Staff)*
- *Communications Management*
- *Procurement Management*

Based on the worksheet in Enclosure 3, Appendix A, the eCC project risk score is "Medium" which is consistent with the evaluation of the County's project team. The project team developed an organization chart that graphically defines the hierarchical structure of the people and workgroups need to complete the project. **(ATTACHMENT 3.1)**

The eCC Management Team is at the top of the organization chart and includes senior managers from the County Health Department, BHRS and ISD. The Project Sponsor is Louise Rogers, MPA, Director of BHRS. The Project Executive is Pat Miles, PhD, Assistant Director of BHRS. In addition, the eCC Steering Committee has oversight and consultation responsibility for the project. The Steering Committee includes BHRS Managers, Administrative staff, Clinical Staff, Contractors, Billing and Finance Staff, ISD staff.

eCC has two experienced project managers assigned – Lorrie Sheets, BHRS Systems Support Specialist and Rand Miyashiro, ISD Analyst. They are responsible for daily management of the project and report to the Project Sponsor, Project Executive, the Steering Committee and Executive Management team.

The Project Charter **(ATTACHMENT 3.2)** has the details for Integration, Scope, Time, Cost, Quality, and Human Resources Management. The updated Communications Plan is attached as **ATTACHMENT 2.2.3.** Procurement Management is detailed within the project plan.

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.

	Personnel	Hardware	Software	Contract Services	Total
FY 08/09					
Qtr 1	80,318	2,168	24,000	170,693	**277,179**
Qtr 2	80,318	71,783	49,000	406,026	**607,127**
Qtr 3	80,318		25,000	406,027	**511,345**

	Personnel	Hardware	Software	Contract Services	Total
Qtr 4	80,319		71,250	406,028	**557,597**
Total FY 08/09	**321,273**	**73,951**	**169,250**	**1,388,774**	**1,953,248**
FY 09/10					
Qtr 1	81,647	0	0	139,756	**221,403**
Qtr 2	81,647	0	0	139,756	**221,403**
Qtr 3	81,648	0	0	139,756	**221,404**
Qtr 4	81,649	0	0	139,756	**221,405**
Total FY09/10	**326,591**	**-**	**-**	**559,024**	**885,615**
FY 10/11					
Qtr 1	83,017	-	-	58,295	**141,312**
Qtr 2	83,018	-	-	58,295	**141,313**
Qtr 3	36,000	-	-	58,295	**94,295**
Qtr 4	36,000	-	-	58,295	**94,295**
Total FY 10/11	**238,035**	**-**	**-**	**233,180**	**471,215**
Project Total	**885,899**	**73,951**	**169,250**	**2,180,978**	**3,310,078**

Nature of the Project

Describe:

- *The extent to which the Project is critical to the accomplishment of the County, MHSA, and DMH goals and objectives*

We've attached our project charter **(ATTACHMENT 3.2)**, which describes goals and objectives; they are aligned with our County's and, implicitly, our Division's goals and objectives as well as with DMH's. We see establishing the infrastructure for an Electronic Health Records system as an essential step towards improving the quality of our care and the effectiveness of our outcomes

- *The degree of centralization or decentralization required for this activity.*

This project will be managed very centrally, however implementation involves over 20 diverse sites. Thus the communication and management plan for this project will involve many decentralized activities.

- *The characteristics of the data to be collected and processed, i.e., source, volume, volatility, distribution, and security or confidentiality*

Data to be collected and processed includes all data elements collected and reported to DMH as part of Medi-Cal as well as the client services information reporting (CSI) required by the State. There is a high degree of security and confidentiality required for transmission of this data. In addition, data will be more expanded because the whole Electronic Health Records system will be included, as described elsewhere in this document.

- *The degree to which the technology can be integrated with other parts of a system in achieving the Integrated Information Systems Infrastructure*

Our County has a standard for interoperability. The product meets these criteria. In addition, NetSmart Technologies, more than any other vendors, has the corporate capacity to support the evolution of this product to meet current and future standards.

• *The data communication requirements associated with the activity*

The County's Information Systems Department (ISD) evaluated our plan and product with our data communication capacity in mind (telecommunications and network). We are satisfied we have the capacity we need.

Hardware Considerations *(as applicable)

Describe:

- *Existing capacity, immediate required capacity and future capacity*
- *Compatibility with existing hardware, including telecommunications equipment*
- *Hardware maintenance*
- *Backup processing capability*
- *Physical space requirements necessary for proper operation of the equipment*

Hardware costs are included in the eCC budget as a result of planning by County ISD and BHRS for this project. Hardware specifications were developed between County ISD and Netsmart's Technical Support to specifically support the software configuration, number of users, expected volume of transactions, a BHRS-requested maximum one hour downtime during regular business hours and the support level agreements (SLA) for system response time. County ISD reviewed the requirements to insure that they were compatible with existing hardware platforms. ISD had sufficient lead time to plan for space for new servers in a secure server environment. Netsmart and ISD determined that the County's existing telecommunications equipment was sufficient to support the installation.

Once the Netsmart Agreement was approved by the County Board of Supervisors the hardware specifications were released for bid by the Purchaser's office. The County is leasing the hardware and is purchasing hardware maintenance agreements for it.

The servers will be connected to a storage area network (SAN) with built-in redundancies. The software and data will be backed up daily and a full backup will be stored weekly in a secure off-site location.

Software Considerations * (as applicable)

Describe:

- *Maintenance of the proposed software, e.g. vendor-supplied*

Costs for maintenance for all software purchased as part of the eCC project are included in the project budget. Maintenance will be purchased from software vendors.

- *Availability of complete documentation of software*

The County requires complete documentation of software it purchases.

- *Availability of necessary security features as defined in DMH standards noted in Appendix B*

1. *Functional Standards*

A critical factor in the County's selection of Netsmart Technologies is Netsmart's demonstrated commitment to supporting industry standards. Netsmart's EHR was the first and is still the only behavioral health software that is CCHIT certified for Ambulatory EHR. Netsmart's software also complies with HIPAA security and privacy standards.

User Friendly Interface Standard

The User Interface was one of the factors considered in the vendor selection process. Netsmart's software complies with the standard.

*The EHR Project **MUST MOVE TOWARDS** the following**:***

- *Be Internet based, available from any standard web browser, so that consumers or family members may access their PHRs.*

Netsmart's software is thin-client. The company just announced a Personal Health Record module based on their EHR.

- *Be able to transmit an approved form of a Continuity of Care Record as applicable.*

  Netsmart has a demonstrated commitment to standards including HL7 standards.

- *Provide ability of the client and family to communicate with the clinician and service provider, especially in the multi-lingual environment.*

  The County believes communication with consumers and family members will be enhanced by the use of Netsmart's Avatar software. Please see **Attachment 3.2**, Project Charter, Strategic Alignment pages 3-8 and Goals and Objectives pages 9-24.

Vendor Commitment Standard *The EHR Project vendor **MUST** meet current industry and government standards. At a minimum, the technology must support current basic standards and the vendor must provide a written agreement to continually upgrade the technology to meet future standards as they become available. The vendor **MUST**:*

- *Include implementation plans that meet minimum staffing criteria for planning, implementation, conversion/migration, oversight, risk management and quality assurance of the technology.*

  The County is pleased with Netsmart's Project Management resources. We have a project manager who conducts regular calls about project status. Together we are developing robust Communication, Change Management and Statement of Work documents that are detailed and specific to San Mateo's implementation plans. They address planning, implementation, conversion, migration, risk management and quality assurance issues.

  In addition to the project manager, the vendor has assigned four business analysts each of whom has their own expertise with different different modules. The subject areas are: Practice Management, Clinical/EHR, Managed Care and Document Management and Imaging.

- *Specify how their product meets or is planning to address all State and federal regulations including but not limited to HIPAA regulations.*

  The Avatar software is HIPAA compliant regarding transactions, security and privacy. It is used by a number of California County Mental Health departments and complies with State regulations regarding reporting and claiming.

  In the Agreement with the vendor, the County included clauses that obligate Netsmart to comply with all State and Federal regulations. If the software requires modification, it will be done at Netsmart's cost.

- *Provide the necessary plan for the product to have application interfaces as necessary to meet California mental health reporting and claiming requirements.*

  The software is used by a number of California County Mental Health departments and complies with State regulations regarding reporting and claiming.

- *Meet the CCHIT behavioral health criteria within one year of the availability of final CCHIT behavioral health certification criteria.*

  The County understands that Netsmart will undergo certification for the CCHIT Behavioral Health standard.

2. *Connectivity and Language (Interoperability) Standards*

   Connectivity Standard:
   - *Be compatible with modern local and wide area network technology supporting Internet and intranet communication.* **YES**
   - *Be distributed, with "ownership" of the data remaining at both the sending and the receiving ends.* **YES**
   - *Use standard protocols that include:* **YES**
     - *Extensible Markup Language (XML)*
     - *Simple Object Access Protocol (SOAP)*
     - *Security Assertion Markup Language (SAML)*
     - *Web services used for application programming interfaces*
     - *Message-oriented middleware*
     - *Other fully documented and highly-supported application programming interfaces as applicable and developed over time*

   Language Standard:
   *The EHR Project **MUST** use industry standard coding and classification systems such as:* **YES**
   - *International Classification of Diseases (ICD-9)*
   - *Common Procedural Terminology (CPT)*

   *The EHR Project **MUST** be able to capture and report:* **YES**
   - *California specific cost reporting and performance outcome data*

   *In addition, the EHR Project **MUST MOVE TOWARDS**:* **YES**
   - *Standardized clinical nomenclature within structured messages (reference terminologies such as SNOMED (Standardized Nomenclature of Medicine)*
   - *HL7 2.X (with vendor commitment to migrate to HL7 RIM)*
   - *Logical Observation Identifiers Names and Codes (LOINC) as applicable*
   - *Having a cross-mapping of terms from one formal terminology or classification to another consistent with federal, state and DMH standard languages*

3. *Client Access, Security and Privacy Standards*

   Privacy Standard

   Government Compliance Standard: **YES**
   Privacy Standard: **YES**
   Client Access:
   - *Address competency and literacy in the use of technology:* See the section on training.
   - *Comply with current Americans with Disabilities Act (ADA), Section 508 of the Rehabilitation Act requirements.* **YES**
   - *Address cultural and language issues to facilitate access and sharing of data.* **YES.** Please see **Attachment 3.2**, Project Charter, Strategic Alignment pages 3-8 and Goals and Objectives pages 9-24.

   *Security**:*** **YES,** as demonstrated by CCHIT Ambulatory EHR certification.

Access Control Standard: **YES,** based on role based security with a high level of granularity.

Auditing Standard: **YES**

Authentication Standars: **YES**

• *Compatibility of computer languages with existing and planned activities*

Again, Netsmart's commitment to standards including computer languages was important to the County's selection process. Our evaluation found the product to be able to meet current needs for data (purchase of Data Warehouse Middleware to bring data and decision support to clinicians' desktops) and to be compliant with future needs based on their support of HL7 and XML web services.

• *Ability of the software to meet current technology standards or be modified to meet them in the future*

In the RFP phase, the County evaluated each respondent's ability to meet technology standards today and in the future. Netsmart Technologies met the requirement.

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 considered interfaces with other entities to be important enough to write into the Netsmart Agreement. BHRS identified the need to interface with other County departments, contracted providers, primary care providers, the Health Plan of San Mateo, the pharmacy benefits manager, community based organizations and the State Department of Mental Health.

- San Mateo Medical Center – Billing interface for Psychiatric Emergency Services (PES) and Psychiatric Inpatient stays. In addition, eCC will continue an existing interface with the hospital that notifies mental health care managers whenever a consumer is admitted to PES, Emergency Department or Psychiatric Inpatient.
- Criminal Justice – interface with criminal justice information system (CJIS) to notify mental health care managers whenever a BHRS consumer is booked or released from County Jail
- Health Plan of San Mateo – BHRS updates consumer eligibility based on HPSM monthly membership files.
- Pharmacy Benefits Manager – BHRS receives pharmacy data for billing the State and sends daily eligibilty list to the PBM.
- CBOs – BHRS receives electronic files of services delivered to consumers. In turn, BHRS sends standard reports to our contracted providers.
- DMH – FSP data entry requirements.

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 documentation of BHRS "as-is" workflow is complete and will be used by implementation workgroups as the basis for developing "to-be" workflows in the eCC system.

Netsmart has made Netsmart University, their Learning Management System (LMS), available to the County for a six-month trial period. Technical staff are using Netsmart University courses to study the database structure, report writing and application administration. End user oriented courses require Avatar software to be installed to complete all the exercises. The project team hopes to make end user courses available to workgroup leaders as soon as the Netsmart software is installed.

When the hardware and software for eCC are installed, the project team and workgroup leaders will receive application specific training and technical team members will receive application administration training. The project plan calls for an initial nine month phase during which the implementation team and workgroups will configure the software, complete data conversion from the legacy system, develop new forms (e.g., registration, financial, assessments, treatment plans, progress notes), workflows and reports. At the end of that phase, a prototype of the eCC system will be available for beta testing by BHRS staff.

The Software Trainer will be part of the implementation team from the beginning and will assist in configuration and testing. The Trainer will work with the Clinical and Administrative Implementers as well as the workgroups to customize the eCC Help system to reflect the County policies, procedures and workflows. The Trainer will lead the effort to develop courses to train BHRS users in eCC screen navigation, practice management, using the EHR, e-prescribing, medication management, accessing scanned images and reporting.

Because of the number of users, BHRS plans to identify “super-users” at sites and provide them additional training and support. Super-users will receive software training and access to eCC before standard users and will receive training in problem solving. The Trainer will create a support structure for super-users. At a minimum, that structure will include quarterly in person meetings to discuss issues, present suggestions for enhancements and get training. In addition, super-users will have access to an issues list (i.e. a “bug” list) that contains known issues and work arounds.

Along with the Trainer and super-users, the County ISD Help Desk will triage support calls and emails from eCC users. ISD Help Desk staff will receive the same training as super-users and will be expected to assist users in resolving problems found on the issues list. If the user’s problem is not easily solved, the Help Desk will triage the call to one of the two ISD eCC software analysts for a solution.

The project plan calls for the first pilot site “go live” to happen three months after the prototype is available. The timing may change based on results of prototype testing and follow-up modifications. Users at the pilot site will receive class room training the week before they go live. The implementation team will be at the pilot site to support users (ratio of 1:3 or one support person for every three users) for the first week. If conditions permit (e.g. the go live is going well), the support staff level will drop to 1:5 during the second and third weeks.

At the end of the third week, the team will evaluate the lessons learned to date from the pilot and determine whether or not to proceed or delay the next implementation site. The project plan calls for the pilot to run for two months before moving to the next site.

The County is working with Netsmart’s implementation team to determine how many “roll-outs” (teams and sites implemented) we will have and how long the roll-outs will take. Current thinking is that it will take 4-5 big site roll-outs to include all County operated clinics. Once the County clinics are running, the Contractor sites will be brought into the system.

The County is purchasing Netsmart licenses for Contracted providers. BHRS will work with Contractors to define eCC access options available to these providers. After talking with contracted providers, BHRS has tentatively identifed three models of use for providers:

1) *Full use of eCC*. Contractors would use eCC software just as County operated clinics. They would use the EHR and all practice management features (registration, record CSI data, episode management, financial information, scheduling). Customization would be minimal.
2) *Practice Management use of eCC*. Contractors would use eCC software to register and schedule clients and record services. Contractors would maintain their own charts.
3) *Minimal use of eCC*. Contractors would use eCC software to review client history and register clients.

BHRS will fully develop the access models working with our Contracted providers.

During implementation, users will receive classroom training just before implementation at their site. The project team will be on site for the first four weeks of implementation. Support staffing will vary based on system usage and user support demands.

When the implementation team feels the site is ready, support will be turned over to super-users and the ISD Help Desk.

When implementation is complete, classes will continue to be offered every three to four months and will be updated based on changes in workflow, policies and procedures, regulations and/or software.

BHRS would like to take advantage of technology to provide on-line training via the County Learning Management System and/or recorded short videos of "how-to-do" software tasks to supplement existing training plans. Although plans for utilizing additional training technology are outside the scope of the implementation project, they are included on the BHRS project wish-list.

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. Please address specifics related to:

- *Protecting data security and privacy*
- *Operational Recovery Planning*
- *Business Continuity Planning*
- *Emergency Response Planning*
- *HIPAA Compliance*
- *State and Federal laws and regulations*

As part of the implementation project, County Quality Improvement staff are reviewing all policies in context of the eCC project. New procedures will be recorded as they are developed and approved by the implementation workgroups. All new policies and procedures will undergo the standard Quality Improvement process for approval and implementation.

The County expects the use of Netsmart's Avatar software will improve the security of our electronic data. The role based security model used by Avatar allows the County to implement a more granular level of appropriate security than we are able to do with our legacy system. The security matrix will be maintained by QI staff.

The County is in the process of providing clinical staff with encrypted, laptop computers. The County is developing training for clinicians to show them how to use computer based lists and notes to replace paper lists and notes containing sensitive information. The County is purchasing Netsmart's Avatar Mobile module that allows clinicians to record data about field-based clinical work on laptop computers. Avatar Mobile allows clinicians to "check-out" consumer charts to laptop computers, work on them in the field, and then synchronize data recorded in the field when clinicians re-connect to the County network.

The data contained in Avatar Mobile will be doubly protected by encryption of the laptop and Netsmart's own encryption of data within Avatar Mobile.

Planning for Operational Recovery, Business Continuity and Emergency Response is in process. The hardware and software supporting the EHR application was planned for have no more than one hour downtime during regular business hours (defined as Monday – Friday, 7:00 a.m. – 7:00 p.m.). We will develop policies and procedures to address the following scenarios:

1) Server Hardware or software failure – Maximum one hour downtime. Users will record information on paper forms. Once the system is back in production, the forms will be entered by staff at regional clinics.
2) Failure of one section of the County wide area network - Users will record information on paper forms. Once the system is back in production, the forms will be entered by staff at regional clinics. We are developing procedures for cases where the outage is longer than one day.
3) Disaster planning – e.g. pandemic flu or man-made disaster – We are developing procedures for this scenario. We expect to rely on remote computing options as long as power and internet connections are available.
4) Disaster planning – e.g. natural disasters – We are developing procedures for this scenario.

The county is working with our vendor and requesting information from other counties about their business continuity policies and procedures. The policies and procedures will be developed and approved prior to the EHR project "go-live". To make sure the policies and procedures are effective and that staff know how to perform the tasks, the County will perform drills twice a year to prepare for the scenarios.

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.

Project Sponsor: Louise Rogers, MPA, Director, Behavioral Health and Recovery Services
Project Executive: Patrick Miles, PhD, Assistant Director, Behavioral Health and Recovery Services

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

Ms Rogers has been the Project Sponsor since 2003 when San Mateo County joined the State-wide California Behavioral Systems (CBS) Coalition. In January, 2008, Ms Rogers became the BHRS Director. She considers the eCC technology initiative a key initiative for the division and committed to maintain her role as Project Sponsor. Along with Assistant Director Patrick Miles, she participates in weekly project status meetings with the two project managers – Lorrie Sheets and Rand Miyashiro.

When Ms Rogers became BHRS Director, Dr Miles, Assistant Director, was named the Project Executive. In addition to his role as Project Executive, Dr Miles is chair of the Clinical Workflow and Documentation Workgroup.

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)

APPENDIX A - PROJECT RISK ASSESSMENT

Category		Factor	Rating	Score
Estimated Cost of Project		Over $5 million	6	6
		Over $3 million	4	
		Over $500,000	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	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		5	3
	Application Service Provider		1	
	COTS* Installation	"Off-the-Shelf"	1	
		Modified COTS	3	
	Number of Users	Over 1,000	5	3
		Over 100	3	
		Over 20	2	
		Under 20	1	
	Architecture	Browser/thin client based	1	1
		Two-Tier (client / server)	2	
		Multi-Tier (client & web, database, application, etc. servers)	3	

*Commercial Off-The-Shelf Software

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

EXHIBIT 4 - BUDGET SUMMARY
FOR TECHNOLOGICAL NEEDS PROJECT PROPOSAL

County: San Mateo
Project Name: eClinical Care

Category	(1) 08/09	(2) 09/10	(3) Future Years	(4) Total One-Time Costs (1+2+3)	Estimated Annual Ongoing Costs*
Personnel					
Clinical Implementer (2.5 years)	108,685	111,945	57,652	278,283	None
Administrative Implementer (2.5 years)	68,588	70,645	36,383	175,616	None
Software Trainer (3 years)	144,000	144,000	144,000	432,000	144,000
Total Staff (Salaries & Benefits)	321,273	326,591	238,035	885,899	
Hardware					
From Exhibit 2					
Topaz Signature Pads (150 units) for electronic signature capture	29,783			29,783	
Scanner with Kofax software for conversion of paper charts and on going scanning needs	2,168			2,168	
Production scanners (3 units) for conversion of paper charts and on going scanning needs	21,000			21,000	
Scanning and Data Entry workstations for conversion of paper charts and on going scanning needs	21,000			21,000	
Total Hardware	73,951			73,951	
Software					
From Exhibit 2					
Netsmart development of Outpatient Laboratory Orders and Results for Avatar Cal-PM	50,000			50,000	Maintenance costs will be included in maintenance of Avatar Cal-PM
Netsmart development of Interface to San Mateo County Medical Center – Send notification to care	48,000			48,000	Maintenance costs will be included in maintenance

Category	(1) 08/09	(2) 09/10	(3) Future Years	(4) Total One-Time Costs (1+2+3)	Estimated Annual Ongoing Costs*
manager of BHRS consumer admission to PES, Emergency Department or Psychiatric Inpatient					of Avatar Cal-PM
Data Conversion – Mapping, clean-up and Import of 20+ years of historical registration, demographics, CSI, episodic and authorization data.	71,250			71,250	None
Total Software	169,250			169,250	
Contract Services (list services to be provided)					
ISD Project Management	154,400	154,400	154,400	463,200	
Application Analysts	157,560	157,560	78,780	393,900	
Reporting Analyst	154,400	154,400		308,800	
Interface Analyst	92,664	92,664		185,328	
Data Conversion Analyst	123,750			123,750	
HSA/VRS Scanning and Data Entry for conversion of paper charts	550,000			550,000	
2 Medical Records Clerks, 1 Medical Records Supervisor for chart preparation	156,000			156,000	
Total Contract Services	1,388,774	559,024	233,180	2,180,978	
Administrative Overhead					
Other Expenses (Describe)					
Total Costs (A)	**1,953,248**	**885,615**	**471,215**	**3,310,078**	
Total Offsetting Revenues (B) **					
MHSA Funding Requirements (A-B)	**1,953,248**	**885,615**	**471,215**	**3,310,078**	
NOTES:					

EXHIBIT 5 - STAKEHOLDER PARTICIPATION
FOR TECHNOLOGICAL NEEDS PROJECT PROPOSAL

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	Meeting Type	Meeting Date
e.g. (contract provider, client, family member, clinician)	**e.g. public teleconference**	
BHRS Staff Team meetings – Clinical, QI, Administrative, Fiscal, Billing, Consumer and Family Affairs. Louise Rogers and Lorrie Sheets met with all BHRS teams to discuss project, answer questions and get feedback	26 In person meetings	First meeting was Nov 21, 2006. Last meeting was Jan 28, 2008
Mental Health Board Older Adult Subcommittee	In person	Dec 13, 2007
Mental Health Board Youth Subcommittee	In person	Dec 5, 2007
Consumer Meeting at Heart and Sould	In person	Jan 18, 2008
Contract Provider Technical Assistance Meeting	In person	Jan 19, 2007 and July 20, 2007

Attachment 2.1.5

Strategic Alignment

ATTACHMENT 215

eClinical Care System – Strategic Alignment with Mental Health Initiatives

System Goal	Initiative	eClinical Care System Alignment	Opportunities
Coordinated, integrated system	Full Service Partnerships	1. Clinical workstation with electronic health record/chart and treatment plan 2. Coordination and integration will also be supported through more timely access to clinical information from other providers including contract providers. 3. Coordination and integration through improved clinical reporting, due to more clinical information available electronically.	Offers possibility of improving coordination and integration of treatment planning and treatment.
Coordinated, integrated system	Supported Employment	BHRS will use existing resources from the County Human Services Agency (HSA) to support our document imaging efforts. HSA employs consumers via the Vocational Rehabilitation Service to staff their document imaging center. Through the agreement with BHRS, HSA will increase the number of VRS supported employment positions.	
System of care oriented to individual consumer and goals for wellness/recovery	Housing	1. Greater accessibility of client record, including tx plan, to client. 2. More timely accessibility. 3. Client information to support wellness/recovery around illness, recovery, meds.	Med sheets normally emphasize side effects and not what it's supposed to do.
Consumer/family guided system of care	Paving the Way	1) More substantial clinical aggregate data available to consumer, family, policy makers and public.	May include info to what extent people making progress toward meeting goals.
Consumer Financial Empowerment to support wellness/recovery	Financial Empowerment Project (FEP)	1) Increased accessibility of bills 2) Eligibility information and reminders	1) Making appts 2) Confirming appts

System Goal	Initiative	eClinical Care System Alignment	Opportunities
Cost Effective, Efficient Financial Mgmt of Mental Health System	Stabilize transition to FFS billing from case rate—billing edits, logic, compliance	1) Individualized Reporting and Help staying on top of finances for supervisors, managers, clinicians. 2) Contract limits and adjudication against contract limits.	1) Electronic notification and reminders to tie back to documentation.
Quality Improvement	Implement new E Clinical Care electronic health record, billing and other functionality.	1) Confidentiality – assist with security levels, encryption. 2) Improved Project Mgmt – BCAP tools 3) QI Meds monitoring – review meds utilization	Make Policies & Procedures, QI FAQ and definitions available online through Help system.
	Implement strategies for improved communication/dialogue with MH workforce		
	Documentation compliance and improvement training, reporting and monitoring		Creating best practice libraries for treatment planning and progress notes.
	Peer Utilization Mgmt/Review process incorporating LOCUS/CALOCUS		
	Confidentiality improvement		
	Contracting monitoring reporting tools		
	Improved project mgmt—BCAP tools		
Cultural Competence Improvement	Linguistic Access initiative	1) Technical assistance around tx planning that's culturally/linguistically focused.	1) Using alerts to flag special needs for clients 2) Reporting at team level 3) Translation of documents online
Learning organization/evaluating/ accountability--QI	OBM--revisiting	1) Include OBM measures in data collection 2) Integrate Data Book into eCC reporting.	1) Reports will be accessible online to the level of individual clinicians.

System Goal	Initiative	eClinical Care System Alignment	Opportunities
Learning organization/evaluating/ accountability--QI	System reporting for program monitoring	1) We will collect an expanded data set in Avatar and can provide clinical reporting in addition to business performance. 2) Track individual client response to meds 3) Review prescribing patters of MDs by cost and dosage. 4) Provide guidelines for lab results of individual clients. 5) Flag when prescriptions are not refilled by clients. 6) Follow trends of which contacts become clients and which don't.	
Consumer, community engagement through more welcoming, immediate, integrated, timely system of access	EPA access redesign pilot through Best Clinical and Admin Practices learning collaborative	1) Staff will have more timely access to integrated clinical data down to the level of front line clinicians. 2) Contact Tracking provides more flexibility. Can track work we do for those people who don't become clients. Don't need to collect as much info about Contacts. 3) Access points will have more information available about clients that have a history with us. 4) Create referral forms for other consumer services within eCC. Staff can complete and fax forms from eCC. Completed forms can be stored in client's chart. 5) Online forms will decrease number of times consumers are asked the same question to complete our forms. 6) Making clinicians' schedules available to front desk and other clinic staff is helpful to clients.	1) Web Services offer the opportunity to have "portals" for other constituents including Consumers, Primary Care, AOD services, Inpatient services, etc. 2) Create a Clinical Face Sheet based on feedback from clinical staff. Summarize critical info.
Consumer, community engagement through more welcoming, immediate, integrated, timely system of access	MHSA Outreach navigators/ promotoras		Develop a library of resources and referral in order to assist consumers in navigating the menu of available resources
Consumer, community engagement through more welcoming, immediate, integrated, timely system of access	Primary care interface expansions	Avatar facilitates a shared treatment plan.	We have the opportunity to share treatment plans. We have to identify what part of the treatment plan belongs to each provider.

System Goal	Initiative	eClinical Care System Alignment	Opportunities
Improved physical plant more supportive of system goals and workforce	Youth Services Campus implementation	Having smaller physical charts may mean more physical space at clinics.	Won't have the same space requirements if charts are smaller.
Improved physical plant more supportive of system goals and workforce	La Selva replacement	Use web services for client information portals.	Opportunity to provide computer access in clinic waiting rooms.
Improved physical plant more supportive of system goals and workforce	New RWC site	Workflow analysis may show opportunities to improve use of space.	With upcoming clinic moves we have opportunity to place people differently.
Improved physical plant more supportive of system goals and workforce	Ergonomic improvements	Ergonomic improvements must precede each site implementation to alleviate staff concerns about increased computer use.	
Workforce development	Workforce development and training plan for MHSA proposal	Avatar clinical software provides more information for analysis of individual and aggregate caseloads. Will have facts to support or dispel theories/ideas about caseloads. 1) Provide some decision support tools through treatment plan libraries and customized help system. 2) Provide definitions of clinical terms. Include Mental Health Policies and Procedures as part of customized Help.	Identify experts in a variety of clinical areas of expertise within our system. Develop best practices with them.

Attachment 2.2.1A

Project Plan

San Mateo County Implementation Plan Draft

ID	Task Name	Duration	Start	Finish
1	**San Mateo County Project Work Plan - DRAFT**	**596.25 days**	**Mon 7/2/07**	**Thu 11/5/09**
2	**Project Initiation**	**23.5 days**	**Mon 7/2/07**	**Fri 8/3/07**
3	Contract Signing	0 days	Mon 7/2/07	Mon 7/2/07
4	**Sales to Operations Transition**	**10.5 days**	**Mon 7/2/07**	**Tue 7/17/07**
5	Pre-Kick off Conference Call	0.5 days	Mon 7/2/07	Mon 7/2/07
6	Creation of Kick Off Agenda	2 days	Mon 7/2/07	Thu 7/5/07
7	Development of Draft Implementation Plan	10 days	Mon 7/2/07	Tue 7/17/07
8	**Statement of Work**	**13 days**	**Tue 7/17/07**	**Fri 8/3/07**
9	Draft Statement of Work	5 days	Tue 7/17/07	Tue 7/24/07
10	Client Review	5 days	Tue 7/24/07	Tue 7/31/07
11	SOW Revisions	2 days	Tue 7/31/07	Thu 8/2/07
12	Final Client Approval - Payment Milestone	1 day	Thu 8/2/07	Fri 8/3/07
13	SOW Complete	0 days	Fri 8/3/07	Fri 8/3/07
14	**HW/OS/Network Installation**	**12 days**	**Mon 7/2/07**	**Wed 7/18/07**
15	Hardware Acquisition	1 day	Mon 7/2/07	Mon 7/2/07
16	Installation of Hardware & OS	10 days	Tue 7/3/07	Tue 7/17/07
17	Complete Pre-Installation Checklist	1 day	Wed 7/18/07	Wed 7/18/07
18				
19	**Phase I - Avatar PM, CWS, HL7, Web Services, Document Management plus software development and conve**	**379 days**	**Thu 7/19/07**	**Wed 1/21/09**
20	**Software Delivery and Installation**	**7 days**	**Thu 7/19/07**	**Fri 7/27/07**
21	System Administration Training	4 hrs	Thu 7/19/07	Thu 7/19/07
22	Install 10 Cache Multi-Server Processes	2 hrs	Thu 7/19/07	Thu 7/19/07
23	Install 30 RAD Users	0 days	Thu 7/19/07	Thu 7/19/07
24	Install PM	2 hrs	Thu 7/19/07	Thu 7/19/07
25	Install CWS	2 hrs	Thu 7/19/07	Thu 7/19/07
26	Install MSO	2 hrs	Thu 7/19/07	Thu 7/19/07
27	Install Avatar Mobile	2 hrs	Fri 7/20/07	Fri 7/20/07
28	Install Avatar Document Management	2 hrs	Fri 7/20/07	Fri 7/20/07
29	Install Web Services	2 hrs	Fri 7/20/07	Fri 7/20/07
30	Install Data Warehouse Middleware	2 hrs	Fri 7/20/07	Fri 7/20/07
31	Install 2 HL-7 Interfaces	2 hrs	Mon 7/23/07	Mon 7/23/07
32	Install Infoscriber Link	2 hrs	Mon 7/23/07	Mon 7/23/07
33	ECP Server Configuration	16 hrs	Mon 7/23/07	Wed 7/25/07
34	Creation of "LIVE" Namespaces	1 hr	Wed 7/25/07	Wed 7/25/07
35	Install Test Server	4 hrs	Wed 7/25/07	Thu 7/26/07
36	Verify Software Installation	3 days	Wed 7/25/07	Fri 7/27/07
37	**Pre-Specification Training**	**137 days**	**Mon 7/30/07**	**Fri 2/15/08**
38	**Initial Software Training**	**15 days**	**Mon 7/30/07**	**Fri 8/17/07**
39	PM Quick Start (File Build Worksheet Review)	3 days	Mon 7/30/07	Wed 8/1/07
40	RADplus (Modeling)	2 days	Thu 8/2/07	Fri 8/3/07
41	Web Services Training	1 day	Mon 8/6/07	Mon 8/6/07
42	**CWS Training**	**7 days**	**Tue 8/7/07**	**Wed 8/15/07**
43	CWS Quick Start	2 days	Tue 8/7/07	Wed 8/8/07
44	Assessments	1 day	Thu 8/9/07	Thu 8/9/07
45	Treatment Planning	2 days	Fri 8/10/07	Mon 8/13/07
46	Progress Notes	1 day	Tue 8/14/07	Tue 8/14/07
47	Workflow Management	1 day	Wed 8/15/07	Wed 8/15/07

San Mateo County Implementation Plan Draft

ID	Task Name	Duration	Start	Finish
48	Avatar Data Model Review / ODBC reporting	1 day	Thu 8/16/07	Thu 8/16/07
49	Data Warehouse Middleware Training	1 day	Fri 8/17/07	Fri 8/17/07
50	**CWS Implementation Decisions**	**16 days**	**Mon 8/20/07**	**Tue 9/11/07**
51	Clinical Forms Gathering	5 days	Mon 8/20/07	Fri 8/24/07
52	Workflow Manager Decisions	10 days	Mon 8/27/07	Mon 9/10/07
53	Treatment Planner Decisions	10 days	Mon 8/27/07	Mon 9/10/07
54	Avatar Mobile Decisions	10 days	Mon 8/27/07	Mon 9/10/07
55	Identify / Select CWS Pilot Programs	1 day	Tue 9/11/07	Tue 9/11/07
56	**Conversion**	**137 days**	**Mon 7/30/07**	**Fri 2/15/08**
57	Provide Conversion Specifications	0 days	Mon 9/10/07	Mon 9/10/07
58	Train IT Staff on Requirements	1 day	Mon 9/10/07	Mon 9/10/07
59	Develop Conversion Specifications	2 days	Tue 9/11/07	Wed 9/12/07
60	Identify fields that require modeling and forms	2 days	Thu 9/13/07	Fri 9/14/07
61	Compile/Assemble specifications	5 days	Mon 9/17/07	Fri 9/21/07
62	Approve conversion plan	2 days	Mon 9/24/07	Tue 9/25/07
63	**Develop Load Progams**	**37.5 days**	**Wed 9/26/07**	**Fri 11/16/07**
64	Balance forward, services and related data	10 days	Wed 9/26/07	Tue 10/9/07
65	Payment data	0 days	Wed 9/26/07	Wed 9/26/07
66	Clinical Data	20 days	Wed 10/10/07	Tue 11/6/07
67	Authorization data	7.5 days	Wed 11/7/07	Fri 11/16/07
68	Develop Extraction Routines from Legacy Systems	20 days	Fri 11/16/07	Tue 12/18/07
69	**System Interface Requirements - Exhibit E**	**50.5 days**	**Mon 8/20/07**	**Tue 10/30/07**
70	**Interface Approach**	**50.5 days**	**Mon 8/20/07**	**Tue 10/30/07**
71	Establish Interface Approach / Specifications	2 days	Mon 8/20/07	Tue 8/21/07
72	Document Approach	5 days	Wed 8/22/07	Tue 8/28/07
73	Approve Approach	2 days	Wed 8/29/07	Thu 8/30/07
74	**Interface Development**	**41.5 days**	**Thu 8/30/07**	**Tue 10/30/07**
75	SMMC Medicare Billing File Upload	40 hrs	Fri 8/31/07	Fri 9/7/07
76	SMMC PES and Psychiatric iP Notificaitons	110 hrs	Fri 8/31/07	Thu 9/20/07
77	SMC Jail Booking and Discharge Notifications	120 hrs	Thu 9/20/07	Thu 10/11/07
78	Pharmacy Benefits Manager (PBM) Extract	15 days	Fri 8/31/07	Fri 9/21/07
79	Pharmacy Benefits Manager (PBM) Rx Upload	40 hrs	Mon 9/24/07	Fri 9/28/07
80	Health Plan of San Mateo (HPSM) Eligibility Upload	152 hrs	Fri 8/31/07	Thu 9/27/07
81	Lab Services Data Upload / HL 7 Interface	36 hrs	Fri 9/28/07	Thu 10/4/07
82	SMC Personnel Data Upload	24 hrs	Fri 9/28/07	Tue 10/2/07
83	Service Upload (from Contracted Agencies)	16 hrs	Fri 9/28/07	Mon 10/1/07
84	SMMC Rx File Upload (for Medi-Cal Billing)	40 hrs	Mon 10/1/07	Fri 10/5/07
85	Health Client Data Store (HCDS) Extract	8 hrs	Fri 8/31/07	Fri 8/31/07
86	SMMH Client Billing Export	8 hrs	Fri 8/31/07	Fri 8/31/07
87	PBM Share of Cost File Upload	132 hrs	Mon 10/8/07	Tue 10/30/07
88	Medicare Part D	0 days	Thu 8/30/07	Thu 8/30/07
89	Managed Care Payment File Extract	24 hrs	Tue 9/4/07	Thu 9/6/07
90	**SMMH - Customization Requirements - Attachment D**	**55 days**	**Fri 8/31/07**	**Fri 11/16/07**
91	**Specifications**	**13 days**	**Fri 8/31/07**	**Wed 9/19/07**
92	Customization Specifications	3 days	Fri 8/31/07	Wed 9/5/07
93	Compile and publish specifications	5 days	Thu 9/6/07	Wed 9/12/07
94	Approve specifications	5 days	Thu 9/13/07	Wed 9/19/07

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ID	Task Name	Duration	Start	Finish
95	**Project Development**	**42 days**	**Wed 9/19/07**	**Fri 11/16/07**
96	Display of 16-Months Medi-Cal Eligibility History	20 hrs	Thu 9/20/07	Mon 9/24/07
97	Billing for Case Management Services in IP Setting	20 hrs	Thu 9/20/07	Mon 9/24/07
98	UMDAP Calculation-include adjustment for housing costs	32 hrs	Mon 9/24/07	Fri 9/28/07
99	Ability to create Task/To-Do List for Non-Clinical Users	136 hrs	Fri 9/28/07	Tue 10/23/07
100	Ability to Track Provider Contract Limits	88 hrs	Fri 9/28/07	Mon 10/15/07
101	Staff Productivity Reports	24 hrs	Mon 10/15/07	Thu 10/18/07
102	Data Entry Screens for Clients and Services	0 days	Wed 9/19/07	Wed 9/19/07
103	Cost Reporting Support	24 hrs	Mon 10/15/07	Thu 10/18/07
104	Billind Edits and Lockouts	36 hrs	Mon 10/15/07	Fri 10/19/07
105	Clearing Medi-Cal Share of Cost	0 days	Wed 9/19/07	Wed 9/19/07
106	Outpatient Lab forms - request labs, print lab requests, report results	20 days	Mon 10/22/07	Fri 11/16/07
107	Other software development (TBD)	1 day	Thu 9/20/07	Thu 9/20/07
108	**VAX / Avatar Synchronization**	**24 days**	**Thu 9/20/07**	**Tue 10/23/07**
109	Review requirements	2 days	Thu 9/20/07	Fri 9/21/07
110	Establish County-managed approach	2 days	Mon 9/24/07	Tue 9/25/07
111	Provide Technical Assistance	20 days	Wed 9/26/07	Tue 10/23/07
112	**Technical Configuration Efforts (RAD Forms and Crystal)**	**100 days**	**Thu 9/20/07**	**Fri 2/15/08**
113	**RADplus Forms Development**	**57 days**	**Thu 9/20/07**	**Tue 12/11/07**
114	Identify PM Forms to be Modeled	5 days	Thu 9/20/07	Wed 9/26/07
115	Identify CWS Forms to be Modeled (including Avatar Mobile)	5 days	Thu 9/27/07	Wed 10/3/07
116	Prioritize Forms to be Modeled	2 days	Thu 10/4/07	Fri 10/5/07
117	Develop Specifications for PM Forms	15 days	Mon 10/8/07	Fri 10/26/07
118	Develop Specifications for CWS Forms	15 days	Mon 10/8/07	Fri 10/26/07
119	Model PM Forms in TEST Namespaces	20 days	Mon 10/22/07	Fri 11/16/07
120	Model CWS Forms in TEST Namespaces	20 days	Mon 11/12/07	Tue 12/11/07
121	Test and Approve Completed PM Forms	10 days	Fri 11/9/07	Mon 11/26/07
122	Test and Approve Completed CWS Forms	10 days	Fri 11/16/07	Mon 12/3/07
123	Export Approved Forms to LIVE Namespace	5 days	Fri 11/16/07	Mon 11/26/07
124	**Crystal Report Development**	**43 days**	**Wed 12/12/07**	**Fri 2/15/08**
125	Identify Crystal Reports to be Developed for PM	5 days	Wed 12/12/07	Tue 12/18/07
126	Identify Crystal Reports to be Developed for CWS	5 days	Wed 12/19/07	Thu 12/27/07
127	Prioritize Reports to be Developed	3 days	Fri 12/28/07	Thu 1/3/08
128	Develop Specifications for PM Reports	10 days	Fri 1/4/08	Thu 1/17/08
129	Develop Specifications for CWS Reports	10 days	Fri 1/4/08	Thu 1/17/08
130	Develop Reports	20 days	Fri 1/11/08	Fri 2/8/08
131	Test and Approve PM Reports	10 days	Mon 1/28/08	Fri 2/8/08
132	Test and Approve CWS Reports	10 days	Mon 2/4/08	Fri 2/15/08
133	Import Approved Reports to LIVE Namespace (When Appropriate	5 days	Mon 2/11/08	Fri 2/15/08
134	**Delvery & Demonstration - Development & Interfaces**	**22 days**	**Wed 10/24/07**	**Mon 11/26/07**
135	Perform QC	20 days	Wed 10/24/07	Tue 11/20/07
136	Installation of developmenmt	1 day	Wed 11/21/07	Wed 11/21/07
137	Deliver & Demonstrate to County Staff - Payment Milestone	1 day	Mon 11/26/07	Mon 11/26/07
138	**"Quick-Start" Data Collection and File-Build**	**100 days**	**Mon 7/30/07**	**Wed 12/19/07**
139	File Build Assisance/Consulting	100 days	Mon 7/30/07	Wed 12/19/07
140	**"Quick-Start" Data Collection and Review**	**69 days**	**Thu 8/2/07**	**Wed 11/7/07**
141	**Cal PM Items**	**69 days**	**Thu 8/2/07**	**Wed 11/7/07**

ID	Task Name	Duration	Start	Finish
142	Complete Guarantor Data Collection Sheet for Each Guarantor (25)	10 days	Thu 8/2/07	Wed 8/15/07
143	Complete Benefit Plan Data Collection Sheets for each Plan (est 25)	10 days	Thu 8/16/07	Wed 8/29/07
144	Complete Service Code Collection Sheet/Upload File	10 days	Thu 8/30/07	Thu 9/13/07
145	Complete Service Code Cross Reference Collection Sheets	3 days	Fri 9/14/07	Tue 9/18/07
146	Complete Service Fee Data Collection Sheet	5 days	Wed 9/19/07	Tue 9/25/07
147	Complete Program Data Collection Sheets	5 days	Wed 9/26/07	Tue 10/2/07
148	Complete Payment/Adjustment Code Collection Sheets	3 days	Wed 10/3/07	Fri 10/5/07
149	Complete Facility Defaults Data Collection Sheet	1 day	Mon 10/8/07	Mon 10/8/07
150	Complete Referral Source Data Collection Sheets	1 day	Tue 10/9/07	Tue 10/9/07
151	Complete Practitioner Enrollment Data Collection Sheets	5 days	Wed 10/10/07	Tue 10/16/07
152	Complete Guarantor/Program Billing Defaults Data Collection Sheets	10 days	Wed 10/17/07	Tue 10/30/07
153	Complete Practitioner Numbers by Guarantor Data Collection Sheets	3 days	Wed 10/31/07	Fri 11/2/07
154	Complete Appt Scheduling Site Registration Data Collection Sheets	3 days	Mon 11/5/07	Wed 11/7/07
155	Complete Appt Scheduling Group Registration Data Collection Sheets	3 days	Mon 11/5/07	Wed 11/7/07
156	Complete Appt Scheduling Staff Schedules Data Collection Sheets	3 days	Mon 11/5/07	Wed 11/7/07
157	**File Build Assistance - (BUILD) Root System Code**	**21.75 days**	**Thu 11/8/07**	**Tue 12/11/07**
158	**Cal PM Dictionary and Table Population Assistance**	**18.75 days**	**Thu 11/8/07**	**Thu 12/6/07**
159	Upload All Dictionaries in "BUILD" Root System Code	5 days	Thu 11/8/07	Wed 11/14/07
160	Upload Payment/Adjustment Posting Codes	1 day	Thu 11/15/07	Thu 11/15/07
161	Upload Service Code File	0.25 days	Fri 11/16/07	Fri 11/16/07
162	Upload Guarantor Data Collection Sheets	1 day	Fri 11/16/07	Mon 11/19/07
163	Upload Benefit Plan Data Collection Sheets	1 day	Mon 11/19/07	Tue 11/20/07
164	Upload Service Code Cross Reference Collection Sheets	2 days	Tue 11/20/07	Mon 11/26/07
165	Upload Service Fee Data Collection Sheet	0 days	Mon 11/26/07	Mon 11/26/07
166	Upload Program Data Collection Sheets	0.25 days	Mon 11/26/07	Mon 11/26/07
167	Upload Facility Defaults Data Collection Sheet	0.25 days	Mon 11/26/07	Mon 11/26/07
168	Upload Referral Source Data Collection Sheets	1 day	Mon 11/26/07	Tue 11/27/07
169	Upload Upload Practitioner Enrollment Data Collection Sheets	2 days	Tue 11/27/07	Thu 11/29/07
170	Upload Guarantor/Program Billing Defaults Data Collection Sheets	1 day	Thu 11/29/07	Fri 11/30/07
171	Upload Practitioner Numbers by Guarantor Data Collection Sheets	2 days	Fri 11/30/07	Tue 12/4/07
172	Upload Appt Scheduling Site Registration Data Collection Sheets	2 days	Tue 12/4/07	Thu 12/6/07
173	Upload Appt Scheduling Group Registration Data Collection Sheets	2 days	Tue 12/4/07	Thu 12/6/07
174	Upload Appt Scheduling Staff Schedules Data Collection Sheets	2 days	Tue 12/4/07	Thu 12/6/07
175	Perform QA on PM File Builds	3 days	Thu 12/6/07	Tue 12/11/07
176	**CWS, Avatar Mobile File Build**	**30 days**	**Tue 9/11/07**	**Mon 10/22/07**
177	**Progress Note File Build - Data Collection**	**1 day**	**Tue 9/11/07**	**Tue 9/11/07**
178	Gather, Review, Define Note Type Dictionary	1 day	Tue 9/11/07	Tue 9/11/07
179	**Treatment Plan File Build - Data Gathering**	**20 days**	**Wed 9/12/07**	**Tue 10/9/07**
180	Gather, Review, Define Problems	20 days	Wed 9/12/07	Tue 10/9/07
181	Gather, Review, Define Problem Definitions	20 days	Wed 9/12/07	Tue 10/9/07
182	Gather, Review, Define Goals	20 days	Wed 9/12/07	Tue 10/9/07
183	Gather, Review, Define Objectives	20 days	Wed 9/12/07	Tue 10/9/07
184	Gather, Review, Define Interventions	20 days	Wed 9/12/07	Tue 10/9/07
185	Gather, Review, Define Staff Role in Treatment Planner	20 days	Wed 9/12/07	Tue 10/9/07
186	Gather, Review, Define Current Goals Status	20 days	Wed 9/12/07	Tue 10/9/07
187	Gather, Review, Define Objective Type	20 days	Wed 9/12/07	Tue 10/9/07
188	**Progress Note File Build - Data Entry**	**5 days**	**Wed 10/3/07**	**Tue 10/9/07**

ID	Task Name	Duration	Start	Finish
189	Upload Note Type Dictionary	5 days	Wed 10/3/07	Tue 10/9/07
190	**Treatment Plan File Build - Data Entry / Import**	**6 days**	**Wed 10/10/07**	**Wed 10/17/07**
191	Upload Problems	5 days	Wed 10/10/07	Tue 10/16/07
192	Upload Problem Definitions	5 days	Wed 10/10/07	Tue 10/16/07
193	Upload Goals	5 days	Wed 10/10/07	Tue 10/16/07
194	Upload Objectives	5 days	Wed 10/10/07	Tue 10/16/07
195	Upload Interventions	5 days	Wed 10/10/07	Tue 10/16/07
196	Upload Staff Role in Treatment Planner	5 days	Wed 10/10/07	Tue 10/16/07
197	Upload Current Goals Status	1 day	Wed 10/17/07	Wed 10/17/07
198	Upload Objective Type	1 day	Wed 10/17/07	Wed 10/17/07
199	Perform QA on CWS File Builds	3 days	Thu 10/18/07	Mon 10/22/07
200				
201	**Training of Trainers - PM/CWS**	**18 days**	**Tue 10/23/07**	**Thu 11/15/07**
202	Table Management / Set-up	24 hrs	Tue 10/23/07	Thu 10/25/07
203	Service Entry / Notes	16 hrs	Fri 10/26/07	Mon 10/29/07
204	Scheduling	16 hrs	Tue 10/30/07	Wed 10/31/07
205	Billing	32 hrs	Thu 11/1/07	Tue 11/6/07
206	Reporting / Data Warehouse Middleware	8 hrs	Wed 11/7/07	Wed 11/7/07
207	CWS Assessments	1 day	Thu 11/8/07	Thu 11/8/07
208	CWS Treatment Planning	1 day	Fri 11/9/07	Fri 11/9/07
209	Document Management	1 day	Mon 11/12/07	Mon 11/12/07
210	Avatar Mobile	1 day	Tue 11/13/07	Tue 11/13/07
211	Web Services	1 day	Wed 11/14/07	Wed 11/14/07
212	Workflow Management	1 day	Thu 11/15/07	Thu 11/15/07
213	**Testing**	**80.25 days**	**Tue 12/11/07**	**Tue 4/8/08**
214	**Design Acceptance Test Scenarios and Objectives**	**14.25 days**	**Tue 12/11/07**	**Fri 1/4/08**
215	Admissions/Discharges/Transfers	2 days	Tue 12/11/07	Thu 12/13/07
216	Financial Eligibility	1 day	Thu 12/13/07	Fri 12/14/07
217	MEDS	1 day	Fri 12/14/07	Mon 12/17/07
218	**270/271 Testing**	**1 day**	**Mon 12/17/07**	**Tue 12/18/07**
219	Eligibility processing	1 day	Mon 12/17/07	Tue 12/18/07
220	Share of Cost processing	1 day	Mon 12/17/07	Tue 12/18/07
221	Family Registration and UMDAP	1 day	Fri 12/14/07	Fri 12/14/07
222	Scheduling	1 day	Mon 12/17/07	Mon 12/17/07
223	Service/Charge Entry	2 days	Tue 12/18/07	Wed 12/19/07
224	Client ledger/Liability Distribution	2 days	Tue 12/18/07	Wed 12/19/07
225	PM Workflow	2 days	Thu 12/20/07	Fri 12/21/07
226	Feature customizations and interfaces	1 day	Wed 12/26/07	Wed 12/26/07
227	Assessments	1 day	Thu 12/27/07	Thu 12/27/07
228	Treatment Planning	1 day	Fri 12/28/07	Fri 12/28/07
229	Progress Notes	1 day	Thu 12/27/07	Thu 12/27/07
230	Mobile forms and functions	1 day	Fri 12/28/07	Fri 12/28/07
231	Document Management, document scanning	1 day	Wed 1/2/08	Wed 1/2/08
232	CWS Workflow Management	1 day	Thu 1/3/08	Thu 1/3/08
233	Integration of CWS with Cal-PM	1 day	Fri 1/4/08	Fri 1/4/08
234	**Acceptance Testing Preparation**	**14 days**	**Mon 1/7/08**	**Fri 1/25/08**
235	Copy .dat from "LIVE" Namespaces to "Test" Namespaces	4 hrs	Mon 1/7/08	Mon 1/7/08

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ID	Task Name	Duration	Start	Finish
236	Certify software is ready for testing	0 days	Mon 1/7/08	Mon 1/7/08
237	**Test Conversion**	**12 days**	**Mon 1/7/08**	**Wed 1/23/08**
238	Run Test conversion	16 hrs	Mon 1/7/08	Tue 1/8/08
239	**Valdate Data**	**5 days**	**Wed 1/9/08**	**Tue 1/15/08**
240	Unique Client Identification Numbers	5 days	Wed 1/9/08	Tue 1/15/08
241	Dictionary Values	3 days	Wed 1/9/08	Fri 1/11/08
242	Movement Errors	3 days	Wed 1/9/08	Fri 1/11/08
243	Test/Fix conversion routines	5 days	Wed 1/16/08	Wed 1/23/08
244	Run conversion in support of testing and review results	2 days	Thu 1/24/08	Fri 1/25/08
245	**837 Billing Submission Preparation**	**1 day**	**Mon 1/7/08**	**Mon 1/7/08**
246	ITWS - Setup for Test site - Netsmart new Software vendor	1 day	Mon 1/7/08	Mon 1/7/08
247	Download all Companion Guides	2 hrs	Mon 1/7/08	Mon 1/7/08
248	Apply for 835 Remittance Files	1 day	Mon 1/7/08	Mon 1/7/08
249	**Billing Training**	**11 days**	**Mon 1/7/08**	**Tue 1/22/08**
250	**Billing Set-ups training**	**1 day**	**Mon 1/7/08**	**Mon 1/7/08**
251	Guarantor/Program billing defaults	1 day	Mon 1/7/08	Mon 1/7/08
252	Practitioner numbers by Guarantor/Program	1 day	Mon 1/7/08	Mon 1/7/08
253	Guarantor 837 requirements	1 day	Mon 1/7/08	Mon 1/7/08
254	Posting & adjustment codes	1 day	Mon 1/7/08	Mon 1/7/08
255	Group codes	1 day	Mon 1/7/08	Mon 1/7/08
256	Dunning messages	1 day	Mon 1/7/08	Mon 1/7/08
257	**Closing Charges**	**1 day**	**Tue 1/8/08**	**Tue 1/8/08**
258	Service entry	1 day	Tue 1/8/08	Tue 1/8/08
259	Census Management Reports	1 day	Tue 1/8/08	Tue 1/8/08
260	Inpatient worklists	1 day	Tue 1/8/08	Tue 1/8/08
261	Day Tx worklists	1 day	Tue 1/8/08	Tue 1/8/08
262	Post Staff Activity Log Billing	1 day	Tue 1/8/08	Tue 1/8/08
263	Outpatient service entry	1 day	Tue 1/8/08	Tue 1/8/08
264	Spreadsheet entry	1 day	Tue 1/8/08	Tue 1/8/08
265	**Claiming**	**2 days**	**Wed 1/9/08**	**Thu 1/10/08**
266	Update liabilities	2 days	Wed 1/9/08	Thu 1/10/08
267	Benefit Plan updates	2 days	Wed 1/9/08	Thu 1/10/08
268	Interim batch creations	2 days	Wed 1/9/08	Thu 1/10/08
269	Closing charges	2 days	Wed 1/9/08	Thu 1/10/08
270	**Preparing Medi-Cal 837P**	**1 day**	**Fri 1/11/08**	**Fri 1/11/08**
271	Claim set-up	1 day	Fri 1/11/08	Fri 1/11/08
272	Compiling the claim	1 day	Fri 1/11/08	Fri 1/11/08
273	Errors vs companion guides (fixing errors)	1 day	Fri 1/11/08	Fri 1/11/08
274	Recreating the claim	1 day	Fri 1/11/08	Fri 1/11/08
275	Editing and re-billing	1 day	Fri 1/11/08	Fri 1/11/08
276	Understanding the claim layout	1 day	Fri 1/11/08	Fri 1/11/08
277	**Preparing Medicare 837**	**1 day**	**Mon 1/14/08**	**Mon 1/14/08**
278	Claim set-up	1 day	Mon 1/14/08	Mon 1/14/08
279	Compiling the claim	1 day	Mon 1/14/08	Mon 1/14/08
280	Errors vs companion guides (fixing errors0	1 day	Mon 1/14/08	Mon 1/14/08
281	Recreating the claim	1 day	Mon 1/14/08	Mon 1/14/08
282	Editing and re-billing	1 day	Mon 1/14/08	Mon 1/14/08

ID	Task Name	Duration	Start	Finish
283	Understanding the claim layout	1 day	Mon 1/14/08	Mon 1/14/08
284	**Preparing paper claims**	**1 day**	**Tue 1/15/08**	**Tue 1/15/08**
285	Claim set-up	1 day	Tue 1/15/08	Tue 1/15/08
286	Compiling the claim	1 day	Tue 1/15/08	Tue 1/15/08
287	Errors vs companion guides (fixing errors0	1 day	Tue 1/15/08	Tue 1/15/08
288	Recreating the claim	1 day	Tue 1/15/08	Tue 1/15/08
289	Editing and re-billing	1 day	Tue 1/15/08	Tue 1/15/08
290	**Preparing Family Bill (UMDAP)**	**1 day**	**Wed 1/16/08**	**Wed 1/16/08**
291	Compile	1 day	Wed 1/16/08	Wed 1/16/08
292	Understanding UMDAP calculations	1 day	Wed 1/16/08	Wed 1/16/08
293	Customizing the Family Bill	1 day	Wed 1/16/08	Wed 1/16/08
294	Dunning messages	1 day	Wed 1/16/08	Wed 1/16/08
295	**Remittance Advice EOB Processing**	**1 day**	**Thu 1/17/08**	**Thu 1/17/08**
296	835 Uploads	1 day	Thu 1/17/08	Thu 1/17/08
297	Individual cash posting	1 day	Thu 1/17/08	Thu 1/17/08
298	Quick cash posting	1 day	Thu 1/17/08	Thu 1/17/08
299	Individual quick cash posting	1 day	Thu 1/17/08	Thu 1/17/08
300	Batch cash posting	1 day	Thu 1/17/08	Thu 1/17/08
301	Flag unapid claims	1 day	Thu 1/17/08	Thu 1/17/08
302	**Billing Reports**	**1 day**	**Fri 1/18/08**	**Fri 1/18/08**
303	Individual Client reports	1 day	Fri 1/18/08	Fri 1/18/08
304	Ad Hoc reports	1 day	Fri 1/18/08	Fri 1/18/08
305	Monthly close out reports	1 day	Fri 1/18/08	Fri 1/18/08
306	**Avatar PM Reconciliation/Closing the month**	**1 day**	**Tue 1/22/08**	**Tue 1/22/08**
307	Understanding "Monthly Close-Outs"	1 day	Tue 1/22/08	Tue 1/22/08
308	Summary Trial Balance	1 day	Tue 1/22/08	Tue 1/22/08
309	Earned Income Report	1 day	Tue 1/22/08	Tue 1/22/08
310	Payment/Adjustment report	1 day	Tue 1/22/08	Tue 1/22/08
311	Balancing the system	1 day	Tue 1/22/08	Tue 1/22/08
312	Close out	1 day	Tue 1/22/08	Tue 1/22/08
313	Trouble shooting	1 day	Tue 1/22/08	Tue 1/22/08
314	**Execute Test Plans**	**37 days**	**Mon 1/28/08**	**Tue 3/18/08**
315	Admissions/Discharges/Transfers	3 days	Mon 1/28/08	Wed 1/30/08
316	Financial Eligibility	3 days	Mon 1/28/08	Wed 1/30/08
317	MMEF processing	3 days	Mon 1/28/08	Wed 1/30/08
318	**270/271 Testing**	**3 days**	**Thu 1/31/08**	**Mon 2/4/08**
319	Eligibility processing	3 days	Thu 1/31/08	Mon 2/4/08
320	Share of Cost processing	3 days	Thu 1/31/08	Mon 2/4/08
321	Family Registration and UMDAP	3 days	Mon 1/28/08	Wed 1/30/08
322	Scheduling	5 days	Thu 1/31/08	Wed 2/6/08
323	Service/Charge Entry	5 days	Thu 1/31/08	Wed 2/6/08
324	Client ledger/Liability Distribution	3 days	Thu 2/7/08	Mon 2/11/08
325	Outpatient lab orders	1 day	Tue 2/12/08	Tue 2/12/08
326	PM Workflow	5 days	Wed 2/13/08	Tue 2/19/08
327	Feature customizations and interfaces	5 days	Wed 2/20/08	Tue 2/26/08
328	Assessments	2 days	Wed 2/27/08	Thu 2/28/08
329	Treatment Planning	3 days	Fri 2/29/08	Tue 3/4/08

ID	Task Name	Duration	Start	Finish
330	Progress Notes	2 days	Wed 2/27/08	Thu 2/28/08
331	Mobile forms and functions	3 days	Fri 2/29/08	Tue 3/4/08
332	Document Management, document scanning	5 days	Fri 2/29/08	Thu 3/6/08
333	CWS Workflow Management	5 days	Fri 3/7/08	Thu 3/13/08
334	Integration of CWS with Cal-PM	3 days	Fri 3/14/08	Tue 3/18/08
335	**CSI Testing**	**4 days**	**Thu 1/31/08**	**Tue 2/5/08**
336	Compilation	1 day	Thu 1/31/08	Thu 1/31/08
337	Output Report	1 day	Fri 2/1/08	Fri 2/1/08
338	Review report and fix data problems	2 days	Mon 2/4/08	Tue 2/5/08
339	**MHSA DCR**	**8 days**	**Wed 2/20/08**	**Fri 2/29/08**
340	Compile	6 days	Wed 2/20/08	Wed 2/27/08
341	Output Report	2 days	Thu 2/28/08	Fri 2/29/08
342	**Claims Processing Initial Testing**	**39 days**	**Tue 2/12/08**	**Fri 4/4/08**
343	**837 Claims Submission Testing**	**36 days**	**Tue 2/12/08**	**Tue 4/1/08**
344	**Medi-Cal 837 Testing**	**12 days**	**Tue 2/12/08**	**Wed 2/27/08**
345	Enter Test Claim Clients and Charges	2 days	Tue 2/12/08	Wed 2/13/08
346	Reconfirm System Set-up	1 day	Thu 2/14/08	Thu 2/14/08
347	Produce Test Claim Files	1 day	Fri 2/15/08	Fri 2/15/08
348	Submit Test File	0 days	Fri 2/15/08	Fri 2/15/08
349	Review Results	3 days	Mon 2/25/08	Wed 2/27/08
350	Recreate New Test Claim Files	0 days	Wed 2/27/08	Wed 2/27/08
351	**Medicare Part B 837 Testing**	**12 days**	**Thu 2/28/08**	**Fri 3/14/08**
352	Enter Test Claim Clients and Charges	2 days	Thu 2/28/08	Fri 2/29/08
353	Reconfirm System Set-up	1 day	Mon 3/3/08	Mon 3/3/08
354	Produce Test Claim Files	1 day	Tue 3/4/08	Tue 3/4/08
355	Submit Test File	0 days	Tue 3/4/08	Tue 3/4/08
356	Review Results	3 days	Wed 3/12/08	Fri 3/14/08
357	Recreate New Test Claim Files	0 days	Fri 3/14/08	Fri 3/14/08
358	**HPSM 837 Testing**	**12 days**	**Mon 3/17/08**	**Tue 4/1/08**
359	Enter Test Claim Clients and Charges	2 days	Mon 3/17/08	Tue 3/18/08
360	Reconfirm System Set-up	1 day	Wed 3/19/08	Wed 3/19/08
361	Produce Test Claim Files	1 day	Thu 3/20/08	Thu 3/20/08
362	Submit Test File	0 days	Thu 3/20/08	Thu 3/20/08
363	Review Results	3 days	Fri 3/28/08	Tue 4/1/08
364	Recreate New Test Claim Files	0 days	Tue 4/1/08	Tue 4/1/08
365	**EOB Processing**	**9 days**	**Tue 2/12/08**	**Fri 2/22/08**
366	Medi-Cal 835 EOB testing	5 days	Tue 2/12/08	Mon 2/18/08
367	Medicare 835 EOB testing	3 days	Mon 2/18/08	Wed 2/20/08
368	HPSM 835 EOB testing	3 days	Wed 2/20/08	Fri 2/22/08
369	Paper Claims Testing	2 days	Wed 4/2/08	Thu 4/3/08
370	UMDAP Family Bill testing	2 days	Thu 4/3/08	Fri 4/4/08
371	Billing Reports testing	1 day	Mon 2/25/08	Mon 2/25/08
372	**Post Testing Acceptance Effort**	**15 days**	**Wed 3/19/08**	**Tue 4/8/08**
373	Address Issues Identified During Testing (In "LIVE" Namespaces)	15 days	Wed 3/19/08	Tue 4/8/08
374	Copy .dat from "LIVE" Namespaces to "Test" Namespaces	4 hrs	Wed 3/19/08	Wed 3/19/08
375	**Pre-Go Live Efforts**	**38 days**	**Wed 4/9/08**	**Fri 5/30/08**

ID	Task Name	Duration	Start	Finish
376	**Create User Roles and User Accounts**	**7 days**	**Wed 4/9/08**	**Thu 4/17/08**
377	Define System Codes	2 days	Wed 4/9/08	Thu 4/10/08
378	Create User Roles	3 days	Fri 4/11/08	Tue 4/15/08
379	Define User Accounts	2 days	Wed 4/16/08	Thu 4/17/08
380	**Training Efforts**	**38 days**	**Wed 4/9/08**	**Fri 5/30/08**
381	Develop Training Materials	15 days	Wed 4/9/08	Tue 4/29/08
382	Customize Help System	10 days	Wed 4/30/08	Tue 5/13/08
383	**End User Training - First Sites**	**13 days**	**Wed 5/14/08**	**Fri 5/30/08**
384	**Client Management**	**6 days**	**Wed 5/14/08**	**Wed 5/21/08**
385	Admissions/Discharges/Transfers	1 day	Wed 5/14/08	Wed 5/14/08
386	Financial Eligibility (including MEDS Review)	2 days	Wed 5/14/08	Thu 5/15/08
387	Family Registration/UMDAP (including Family/Next of Kin record)	2 days	Wed 5/14/08	Thu 5/15/08
388	Document Management, scanning	2 days	Fri 5/16/08	Mon 5/19/08
389	Scheduling	2 days	Tue 5/20/08	Wed 5/21/08
390	Service entry	2 days	Thu 5/22/08	Fri 5/23/08
391	Billing	2 days	Mon 5/26/08	Tue 5/27/08
392	Progress Notes	1 day	Wed 5/28/08	Wed 5/28/08
393	Assessments	1 day	Wed 5/28/08	Wed 5/28/08
394	Treatment Plans	1 day	Thu 5/29/08	Thu 5/29/08
395	Outpatient lab orders	4 hrs	Fri 5/30/08	Fri 5/30/08
396	Reporting	4 hrs	Fri 5/30/08	Fri 5/30/08
397				
398	**Go Live Activities**	**125 days**	**Tue 6/3/08**	**Fri 11/28/08**
399	**Go-Live: PM Functions**	**125 days**	**Tue 6/3/08**	**Fri 11/28/08**
400	**Conversion**	**3 days**	**Tue 6/3/08**	**Thu 6/5/08**
401	Production Extraction	8 hrs	Tue 6/3/08	Tue 6/3/08
402	Process Conversion Data	8 hrs	Wed 6/4/08	Wed 6/4/08
403	Review data conversion results	1 day	Thu 6/5/08	Thu 6/5/08
404	**Go-Live Activities**	**120 days**	**Tue 6/10/08**	**Fri 11/28/08**
405	Set up Help Desk	5 days	Tue 6/10/08	Mon 6/16/08
406	Complete supplemental conversion data	2 days	Tue 6/17/08	Wed 6/18/08
407	Initiate VAX / Avatar synchronization	1 day	Thu 6/19/08	Thu 6/19/08
408	On-Site Go-Live Support	1 day	Fri 6/20/08	Fri 6/20/08
409	**Technical Go-Live with Clinic 1**	**6 days**	**Mon 6/23/08**	**Mon 6/30/08**
410	Enter Services	1 day	Mon 6/23/08	Mon 6/23/08
411	Test VAX / Avatar synchronization nightly transmissions from Avatar to VAX	3 days	Mon 6/23/08	Wed 6/25/08
412	Review data	3 days	Tue 6/24/08	Thu 6/26/08
413	Load MEDS tape and run eligibility	1 day	Tue 6/24/08	Tue 6/24/08
414	Analyze and fix data	3 days	Thu 6/26/08	Mon 6/30/08
415	Review user built screens	3 days	Mon 6/23/08	Wed 6/25/08
416	**Go Live with Clinic 1**	**5 days**	**Tue 7/1/08**	**Tue 7/8/08**
417	On-Site Go-Live Support	5 days	Tue 7/1/08	Tue 7/8/08
418	Assist with log-ins	5 days	Tue 7/1/08	Tue 7/8/08
419	Monitor processes	5 days	Tue 7/1/08	Tue 7/8/08
420	Track and document all issues	5 days	Tue 7/1/08	Tue 7/8/08
421	**Run Parallel Systems**	**22 days**	**Tue 7/1/08**	**Thu 7/31/08**

ID	Task Name	Duration	Start	Finish
422	Process nightly update from Avatar to VAX	22 days	Tue 7/1/08	Thu 7/31/08
423	Review and adjust VAX / Avatar synchronization as needed	22 days	Tue 7/1/08	Thu 7/31/08
424	**Monthly Closing**	**12 days**	**Fri 8/1/08**	**Mon 8/18/08**
425	Close and ready claims for VAX	3 days	Fri 8/1/08	Tue 8/5/08
426	Run VAX report of totals for Clinic 1	1 day	Wed 8/6/08	Wed 8/6/08
427	Close and ready claims for Avatar	2 days	Fri 8/1/08	Mon 8/4/08
428	Run Avatar report of totals for Clinic 1	1 day	Tue 8/5/08	Tue 8/5/08
429	Claims Testing process	3 days	Wed 8/6/08	Fri 8/8/08
430	Compare and analyze VAX, Avatar claims for Clinic 1	5 days	Mon 8/11/08	Fri 8/15/08
431	Adjust Avatar Billing Rules as needed	1 day	Mon 8/18/08	Mon 8/18/08
432	**Go Live with Clinic 2**	**49 days**	**Mon 7/28/08**	**Fri 10/3/08**
433	Clinic 2 User training	4 days	Mon 7/28/08	Thu 7/31/08
434	**Delta 1 Data Conversion efforts (see notes)**	**4 days**	**Mon 7/28/08**	**Thu 7/31/08**
435	**Create Test data conversion file from VAX**	**1 day**	**Mon 7/28/08**	**Mon 7/28/08**
436	Scrub Avatar data for issues	1 day	Mon 7/28/08	Mon 7/28/08
437	Check unique client identifiers	1 day	Mon 7/28/08	Mon 7/28/08
438	check dictionary values	1 day	Mon 7/28/08	Mon 7/28/08
439	Movement errors	1 day	Mon 7/28/08	Mon 7/28/08
440	Run test conversion	1 day	Mon 7/28/08	Mon 7/28/08
441	Analyze and fix	1 day	Mon 7/28/08	Mon 7/28/08
442	**Claim Line conversion for Clinic 1**	**2 days**	**Tue 7/29/08**	**Wed 7/30/08**
443	Pull payments posted since initial conversion for Clinic 1 claim	2 days	Tue 7/29/08	Wed 7/30/08
444	Post payments in Avatar	2 days	Tue 7/29/08	Wed 7/30/08
445	**Production data conversion**	**1 day**	**Thu 7/31/08**	**Thu 7/31/08**
446	Extract data from VAX	1 day	Thu 7/31/08	Thu 7/31/08
447	Process conversion data	1 day	Thu 7/31/08	Thu 7/31/08
448	Go Live with Clinic 2	1 day	Fri 8/1/08	Fri 8/1/08
449	Run Parallel systems in Clinics 1 and 2	21 days	Fri 8/1/08	Fri 8/29/08
450				
451	**Monthly Closing**	**14 days**	**Mon 9/1/08**	**Fri 9/19/08**
452	Close and ready claims for VAX	3 days	Mon 9/1/08	Wed 9/3/08
453	Run VAX report of totals for Clinics 1 & 2	1 day	Thu 9/4/08	Thu 9/4/08
454	Close and ready claims for Avatar	2 days	Mon 9/1/08	Tue 9/2/08
455	Run Avatar report of totals for Clinics 1 & 2	1 day	Wed 9/3/08	Wed 9/3/08
456	Claims Testing process	5 days	Thu 9/4/08	Thu 9/11/08
457	Compare and analyze VAX, Avatar claims for Clinics 1 & 2	5 days	Fri 9/12/08	Thu 9/18/08
458	Adjust Avatar Billing Rules as needed	1 day	Fri 9/19/08	Fri 9/19/08
459	**EOB Processing**	**10 days**	**Mon 9/22/08**	**Fri 10/3/08**
460	**Medi-Cal 835 EOB testing**	**5 days**	**Mon 9/22/08**	**Fri 9/26/08**
461	Upload 835 test to Avatar	5 days	Mon 9/22/08	Fri 9/26/08
462	Reconfirm System set-up	5 days	Mon 9/22/08	Fri 9/26/08
463	Product reports	5 days	Mon 9/22/08	Fri 9/26/08
464	Review results	5 days	Mon 9/22/08	Fri 9/26/08
465	Adjust errors	5 days	Mon 9/22/08	Fri 9/26/08
466	**Medicare 835 EOB testing**	**4 days**	**Fri 9/26/08**	**Wed 10/1/08**
467	Upload 835 test to Avatar	4 days	Fri 9/26/08	Wed 10/1/08
468	Reconfirm System set-up	4 days	Fri 9/26/08	Wed 10/1/08

ID	Task Name	Duration	Start	Finish
469	Product reports	4 days	Fri 9/26/08	Wed 10/1/08
470	Review results	4 days	Fri 9/26/08	Wed 10/1/08
471	Adjust errors	4 days	Fri 9/26/08	Wed 10/1/08
472	**HPSM 835 EOB testing**	**3 days**	**Wed 10/1/08**	**Fri 10/3/08**
473	Upload 835 test to Avatar	3 days	Wed 10/1/08	Fri 10/3/08
474	Reconfirm System set-up	3 days	Wed 10/1/08	Fri 10/3/08
475	Product reports	3 days	Wed 10/1/08	Fri 10/3/08
476	Review results	3 days	Wed 10/1/08	Fri 10/3/08
477	Adjust errors	3 days	Wed 10/1/08	Fri 10/3/08
478	**Clinic 3 Go Live Activities**	**25 days**	**Tue 8/26/08**	**Tue 9/30/08**
479	Delta 2 Data conversion	4 days	Tue 8/26/08	Fri 8/29/08
480	Clinic 3 user training	3 days	Wed 8/27/08	Fri 8/29/08
481	Go Live with Clinic 3	1 day	Mon 9/1/08	Mon 9/1/08
482	Run parallel systems in Clinics 1, 2, and 3	21 days	Mon 9/1/08	Tue 9/30/08
483	**Monthly Closing**	**14 days**	**Tue 8/26/08**	**Mon 9/15/08**
484	Close and ready claims for VAX	3 days	Tue 8/26/08	Thu 8/28/08
485	Run VAX report of totals for Clinics 1, 2, and 3	1 day	Fri 8/29/08	Fri 8/29/08
486	Close and ready claims for Avatar	2 days	Tue 8/26/08	Wed 8/27/08
487	Run Avatar report of totals for Clinics 1, 2, and 3	1 day	Thu 8/28/08	Thu 8/28/08
488	Claims Testing process	5 days	Fri 8/29/08	Thu 9/4/08
489	Compare and analyze VAX, Avatar claims for Clinics 1, 2, and 3	5 days	Fri 9/5/08	Fri 9/12/08
490	Adjust Avatar Billing Rules as needed	1 day	Mon 9/15/08	Mon 9/15/08
491	**837 Claims Submission Testing**	**11 days**	**Tue 9/16/08**	**Tue 9/30/08**
492	**Medi-Cal 837 Testing - Second test submission**	**9 days**	**Tue 9/16/08**	**Fri 9/26/08**
493	Produce Test Claim Files	1 day	Tue 9/16/08	Tue 9/16/08
494	Submit Test File	0 days	Tue 9/16/08	Tue 9/16/08
495	Review Results, Adjust billing rules as needed	3 days	Wed 9/24/08	Fri 9/26/08
496	**Medicare Part B 837 Testing**	**9 days**	**Wed 9/17/08**	**Mon 9/29/08**
497	Produce Test Claim Files	1 day	Wed 9/17/08	Wed 9/17/08
498	Submit Test File	0 days	Wed 9/17/08	Wed 9/17/08
499	Review Results, Adjust billing rules as needed	3 days	Thu 9/25/08	Mon 9/29/08
500	**HPSM 837 Testing**	**9 days**	**Thu 9/18/08**	**Tue 9/30/08**
501	Produce Test Claim Files	1 day	Thu 9/18/08	Thu 9/18/08
502	Submit Test File	0 days	Thu 9/18/08	Thu 9/18/08
503	Review Results, Adjust billing rules as needed	3 days	Fri 9/26/08	Tue 9/30/08
504	**EOB Processing**	**10 days**	**Wed 10/15/08**	**Tue 10/28/08**
505	**Medi-Cal 835 EOB testing**	**5 days**	**Wed 10/15/08**	**Tue 10/21/08**
506	Upload 835 test to Avatar	5 days	Wed 10/15/08	Tue 10/21/08
507	Reconfirm System set-up	5 days	Wed 10/15/08	Tue 10/21/08
508	Product reports	5 days	Wed 10/15/08	Tue 10/21/08
509	Review results	5 days	Wed 10/15/08	Tue 10/21/08
510	Adjust errors	5 days	Wed 10/15/08	Tue 10/21/08
511	**Medicare 835 EOB testing**	**4 days**	**Tue 10/21/08**	**Fri 10/24/08**
512	Upload 835 test to Avatar	4 days	Tue 10/21/08	Fri 10/24/08
513	Reconfirm System set-up	4 days	Tue 10/21/08	Fri 10/24/08
514	Product reports	4 days	Tue 10/21/08	Fri 10/24/08
515	Review results	4 days	Tue 10/21/08	Fri 10/24/08

ID	Task Name	Duration	Start	Finish
516	Adjust errors	4 days	Tue 10/21/08	Fri 10/24/08
517	**HPSM 835 EOB testing**	**3 days**	**Fri 10/24/08**	**Tue 10/28/08**
518	Upload 835 test to Avatar	3 days	Fri 10/24/08	Tue 10/28/08
519	Reconfirm System set-up	3 days	Fri 10/24/08	Tue 10/28/08
520	Product reports	3 days	Fri 10/24/08	Tue 10/28/08
521	Review results	3 days	Fri 10/24/08	Tue 10/28/08
522	Adjust errors	3 days	Fri 10/24/08	Tue 10/28/08
523	**Clinic 4 Go Live Activities**	**27 days**	**Thu 9/25/08**	**Fri 10/31/08**
524	Delta 3 Data conversion	4 days	Thu 9/25/08	Tue 9/30/08
525	Clinic 4 user training	2 days	Mon 9/29/08	Tue 9/30/08
526	Go Live with Clinic 4	1 day	Wed 10/1/08	Wed 10/1/08
527	Run parallel systems in Clinics 1 - 4	22 days	Thu 10/2/08	Fri 10/31/08
528	**Monthly Closing**	**14 days**	**Thu 9/25/08**	**Tue 10/14/08**
529	Close and ready claims for VAX	3 days	Thu 9/25/08	Mon 9/29/08
530	Run VAX report of totals for Clinics 1 - 4	1 day	Tue 9/30/08	Tue 9/30/08
531	Close and ready claims for Avatar	2 days	Thu 9/25/08	Fri 9/26/08
532	Run Avatar report of totals for Clinics 1 - 4	1 day	Mon 9/29/08	Mon 9/29/08
533	Claims Testing process	5 days	Tue 9/30/08	Mon 10/6/08
534	Compare and analyze VAX, Avatar claims for Clinics 1 - 4	5 days	Tue 10/7/08	Mon 10/13/08
535	Adjust Avatar Billing Rules as needed	1 day	Tue 10/14/08	Tue 10/14/08
536	**837 Claims Certification**	**11 days**	**Wed 10/15/08**	**Wed 10/29/08**
537	**Medi-Cal 837 Testing - Second test submission**	**9 days**	**Wed 10/15/08**	**Mon 10/27/08**
538	Produce Test Claim Files	1 day	Wed 10/15/08	Wed 10/15/08
539	Submit Test File	0 days	Wed 10/15/08	Wed 10/15/08
540	Review Results, Adjust billing rules as needed	3 days	Thu 10/23/08	Mon 10/27/08
541	**Medicare Part B 837 Testing**	**9 days**	**Thu 10/16/08**	**Tue 10/28/08**
542	Produce Test Claim Files	1 day	Thu 10/16/08	Thu 10/16/08
543	Submit Test File	0 days	Thu 10/16/08	Thu 10/16/08
544	Review Results, Adjust billing rules as needed	3 days	Fri 10/24/08	Tue 10/28/08
545	**HPSM 837 Testing**	**9 days**	**Fri 10/17/08**	**Wed 10/29/08**
546	Produce Test Claim Files	1 day	Fri 10/17/08	Fri 10/17/08
547	Submit Test File	0 days	Fri 10/17/08	Fri 10/17/08
548	Review Results, Adjust billing rules as needed	3 days	Mon 10/27/08	Wed 10/29/08
549	**835 EOB Processing**	**10 days**	**Thu 11/13/08**	**Fri 11/28/08**
550	**Medi-Cal 835 EOB testing**	**5 days**	**Thu 11/13/08**	**Wed 11/19/08**
551	Upload 835 test to Avatar	5 days	Thu 11/13/08	Wed 11/19/08
552	Reconfirm System set-up	5 days	Thu 11/13/08	Wed 11/19/08
553	Product reports	5 days	Thu 11/13/08	Wed 11/19/08
554	Review results	5 days	Thu 11/13/08	Wed 11/19/08
555	Adjust errors	5 days	Thu 11/13/08	Wed 11/19/08
556	**Medicare 835 EOB testing**	**4 days**	**Wed 11/19/08**	**Wed 11/26/08**
557	Upload 835 test to Avatar	4 days	Wed 11/19/08	Wed 11/26/08
558	Reconfirm System set-up	4 days	Wed 11/19/08	Wed 11/26/08
559	Product reports	4 days	Wed 11/19/08	Wed 11/26/08
560	Review results	4 days	Wed 11/19/08	Wed 11/26/08
561	Adjust errors	4 days	Wed 11/19/08	Wed 11/26/08

ID	Task Name	Duration	Start	Finish
562	**HPSM 835 EOB testing**	**3 days**	**Wed 11/26/08**	**Fri 11/28/08**
563	Upload 835 test to Avatar	3 days	Wed 11/26/08	Fri 11/28/08
564	Reconfirm System set-up	3 days	Wed 11/26/08	Fri 11/28/08
565	Product reports	3 days	Wed 11/26/08	Fri 11/28/08
566	Review results	3 days	Wed 11/26/08	Fri 11/28/08
567	Adjust errors	3 days	Wed 11/26/08	Fri 11/28/08
568	**Cal PM, CWS, Document Management, Software Development Production Acceptance Testing**	**34 days**	**Mon 12/1/08**	**Tue 1/20/09**
569	**Execute Production Test Plans**	**34 days**	**Mon 12/1/08**	**Tue 1/20/09**
570	Admissions/Discharges/Transfers	3 days	Mon 12/1/08	Wed 12/3/08
571	Financial Eligibility	3 days	Mon 12/1/08	Wed 12/3/08
572	MMEF processing	3 days	Mon 12/1/08	Wed 12/3/08
573	**270/271 Acceptance**	**2 days**	**Thu 12/4/08**	**Fri 12/5/08**
574	Eligibility processing	2 days	Thu 12/4/08	Fri 12/5/08
575	Share of Cost processing	2 days	Thu 12/4/08	Fri 12/5/08
576	Family Registration and UMDAP	2 days	Mon 12/1/08	Tue 12/2/08
577	Scheduling	4 days	Wed 12/3/08	Mon 12/8/08
578	Service/Charge Entry	4 days	Wed 12/3/08	Mon 12/8/08
579	Client ledger/Liability Distribution	3 days	Tue 12/9/08	Thu 12/11/08
580	Outpatient lab orders	1 day	Fri 12/12/08	Fri 12/12/08
581	PM Workflow	4 days	Mon 12/15/08	Thu 12/18/08
582	Feature customizations and interfaces	5 days	Fri 12/19/08	Mon 12/29/08
583	Assessments	2 days	Tue 12/30/08	Thu 1/1/09
584	Treatment Planning	3 days	Fri 1/2/09	Tue 1/6/09
585	Progress Notes	2 days	Tue 12/30/08	Thu 1/1/09
586	Mobile forms and functions	3 days	Fri 1/2/09	Tue 1/6/09
587	Document Management, document scanning	5 days	Fri 1/2/09	Thu 1/8/09
588	CWS Workflow Management	5 days	Fri 1/9/09	Thu 1/15/09
589	Integration of CWS with Cal-PM	3 days	Fri 1/16/09	Tue 1/20/09
590	**CSI Acceptance**	**4 days**	**Wed 12/3/08**	**Mon 12/8/08**
591	Compilation	1 day	Wed 12/3/08	Wed 12/3/08
592	Output Report	1 day	Thu 12/4/08	Thu 12/4/08
593	Review report and fix data problems	2 days	Fri 12/5/08	Mon 12/8/08
594	**MHSA DCR Acceptance**	**6 days**	**Fri 12/19/08**	**Tue 12/30/08**
595	Compile	4 days	Fri 12/19/08	Wed 12/24/08
596	Output Report	2 days	Mon 12/29/08	Tue 12/30/08
597	**837 Claims Acceptance Production Claim**	**2 days**	**Tue 12/30/08**	**Thu 1/1/09**
598	Medi-Cal	2 days	Tue 12/30/08	Thu 1/1/09
599	Medicare	2 days	Tue 12/30/08	Thu 1/1/09
600	HPSM	2 days	Tue 12/30/08	Thu 1/1/09
601	**835 EOB Acceptance Production EOB**	**10 days**	**Fri 1/2/09**	**Thu 1/15/09**
602	Medi-Cal 835 EOB	5 days	Fri 1/2/09	Thu 1/8/09
603	Medicare 835 EOB	4 days	Thu 1/8/09	Tue 1/13/09
604	HPSM 835 EOB	3 days	Tue 1/13/09	Thu 1/15/09
605	Paper claims acceptance	1 day	Tue 12/30/08	Tue 12/30/08
606	UMDAP Family Bill testing	2 days	Thu 1/1/09	Fri 1/2/09
607	Billing Reports testing	1 day	Thu 1/1/09	Thu 1/1/09
608	**Accept Phase 1**	**1 day**	**Tue 1/20/09**	**Wed 1/21/09**

ID	Task Name	Duration	Start	Finish
609	County Production Acceptance of Phase 1 Modules and Software development	1 day	Wed 1/21/09	Wed 1/21/09
610	License Payment	1 day	Wed 1/21/09	Wed 1/21/09
611	Phase I Completed	0 days	Tue 1/20/09	Tue 1/20/09
612	Transition to Maintenance for accepted programs/modules	1 day	Wed 1/21/09	Wed 1/21/09
613				
614	**Phase 2 -Implementation of Infoscriber, Avatar MSO, Web Services for MSO, and the rollout of Cal-PM and CW**	**164 days**	**Thu 1/22/09**	**Tue 9/8/09**
615	**Update Statement of Work**	**7 days**	**Thu 1/22/09**	**Fri 1/30/09**
616	Lessons Learned - Post Phase1 Impmenentation Review	8 hrs	Thu 1/22/09	Thu 1/22/09
617	Update Project Plan	16 hrs	Fri 1/23/09	Mon 1/26/09
618	Compile Updated version	16 hrs	Tue 1/27/09	Wed 1/28/09
619	Aprove Statement of Work	16 hrs	Thu 1/29/09	Fri 1/30/09
620	**Pre-Specification Training - MSO and Infoscriber Implementation**	**6 days**	**Mon 2/2/09**	**Mon 2/9/09**
621	Install latest version of MSO	1 day	Mon 2/2/09	Mon 2/2/09
622	Increase Named users by 170	1 day	Mon 2/2/09	Mon 2/2/09
623	Increase Cache processes by 43	1 day	Mon 2/2/09	Mon 2/2/09
624	**Initial Software Training**	**6 days**	**Mon 2/2/09**	**Mon 2/9/09**
625	MSO Quickstart	16 hrs	Mon 2/2/09	Tue 2/3/09
626	MSO Data Model	8 hrs	Wed 2/4/09	Wed 2/4/09
627	MSO Web Services	2 days	Thu 2/5/09	Fri 2/6/09
628	MSO/PM Integration	8 hrs	Mon 2/9/09	Mon 2/9/09
629	Infoscriber	1 day	Mon 2/2/09	Mon 2/2/09
630	**Technical Configuration Efforts (RAD Forms and Crystal)**	**49 days**	**Tue 2/10/09**	**Fri 4/17/09**
631	**RADplus Forms Development**	**24 days**	**Tue 2/10/09**	**Fri 3/13/09**
632	Identify MSO Forms to be Modeled	16 hrs	Tue 2/10/09	Wed 2/11/09
633	Prioritize Forms to be Modeled	8 hrs	Thu 2/12/09	Thu 2/12/09
634	Develop Specifications for Forms	5 days	Fri 2/13/09	Thu 2/19/09
635	Model Forms in TEST Namespaces	10 days	Fri 2/20/09	Thu 3/5/09
636	Test and Approve Completed Forms	5 days	Fri 3/6/09	Thu 3/12/09
637	Export Approved Forms to LIVE Namespace	1 day	Fri 3/13/09	Fri 3/13/09
638	**Crystal Report Development**	**35 days**	**Mon 3/2/09**	**Fri 4/17/09**
639	Identify Crystal Reports to be Developed	16 hrs	Mon 3/2/09	Tue 3/3/09
640	Prioritize Reports to be Developed	8 hrs	Wed 3/4/09	Wed 3/4/09
641	Develop Specifications for Reports	5 days	Thu 3/5/09	Wed 3/11/09
642	Develop Reports	20 days	Thu 3/12/09	Wed 4/8/09
643	Test and Approve Reports	5 days	Thu 4/9/09	Wed 4/15/09
644	Import Approved Reports to LIVE Namespace (When Appropriate	2 days	Thu 4/16/09	Fri 4/17/09
645	**MSO File Build - Data Collection**	**38 days**	**Tue 2/10/09**	**Thu 4/2/09**
646	**Member File Elements**	**7 days**	**Tue 2/10/09**	**Wed 2/18/09**
647	Member County (Must match the dictionary in LMEHSIS)	1 day	Tue 2/10/09	Tue 2/10/09
648	Member Language (Optional)	1 day	Wed 2/11/09	Wed 2/11/09
649	Reason For Termination	1 day	Thu 2/12/09	Thu 2/12/09
650	Authorized Level of Care (Single Choice = NA)	1 day	Fri 2/13/09	Fri 2/13/09
651	Letter Type	1 day	Mon 2/16/09	Mon 2/16/09
652	Current Authorization Status Reason	1 day	Tue 2/17/09	Tue 2/17/09
653	Primary Level Of Care (Care Manager Assignment) (e.g. Screening, Level II, Level III, Outpatient, Case	1 day	Wed 2/18/09	Wed 2/18/09
654	**Provider File Elements**	**9 days**	**Thu 2/19/09**	**Tue 3/3/09**
655	Specialties	1 day	Thu 2/19/09	Thu 2/19/09

ID	Task Name	Duration	Start	Finish
656	Type Of Contact	1 day	Fri 2/20/09	Fri 2/20/09
657	Special Accommodations	1 day	Mon 2/23/09	Mon 2/23/09
658	Performing Provider's Age Group	1 day	Tue 2/24/09	Tue 2/24/09
659	Reason for Termination	1 day	Wed 2/25/09	Wed 2/25/09
660	Performing Provider's License Type	1 day	Thu 2/26/09	Thu 2/26/09
661	Treatment Age Group Specialties	1 day	Fri 2/27/09	Fri 2/27/09
662	Hospital Privileges	1 day	Mon 3/2/09	Mon 3/2/09
663	Other Languages	1 day	Tue 3/3/09	Tue 3/3/09
664	**Funding Source File Elements**	**1 day**	**Wed 3/4/09**	**Wed 3/4/09**
665	Funding Source Type	1 day	Wed 3/4/09	Wed 3/4/09
666	**Batch Claim Processing File Elements**	**1 day**	**Thu 3/5/09**	**Thu 3/5/09**
667	Claim Status Reason (e.g. Approved but units decreased due to daily/weekly/monthly limits)	1 day	Thu 3/5/09	Thu 3/5/09
668	**RADplus User File Elements**	**1 day**	**Fri 3/6/09**	**Fri 3/6/09**
669	Position Class (e.g. Care Manager, Claims Adjudication, IT, Admin, etc.)	1 day	Fri 3/6/09	Fri 3/6/09
670	**Business Rules Set Up**	**14 days**	**Mon 3/9/09**	**Thu 3/26/09**
671	Complete Position Class (e.g. Care Manager, Claims Adjudication, IT, Admin, etc.)	1 day	Mon 3/9/09	Mon 3/9/09
672	Complete System Defaults Worksheet	1 day	Mon 3/9/09	Mon 3/9/09
673	Complete CPT Code Definition Worksheet	1 day	Tue 3/10/09	Tue 3/10/09
674	Complete UB-92 Code Definition Worksheet	1 day	Wed 3/11/09	Wed 3/11/09
675	Complete Authorization Grouping Worksheet	1 day	Thu 3/12/09	Thu 3/12/09
676	Complete Approve/Pend/Deny Rules Worksheets	5 days	Thu 3/12/09	Wed 3/18/09
677	Complete Contract Registration Worksheets	5 days	Thu 3/19/09	Wed 3/25/09
678	Complete Plan Definition Worksheets	5 days	Thu 3/19/09	Wed 3/25/09
679	Complete Posting/Adjustment Table Worksheets	1 day	Thu 3/26/09	Thu 3/26/09
680	**Provider Set-up**	**11 days**	**Thu 3/19/09**	**Thu 4/2/09**
681	Complete Contracting Provider Set-up Worksheets	5 days	Fri 3/27/09	Thu 4/2/09
682	Complete Performing Provider Set-Up Worksheets	5 days	Thu 3/19/09	Wed 3/25/09
683	**MSO File Build - Data Entry / Import**	**42 days**	**Fri 4/3/09**	**Mon 6/1/09**
684	Upload Dictionary Values	3 days	Fri 4/3/09	Tue 4/7/09
685	**Member File Elements**	**7 days**	**Wed 4/8/09**	**Thu 4/16/09**
686	Member County (Must match the dictionary in LMEHSIS)	1 day	Wed 4/8/09	Wed 4/8/09
687	Member Language (Optional)	1 day	Thu 4/9/09	Thu 4/9/09
688	Reason For Termination	1 day	Fri 4/10/09	Fri 4/10/09
689	Authorized Level of Care (Single Choice = NA)	1 day	Mon 4/13/09	Mon 4/13/09
690	Letter Type	1 day	Tue 4/14/09	Tue 4/14/09
691	Current Authorization Status Reason	1 day	Wed 4/15/09	Wed 4/15/09
692	Primary Level Of Care (Care Manager Assignment) (e.g. Screening, Level II, Level III, Outpatient, Case	1 day	Thu 4/16/09	Thu 4/16/09
693	**Provider File Elements**	**9 days**	**Fri 4/17/09**	**Wed 4/29/09**
694	Specialties	1 day	Fri 4/17/09	Fri 4/17/09
695	Type Of Contact	1 day	Mon 4/20/09	Mon 4/20/09
696	Special Accommodations	1 day	Tue 4/21/09	Tue 4/21/09
697	Performing Provider's Age Group	1 day	Wed 4/22/09	Wed 4/22/09
698	Reason for Termination	1 day	Thu 4/23/09	Thu 4/23/09
699	Performing Provider's License Type	1 day	Fri 4/24/09	Fri 4/24/09
700	Treatment Age Group Specialties	1 day	Mon 4/27/09	Mon 4/27/09
701	Hospital Privileges	1 day	Tue 4/28/09	Tue 4/28/09
702	Other Languages	1 day	Wed 4/29/09	Wed 4/29/09

ID	Task Name	Duration	Start	Finish
703	**Funding Source File Elements**	**1 day**	**Thu 4/30/09**	**Thu 4/30/09**
704	Funding Source Type	1 day	Thu 4/30/09	Thu 4/30/09
705	**Batch Claim Processing File Elements**	**1 day**	**Fri 5/1/09**	**Fri 5/1/09**
706	Claim Status Reason (e.g. Approved but units decreased due to daily/weekly/monthly limits)	1 day	Fri 5/1/09	Fri 5/1/09
707	**RADplus User File Elements**	**1 day**	**Mon 5/4/09**	**Mon 5/4/09**
708	Position Class (e.g. Care Manager, Claims Adjudication, IT, Admin, etc.)	1 day	Mon 5/4/09	Mon 5/4/09
709	**Business Rule Tables**	**14 days**	**Tue 5/5/09**	**Fri 5/22/09**
710	Upload System Defaults	1 day	Tue 5/5/09	Tue 5/5/09
711	Upload CPT Code Definition	1 day	Wed 5/6/09	Wed 5/6/09
712	Upload UB-92 Code Definition	1 day	Thu 5/7/09	Thu 5/7/09
713	Upload Authorization Grouping	1 day	Fri 5/8/09	Fri 5/8/09
714	Upload Approve/Pend/Deny Rules	3 days	Mon 5/11/09	Wed 5/13/09
715	Upload Contract Registration	3 days	Thu 5/14/09	Mon 5/18/09
716	Upload Plan Definition	3 days	Tue 5/19/09	Thu 5/21/09
717	Upload Posting/Adjustment Table	1 day	Fri 5/22/09	Fri 5/22/09
718	**Provider Set-up**	**6 days**	**Mon 5/25/09**	**Mon 6/1/09**
719	Upload Contracting Provider Set-up	3 days	Mon 5/25/09	Wed 5/27/09
720	Upload Performing Provider Set-Up	3 days	Thu 5/28/09	Mon 6/1/09
721	**MSO/Infoscriber Data conversion**	**5 days**	**Tue 6/2/09**	**Mon 6/8/09**
722	Medication history	5 days	Tue 6/2/09	Mon 6/8/09
723	Pharmacy phone numbers	5 days	Tue 6/2/09	Mon 6/8/09
724	Open authorizations	5 days	Tue 6/2/09	Mon 6/8/09
725	**MSO/InfoScriber Application Testing**	**76 days**	**Fri 4/3/09**	**Fri 7/17/09**
726	Design Acceptance Test Scenarios and Objectives	20 days	Fri 4/3/09	Thu 4/30/09
727	**Perform Acceptance Testing**	**34 days**	**Tue 6/2/09**	**Fri 7/17/09**
728	**Execute Test Plans**	**15 days**	**Tue 6/2/09**	**Mon 6/22/09**
729	**MSO**	**15 days**	**Tue 6/2/09**	**Mon 6/22/09**
730	Credentialing	15 days	Tue 6/2/09	Mon 6/22/09
731	Authorizations	15 days	Tue 6/2/09	Mon 6/22/09
732	Claims	15 days	Tue 6/2/09	Mon 6/22/09
733	MSO/PM Integration	15 days	Tue 6/2/09	Mon 6/22/09
734	**InfoScriber**	**8 days**	**Tue 6/2/09**	**Thu 6/11/09**
735	Enable and Test link from CWS	16 hrs	Tue 6/2/09	Wed 6/3/09
736	Medication history	8 days	Tue 6/2/09	Thu 6/11/09
737	Prescriptions	8 days	Tue 6/2/09	Thu 6/11/09
738	Refills	8 days	Tue 6/2/09	Thu 6/11/09
739	Reports	8 days	Tue 6/2/09	Thu 6/11/09
740	**Refine / Correct / Refresh**	**26 days**	**Fri 6/12/09**	**Fri 7/17/09**
741	Publish Testing Findings	10 days	Fri 6/12/09	Thu 6/25/09
742	Initiate PCR's	5 days	Fri 6/26/09	Thu 7/2/09
743	Perform PCR's and re-test	10 days	Fri 7/3/09	Thu 7/16/09
744	Refresh / Update production systems	1 day	Fri 7/17/09	Fri 7/17/09
745	**MSO Pre-Go Live Efforts**	**15 days**	**Mon 7/20/09**	**Fri 8/7/09**
746	**Create User roles and accounts**	**1 day**	**Mon 7/20/09**	**Mon 7/20/09**
747	Create User roles	1 day	Mon 7/20/09	Mon 7/20/09
748	Define User accounts	1 day	Mon 7/20/09	Mon 7/20/09

ID	Task Name	Duration	Start	Finish
749	**Training Efforts**	**15 days**	**Mon 7/20/09**	**Fri 8/7/09**
750	**Train the Trainer Classes**	**3 days**	**Mon 7/20/09**	**Wed 7/22/09**
751	Membership management	3 days	Mon 7/20/09	Wed 7/22/09
752	Care/Utilization management	3 days	Mon 7/20/09	Wed 7/22/09
753	Claims Management	3 days	Mon 7/20/09	Wed 7/22/09
754	Develop Training Materials	10 days	Thu 7/23/09	Wed 8/5/09
755	Customize Help System	5 days	Mon 8/3/09	Fri 8/7/09
756	**End User Training**	**2 days**	**Thu 7/23/09**	**Fri 7/24/09**
757	Membership management	2 days	Thu 7/23/09	Fri 7/24/09
758	Care/Utilization management	2 days	Thu 7/23/09	Fri 7/24/09
759	Claims Management	2 days	Thu 7/23/09	Fri 7/24/09
760	**InfoScriber Pre-Go Live Efforts**	**17 days**	**Mon 6/29/09**	**Tue 7/21/09**
761	**Create User roles and accounts**	**1 day**	**Mon 6/29/09**	**Mon 6/29/09**
762	Create User roles	1 day	Mon 6/29/09	Mon 6/29/09
763	Define User accounts	1 day	Mon 6/29/09	Mon 6/29/09
764	**Training Efforts**	**16 days**	**Tue 6/30/09**	**Tue 7/21/09**
765	Train the Trainer Classes	2 days	Tue 6/30/09	Wed 7/1/09
766	Develop Training Materials	10 days	Thu 7/2/09	Wed 7/15/09
767	Customize Help System	5 days	Mon 7/13/09	Fri 7/17/09
768	End User Training	2 days	Mon 7/20/09	Tue 7/21/09
769	**MSO Go Live Activities**	**21 days**	**Mon 8/10/09**	**Mon 9/7/09**
770	Go Live Support	5 days	Mon 8/10/09	Fri 8/14/09
771	Begin Go-Live Activities	5 days	Mon 8/10/09	Fri 8/14/09
772	Address issues	10 days	Mon 8/17/09	Fri 8/28/09
773	Perform Live Test Acceptance	5 days	Mon 8/31/09	Fri 9/4/09
774	Production Acceptance	1 day	Mon 9/7/09	Mon 9/7/09
775	**InfoScriber Go Live Activities**	**12 days**	**Wed 7/22/09**	**Thu 8/6/09**
776	Go Live Support	5 days	Wed 7/22/09	Tue 7/28/09
777	Begin Go-Live Activities	5 days	Wed 7/22/09	Tue 7/28/09
778	Address issues	5 days	Mon 7/27/09	Fri 7/31/09
779	Perform Live Test Acceptance	3 days	Mon 8/3/09	Wed 8/5/09
780	Production Acceptance	1 day	Thu 8/6/09	Thu 8/6/09
781	**Replicate PM and CWS to more programs**	**55.5 days**	**Thu 1/22/09**	**Thu 4/9/09**
782	**Refrresher training of trainers**	**6 days**	**Thu 1/22/09**	**Thu 1/29/09**
783	PM	3 days	Thu 1/22/09	Mon 1/26/09
784	CWS	2 days	Tue 1/27/09	Wed 1/28/09
785	MSO	1 day	Thu 1/29/09	Thu 1/29/09
786	Infoscriber	2 days	Tue 1/27/09	Wed 1/28/09
787	**Create User Roles and User Accounts**	**3 days**	**Fri 1/30/09**	**Tue 2/3/09**
788	Define System Codes	1 day	Fri 1/30/09	Fri 1/30/09
789	Create User Roles	1 day	Mon 2/2/09	Mon 2/2/09
790	Define User Accounts	1 day	Tue 2/3/09	Tue 2/3/09
791	**End User Training - Next Set of Programs**	**10 days**	**Wed 2/4/09**	**Tue 2/17/09**
792	PM	10 days	Wed 2/4/09	Tue 2/17/09
793	CWS	10 days	Wed 2/4/09	Tue 2/17/09
794	MSO	10 days	Wed 2/4/09	Tue 2/17/09

ID	Task Name	Duration	Start	Finish
795	Infoscriber	10 days	Wed 2/4/09	Tue 2/17/09
796	**Conversion**	**6.5 days**	**Wed 2/18/09**	**Thu 2/26/09**
797	Prepare extracts / run conversion	40 hrs	Wed 2/18/09	Tue 2/24/09
798	Adjust VAX/Avatar Synch process	12 hrs	Wed 2/25/09	Thu 2/26/09
799	**Go-Live**	**30 days**	**Thu 2/26/09**	**Thu 4/9/09**
800	Provide site support for go-live	30 days	Thu 2/26/09	Thu 4/9/09
801	**Accept Phase 2 Roll-out and Clinical Implementation**	**1 day**	**Tue 9/8/09**	**Tue 9/8/09**
802	License payment	1 day	Tue 9/8/09	Tue 9/8/09
803	Commence Avatar Maintenance	1 day	Tue 9/8/09	Tue 9/8/09
804				
805	**Phase 3 - Rollout to All programs and System Acceptance Testing**	**149.75 days**	**Thu 4/9/09**	**Thu 11/5/09**
806	**Install products for Phase 5**	**0.25 days**	**Thu 4/9/09**	**Thu 4/9/09**
807	Increase Named users by 311	0 days	Thu 4/9/09	Thu 4/9/09
808	Increase Cache processes to 75	2 hrs	Thu 4/9/09	Thu 4/9/09
809	**Update Statement of Work for Phase 5**	**50 days**	**Thu 4/9/09**	**Thu 6/18/09**
810	Monitor implementation / collect data	40 days	Thu 4/9/09	Thu 6/4/09
811	Lessons Learned - Post Phase2 Implementation Review	8 hrs	Thu 6/4/09	Fri 6/5/09
812	Update Project Plan	16 hrs	Fri 6/5/09	Tue 6/9/09
813	Compile Updated version	16 hrs	Tue 6/9/09	Thu 6/11/09
814	Aprove Statement of Work	5 days	Thu 6/11/09	Thu 6/18/09
815	**Replicate Billing, Clinical and ISC to final set of programs**	**52.5 days**	**Thu 6/18/09**	**Tue 9/1/09**
816	**Refrresher training of trainers**	**4 days**	**Thu 6/18/09**	**Wed 6/24/09**
817	PM	16 hrs	Thu 6/18/09	Mon 6/22/09
818	MSO	8 hrs	Mon 6/22/09	Tue 6/23/09
819	Clinical	8 hrs	Tue 6/23/09	Wed 6/24/09
820	Infoscriber	4 hrs	Mon 6/22/09	Tue 6/23/09
821	**Create User Roles and User Accounts**	**2 days**	**Wed 6/24/09**	**Fri 6/26/09**
822	Define System Codes	16 hrs	Wed 6/24/09	Fri 6/26/09
823	Create User Roles	16 hrs	Wed 6/24/09	Fri 6/26/09
824	Define User Accounts	16 hrs	Wed 6/24/09	Fri 6/26/09
825	**End User Training - Next Set of Programs ongoing**	**40 days**	**Fri 6/26/09**	**Fri 8/21/09**
826	PM	40 days	Fri 6/26/09	Fri 8/21/09
827	CWS	40 days	Fri 6/26/09	Fri 8/21/09
828	MSO	40 days	Fri 6/26/09	Fri 8/21/09
829	Infoscriber	40 days	Fri 6/26/09	Fri 8/21/09
830	**Conversion**	**6.5 days**	**Fri 7/10/09**	**Tue 7/21/09**
831	Prepare extracts / run conversion	40 hrs	Fri 7/10/09	Fri 7/17/09
832	Adjust VAX/Avatar Synch process	12 hrs	Fri 7/17/09	Tue 7/21/09
833	**Go-Live**	**30 days**	**Tue 7/21/09**	**Tue 9/1/09**
834	Provide site support for go-live	30 days	Tue 7/21/09	Tue 9/1/09
835	**Final Application Testing**	**98.5 days**	**Thu 6/18/09**	**Wed 11/4/09**
836	Design Acceptance Test Scenarios and Objectives	10 days	Thu 6/18/09	Thu 7/2/09
837	**Perform Acceptance Testing**	**46 days**	**Tue 9/1/09**	**Wed 11/4/09**
838	**Execute Test Plans**	**20 days**	**Tue 9/1/09**	**Tue 9/29/09**
839	Total System and Integration testing	20 days	Tue 9/1/09	Tue 9/29/09
840	**Refine / Correct / Refresh**	**26 days**	**Tue 9/29/09**	**Wed 11/4/09**

ID	Task Name	Duration	Start	Finish
841	Publish Testing Findings	10 days	Tue 9/29/09	Tue 10/13/09
842	Initiate PCR's	5 days	Tue 10/13/09	Tue 10/20/09
843	Perform PCR's and re-test	10 days	Tue 10/20/09	Tue 11/3/09
844	Refresh / Update production systems	1 day	Tue 11/3/09	Wed 11/4/09
845				
846	**Accept Phase 3 Roll-out and Clinical Implementation**	**1 day**	**Wed 11/4/09**	**Thu 11/5/09**
847	License payment	1 day	Wed 11/4/09	Thu 11/5/09
848	Services Holdback (10%)	1 day	Wed 11/4/09	Thu 11/5/09
849	Commence Avatar Maintenance	1 day	Wed 11/4/09	Thu 11/5/09

Attachment 2.2.1B

SMHD ITSP
Final Report

INFORMATION TECHNOLOGY STRATEGIC PLAN

FINAL REPORT

Prepared for:

The San Mateo County Health Department

JUNE 21, 2005

KURT SALMON ASSOCIATES

www.kurtsalmon.com

ISD Information Services Department SERVICE EXCELLENCE

Foreword

This is the Final Report of a project intended to provide an Information Technology Strategic Plan (Plan) for the San Mateo County Health Department (SMHD). The planning horizon addressed is FY05/06 – through – FY08/09. A particular focus of the Plan is attainment of meaningful support of SMHD's strategic goals and objectives to increase integration and collaboration as a foundation for improved client services and program management.

The Interim Report previously submitted on April 11th, 2005 addressed the prevailing IT environment, the preliminary recommendations and alternative strategies, and a preliminary listing of potential actions and their estimated budgetary and resources impact.

The reviewed and revised contents of the Interim Report are incorporated in this Final Report, which, in addition, also addresses a future SMHD IT Vision, assesses alternative strategies for addressing identified unmet needs, and details the recommended strategy and its benefit, risk, budget, and resource implications.

It should be noted that this Final Report incorporates the changes requested by participants of the April 11th ITSP review meeting with SMHD management. Also note that this Final Report incorporates input as a result of SMHD and Division review of the preliminary initiatives.

This planning activity was performed by the Health Care Consulting Group of Kurt Salmon Associates, working closely with and under the sponsorship of both SMHD Management and the Information Systems Department (ISD). While the aforementioned were contributors, this is the SMHD's Plan.

It should be noted that this Final Report represents the findings, observations, assessments, and strategy recommendations of KSA performed in conjunction with the SMHD and ISD sponsors. The next step for SMHD and ISD is to evaluate, adopt, refine, and translate the strategies, recommendations, initiatives, estimated costs, and priorities into a tactical implementation plan and multi-year budget.

Final Report Organization

I. Background, Objectives and Status

The San Mateo County Health Department (SMHD) serves San Mateo County in the protection of public health through disease control and education, and the provision of physical and mental health care and social services for those with special needs in the community. The Divisions that comprise SMHD include Aging and Adult Services, Correctional Health, Environmental Health, Emergency Medical Services, Public Health, and Mental Health, all of which are overseen and coordinated by Health Administration

SMHD relies heavily on numerous specialty and State-mandated software and databases that support categorical programs and client services. As SMHD pursues a strategy to better integrate services, enhance program and policy development, increase visibility of clients across programs, and better align with the needs of at-risk populations, it has realized that Information Technology (IT) solutions and related support services must serve an enabling role in realization of these strategic goals and objectives.

SMHD and the Information Services Department (ISD) initiated an ITSP project in December 2004. KSA is supporting the SMHD ITSP effort. The primary objectives of the SMHD ITSP project are listed in **Exhibit I-1**. As depicted in **Exhibit I-2**, the ITSP project methodology is comprised of four phases. Phases I & II incorporated input from existing documentation, surveys, and extensive interviews with SMHD and ISD staff in order to assess the current SMHD IT environment, and to create the baseline for future IT initiatives.

Exhibit I-3 details the areas that have been assessed which include governance, control and process; software and databases; architecture and infrastructure; organization, people and services; and budget. **Exhibit I-4** depicts the data gathering approach and methodology used to complete the IT environment assessment. KSA conducted more than 80 individual and group interviews with SMHD senior management, departmental staff, and ISD representatives. **Exhibit I-5** details the participants of the assessment data gathering effort.

The SMHD ITSP project has continuously been directed and managed by the involvement of Stuart Holcomb, an independent consultant; Arthur Morris of SMHD, and Stella Charbakshi, Chris Flatmoe, and Dorothea Curtin of ISD.

Exhibit I-1: Project Objectives

Key Issues

The 2005 IT Strategic Plan (ITSP) addresses key IT challenges of the evolving Health Department.

- Development of effective IT oversight and decision making processes
- Achievement of comprehensive "Department-ness" through oversight, standardization, integration, common and consolidated infrastructure and applications as appropriate
- Development of a strategy for client and case management integration
- Organization and appropriateness of SMHD IT and ISD support to meet current and future needs
- Ensuring the use of technology and operational processes are aligned and mutually optimized
- Consideration of multi-year capital and operating IT budget impact, and timelines for implementation of recommended initiatives
- Align SMHD IT with partner Departments within San Mateo County

Exhibit I-2: Project Methodology and Status

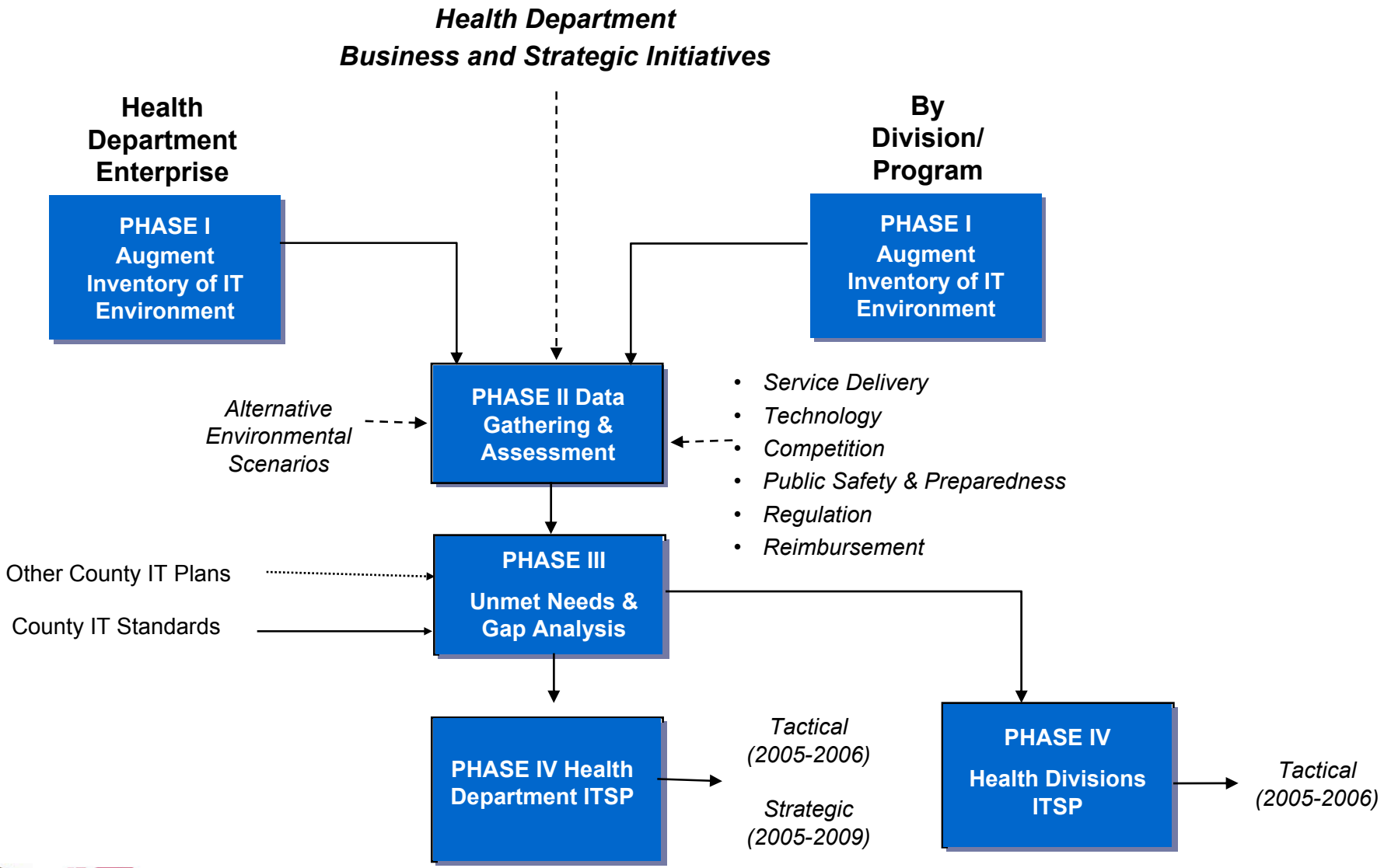

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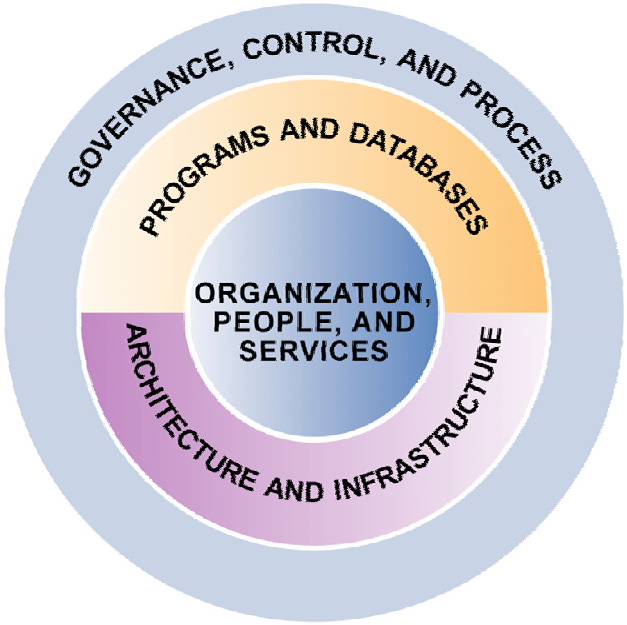
Exhibit I-3: Assessment Areas



Governance, Control & Process

- How effective is the current IT oversight and decision making process?
- Do IT decisions support SMHD strategic business plans?
- How is coordination and integration best achieved?
- What is the most appropriate oversight process going forward?

Programs and Databases

- What programs, applications and data bases are deployed?
- Do they meet current and expected future requirements?
- To what degree should a common application approach be adopted?
- How best to achieve an integrated view of client information across Divisions?

Architecture and Technical Infrastructure

- Does the current infrastructure meet connectivity requirements?
- Can the technology support the organization's future strategies?
- Have security and confidentiality issues been addressed?
- What enhancements are required to stay current with advances?

Organization, People & Services

- What types of resources are currently deployed?
- What is the IT organization structure including scope of services, responsiveness, communications, and management control?
- What are the skills and competencies of the current IT staff?
- What is the most appropriate IT organization structure to support future needs
- What changes are required to support current and future needs?

Exhibit I-4: Data Gathering and Assessment Methodology

SMHD / ISD Current Assessments

- Review of existing documentation (e.g. previous IT plans, meeting minutes, etc.)
- Identify status and performance of systems in use
- Consider advancements in the Information Technology marketplace

Interviews and User Surveys

- User satisfaction with existing systems and technology
- Identification of unmet current needs
- Unmet strategic business initiatives

Consultant's Opinion

- Knowledge of health care IT marketplace
- Assessment of value provided by IT
- Progress against previous planning
- Leveraging prior customer experience

Environmental Assessment

- IT Governance, Control, and Process
- Application Function
- Architecture and Infrastructure (to be completed in next phase)
- Organization, People, and Services
- Budget

Exhibit I-5: Data Gathering Participant List

Maya Altman	Administration, Deputy Director
Rebecca Anderson-Potts	CH, Clinical Svcs. Mgr. – Nursing Health Corrections
Pansy Ang	ISD, IT Analyst
Doreen Avery	MH, Business Systems Mgr.
Gale Bataille	MH, Director
Lani Blazer	AAS, Health Services Manager
Pam Borelli	AAS, Health Services Manager
Christina Bringas	PH, System Support Specialist
Edith Cabuslay	Administration, Program Services Manager, Public Health Analyst
Anand Chabra MD	PH, Staff Physician
Stella Charbakshi	ISD, Project Manager
Roki Charney MD	PH, Staff Physician
Chris Copolla	MH, Clinical Services Manager I
Janet Crist-Whitzel	MH, Financial Svcs. Mgr.
Heather Cross	PH, Contracts Administrator
John Conley	PH, Deputy Director
Steve Cummings MD	MH, Staff Physician SMMC
Dorothea, Curtin	ISD, Deputy Director
Virgina Di Paola	ISD, IT Analyst
Toby Douglas	Administration, Manager, Health Access Initiatives

Linda Drake	MH, Office Manager
Sarah Ehlers	PH, Epidemiologist
Chris Flatmoe	ISD, Director, County CIO
Marsha Fong	AAS, Program Manager
Kevin Fornes	ISD, IT Analyst
Katheen Boutte Foster	ISD, Project Manager
Patrick Galassi	ISD, Advisory Systems Engineer
Rita Geller	MH, Patient Services Supervisor (WOC)
Meg Gilmore	ISD, IT Analyst
Anju Goel MD	PH, Staff Physician
Mary Jo Hansell	PH, Deputy Director
Gina Harrington	PH, Manager, Financial Services
Rich Hayward	CH, Supervising Mental Health Psychologist
John Herbert MD	MH, Supervising Physician,
Carl Hess	PH, Administrative Assistant II
Dennis Israelski MD	PH
Alain, Kelder	ISD, Systems Engineer
Shawn Kristoferu	ISD, Systems Engineer
John Klyver	MH, Management Analyst
Emily Lam	Administration, Management Analyst
Michael Leach	PH, Supervising Epidemiologist
Heather Ledesma	AAS, Health Services Manager
Lorraine Lew	EH, Administrative Services Manager

Exhibit I-5: Data Gathering Participant List (Cont'd)

Barbara Liang	MH, BPM Coordinator
Kathy Luisotti	ISD, IT Analyst
Joanne MacDonald	PH, Senior Public Health Nurse
Diana MacDonald	PH, Epidemiologist
Lisa Mancini	AAS, Director
Tracy Marshall	PH, Epidemiologist
Andy Maso	AAS, Information Tech Analyst
Rand Miyshiro	ISD, IT Analyst
Carlos Morales	MH, Clinical Services Manager, II
Celia Moreno MD	MH, Supervising Physician
Arthur Morris	Administration, Deputy Director
Scott Morrow MD	PH, Staff Physician
David Musikant	PH, Social Work Supervisor
Michael Nachtigal	PH, Clinical Services Manager – Lab
Andrei Ostrea	MH, Lead MOA (WOC)
Dean Peterson	PH, Director, Environmental Health
Barbara Pletz	EMS, EMS Administrator
Diomie Ramos	Administration, Financial Services Manager
Ronell Reyna	PH, Senior Public Health Nurse
Louise Rogers	MH, Deputy Director

Erdmann Rogge	EH, Environmental Services Specialist
Jeff Rosenberger	ISD, Advisory Systems Engineer
Eliana Schultz	PH, Director Food and Nutritional Services
Beth Schulz	PH, Senior Public Health Nurse
Charlene Silva	Administration, Director Health Department
Theresa Smith	PH, Supervisor, Medical Office
Sam Stebbins	PH, Deputy Health Officer
Ellen Sweetin	PH, Health Services Manager
Nomalee Tilman	CH, Health Services Manager
Jackie Toliver	AAS, Deputy Director
Debbie Torres	MH, Clinical Services Manager III
Ruby Trauner	Consultant
Dottie Vura-Weis MD	PH, Staff Physician
Cheryl Walker	MH, Supervising Mental Health Clinician
Jennifer Willcock	PH, IT Analyst
Terry Wilcox-Rittgers	MH, Mental Health Program Specialist
Mary Jane Wood	PH, Associate Director for AIDS Project
Glen Youngblood	EMS, Program Specialist II
Brian Zamora	PH, Director

II. Executive Summary: The SMHD Information Technology Vision

The San Mateo County Health Department (SMHD) Information Technology Strategic Plan (ITSP) identifies the technologies and support services required to enable the mission, goals, and objectives of SMHD to serve the Health needs of San Mateo County. This will be done through the procurement, design, integration, implementation, and optimized use of technology solutions that will provide enhanced value and capabilities to SMHD to serve its clients. The SMHD information technology environment will be pursued in collaboration and coordination with the Divisions, Health Administration, and the IT expertise and resources provided by the Information Services Department (ISD) of San Mateo County.

II. Executive Summary

The Information Technology Strategic Plan (ITSP) incorporated in this document addresses the recommended FY 05/06 – through – FY 08/09 Information technology (IT) environment for the San Mateo Health Department (SMHD). It is intended that this ITSP reflect the most suitable direction for information technology optimization and growth which actively supports the goals and objectives of SMHD.

The process used to develop this Plan was highly participatory involving SMHD users, ISD staff, clinicians, management, and administration in all facets of the unmet needs determination and required initiatives priority rating activities.

It should be noted up-front that the focus of this SMHD ITSP is on increasing the integration of client information, processes, and coordination of IT activities as well as creating the foundation for 'client intelligence', that is, creating an information and analytical capabilities to be exploited for policy and program planning and development.

SMHD FY 04/05– 08/09 Strategic Plan. In March 2004, SMHD identified goals to pursue a new direction that addresses the various forces that affect the ability of the County to provide public health services. The SMHD IT Vision and IT initiatives is intended to actively support the following FY04/05 – FY 08/09 Strategic Plan Goals:

- **Goal 1:** Application of metrics and other performance criteria.
- **Goal 2:** Strengthen the public health presence in the community through increased coordination with local providers, bio-terrorism preparation, increase awareness, collaboration with other County departments, and integrated identification of at-risk populations.
- **Goal 3:** Develop the work force through training, succession planning, and active involvement of staff in program planning and development.
- **Goal 4:** Improve health status of at-risk populations through increased community monitoring, integration with community services and CBO, education, and marketing.
- **Goal 5:** Strengthen and support programs by the principles of quality improvement.
- **Goal 6:** Assure preparedness for emerging health concerns and emergencies through tracking and response capacity.

II. Executive Summary

The prevailing SMHD IT Environment Assessment (Section III)

Governance, Process, and Control. The SMHD utilizes a largely de-centralized IT model. Each Division attends to their programmatic needs through a number of Division-specific IT planning and decision making forums as well as division-specific technical portfolios. An IT Working Group serves as a Health Department-wide information sharing forum and coordination mechanism. SMHD lacks a formal Department-wide planning and decision making function to enable the stated goals of cross-Division integration, nor does the Department have a dedicated IT management role to coordinate, plan, and manage the expanding and exceedingly complex SMHD IT environment. Collaboration with ISD on planning and acquisition is done on an 'on-request' and project-by-project basis. Such collaborative efforts between SMHD and ISD are on the rise.

Programs and Databases. The SMHD application portfolio, as depicted in **Exhibit III-2**, is complex and highly siloed by categorical programs, State mandates, and operational fragmentation between programs and Divisions. There is very little integration and interfacing between application environments within and between Divisions and the separate application environment using different languages.

Most of the Divisions are increasingly consolidating their application functions into 'core' applications. AAS is consolidating into Q Continuum, Mental Health into its existing and replacement solution, Environmental Health into Envision, and EMS into MEDS PCR. Public Health is the one Division that does not enjoy an emerging consolidated application platform for client and case management services. The need to replace Global presents an opportunity for Public Health to address rationalization of its application mix. Correctional Health has no application functions and generally desires increased access into other agency and Division applications such as SMMC Invision, CJIS, Mental Health, and Public Guardian. For all applications and automation in general, there is a new interest to ensure optimization of their use through reengineering of processes to best exploit the potential of automation.

The fragmentation of operational applications follows through to the retrospective analytical capabilities of the Health Department. There are a number of isolated program specific data sets against which reports are run. There is no Health Department-wide data management or analytical toolset solutions to support program analysis and planning for the Health Department.

II. Executive Summary

Architecture and Infrastructure. The SMHD infrastructure is largely supplied and supported through ISD with general satisfaction on availability, performance and data security. Environmental Health remains an exception in this respect as it supports an independent computing and support services environment. A significant SMHD desktop refresh project is underway in conjunction with a new leasing arrangement with Dell that will better ensure the currency of the SMHD desktop inventory. There are a number of opportunities for the Health Department to invest in infrastructure unmet needs in coordination with ISD and possibly other Departments. Infrastructure investments indicated include document imaging, mass data storage, a separate SMHD network domain, virtual meeting capabilities, and community wireless.

Organization, People and Services. ISD has traditionally been used by SMHD for maintenance services (e.g., desktop support), and less so for project planning, consultation, and technology acquisition. The new ISD liaison (Relationship Manager) role is proving to be effective in fostering collaboration and increased involvement of ISD with SMHD IT activities. SMHD IT 'coordinators' serve as the front-line resources for the Department within a decentralized support services model. It is generally agreed that the services of ISD have greatly improved over the last several years. It is also generally agreed upon that the current de-centralized organization of IT resources and services works for the current operational organization of the Health Department. Building upon this organization and support services foundation, there are several areas that should be addressed including service level agreements (SLA), use of contractors, and cross-training SMHD and ISD staff to better collaborate and be responsive to needs of the SMHD user community.

SMHD IT Vision (Section IV)

Exhibits IV.1 and IV.2 show a conceptual SMHD IT Vision and Objectives. The emerging IT vision for SMHD is based on increasing integration and collaboration to achieve a continuum of IT goals and objectives. Integration at the oversight and decision-making level, integration between applications for client visibility and case management, integration for support services, and continuing the utilization of shared architecture and infrastructure resources. It is against this conceptual vision of the SMHD IT environment that the prevailing SMHD IT environment is compared to, and by which, the gap analysis is performed and SMHD unmet needs are identified.

Gap Analysis – Prioritized Primary Needs (Section V)

The gap analysis identifies changes required to governance and control, the primary applications, architecture and infrastructure, and the organization and processes for support resources if SMHD is to attain its IT Vision and Objectives. These changes, shown in **Exhibits V-1 and V-2**, are priority-rated and expressed in terms of the specific activities required – Acquire, Replace, Develop, Upgrade, or Expand. Subsequent sections of this Report address the strategic and tactical approach implications and related Technical Initiatives, as well as the schedule and implications for their implementation.

Alternative and Recommended Strategies (Sections VI)

Governance, process and control. A revised SMHD IT Governance structure and process for decision-making and prioritization is shown in **Exhibits VI-1 through VI-5**. This action is required before any new major initiatives are considered. This includes the formalization of a SMHD dedicated IT management function, the relationship with ISD, and adoption of IT prioritization criteria.

Operational Core systems strategy. Five alternative core systems strategies were evaluated, ranging from retaining the current IT environment with no meaningful enhancements, to replacement to a newly acquired 'mega' SMHD application for operational client and case management functions. Based on cost, risk, schedule, and function considerations, as well as criteria identified, it is recommended that **Strategy V** (see page 68) be pursued, which is based on introducing an 'overlay' function onto existing and augmented Division-specific application solutions, with an Operational Data Store serving as an integrated client data solution. **Exhibits VI-6 through VI-8** summarize the alternative application strategies and criteria matching.

Client Intelligence. A common denominator to all of the strategy alternatives is the primary software and database component addressing the unmet needs of SMHD for quality, integrated, accessible client and services information as a foundation for policy and program management, OBM, and other retrospective decision support and analysis needs. **Exhibit VI-10** shows the conceptual flow of information and access from operational core information systems (e.g., Q Continuum, MH, Envision) into a new analytical data management and decision support toolset to enable SMHD client intelligence. There are a number of tactical approaches ranging from enhanced utilization of existing database environments in use throughout the County, to acquiring SMHD-specific technologies, to an appropriate hybrid mix of solutions. Potential solutions should follow County IT standards to insure interoperability.

Architecture and Infrastructure. The recommended strategy is best reflected in terms of specific activities to be performed, referred to as "Technical Initiatives", each with a description, priority, start date, one-time and ongoing costs, justification, and incremental I/S or IT support staff requirements. As previously indicated, technical initiatives with associated budget and staffing implications have been reviewed prior to this Final Report to be sensitive to the current budgeting cycle. This preliminary list of technical initiatives will continue to be reviewed, refined, and incorporated as approved into Section VII of this Report. As a general infrastructure strategy, KSA recommends a renewed effort to consolidate and share SMHD core infrastructure needs and capacity to achieve economies of scale, reduce total cost of ownership, and increase support services capacity.

Organization, People and Services. The relationship and increased collaboration between ISD and SMHD is a good foundation to enhance and optimize the organization and resource levels of IT support services. It is recommended that support services remain centralized within ISD, but to also augment the skills and cross-training of both ISD and SMHD IT staff to better serve and be responsive to SMHD user community needs. In addition, it is recommended that SMHD continue to involve ISD up-front in all discussions relating to proposed use of outside third-party consulting support. The service level expectations should be documented in the existing Service Level Agreement (SLA) and monitored through quantitative and qualitative performance measures. To enable the stated County goals of optimizing and enhancing operations and processes through automation, ISD and SMHD are required to develop Business Process Reengineering (BPR) skills and methodology. The imminent Mental Health application implementation has been recognized as an opportunity to apply formal BPR techniques.

Technical Initiatives (Section VII)

The recommended strategies are best reflected in terms of specific activities to be performed, referred to as “Technical Initiatives”, each with a description, priority, start date, one-time and ongoing costs, and incremental ISD or SMHD IT support staff requirements. **Section VII**, which will be modified once the FY 05/06 subset of initiatives are approved, identify the initiatives, their priorities, and schedules. Costs and incremental staffing are similarly projected and detailed.

Critical success factors for the deployment of this Plan include:

- The revised IT Governance structure and process
- Strong Senior Management sponsorship of projects
- Active Involvement of SMHD operations
- Improved management of user expectations
- Commitment of required SMHD operations as well as ISD resources
- Effective project management
- Periodic plan updates
- Consistent and complete funding support for IT technology

III. SMHD Information Technology Environment Assessment

KSA performed an inventory of the current major applications, databases, tools, hardware, network environment, infrastructure, operational issues, budgets, and staffing so that the resulting IT Strategic Plan adequately supports both the current and future requirements of the organization. KSA's methodology considers the areas as shown in **Exhibit III.1**. KSA strived to incorporate existing inventory and documentation and to augment as needed with surveys and interviews.

Over 80 Interviews were conducted with ISD and SMHD staff. These interviews were preceded by Division-specific surveys that proved to be invaluable in focusing further data gathering activities and to make the limited time together between KSA and the participants highly effective.

This gathered information has been utilized as a baseline for the evaluation of potential future IT needs and initiatives required to support the SMHD IT Vision. Findings and observations for each assessment area are detailed in **Sections III.1 – III.4**.

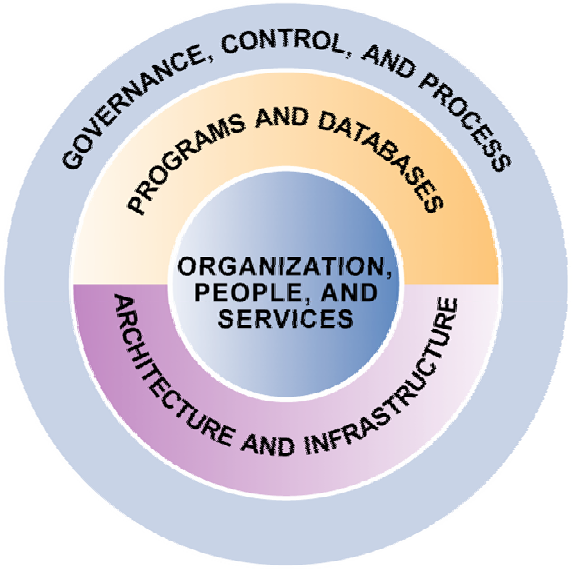
Section III.1 details IT Governance, control and process issues identified for remediation. The recommended IT Governance and Control structure and process is addressed in the selected IT Strategy detailed in Section VII of this Report.

Section III.2 details software and database findings and observations. **Exhibit III.2** depicts the full inventory of software and databases used by SMHD and its comprising Divisions.

Section III.3 details architecture and infrastructure findings and observations. As infrastructure is largely shared with San Mateo Medical Center (SMMC) and, in some cases, other County Departments, and that the SMMC ITSP addressed many infrastructure-wide issues and unmet needs, this ITSP and Report focuses on SMHD-specific issues and highlights where such issues potentially crossover.

Section IV.4 details the organization, staffing, and services employed to support the SMHD IT environment.

Exhibit III-1: Assessment Areas



Governance, Control & Process

- How effective is the current IT oversight and decision making process?
- Do IT decisions support SMHD strategic business plans?
- How is coordination and integration best achieved?
- What is the most appropriate oversight process going forward?

Programs and Databases

- What programs, applications and data bases are deployed?
- Do they meet current and expected future requirements?
- To what degree should a common application approach be adopted?
- How best to achieve an integrated view of client information across Divisions?

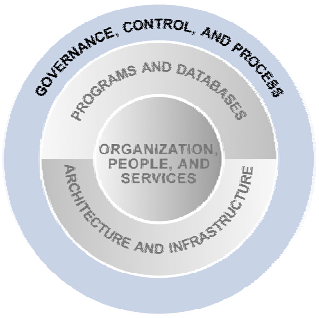
Architecture and Technical Infrastructure

- Does the current infrastructure meet connectivity requirements?
- Can the technology support the organization's future strategies?
- Have security and confidentiality issues been addressed?
- What enhancements are required to stay current with advances?

Organization, People & Services

- What types of resources are currently deployed?
- What is the IT organization structure including scope of services, responsiveness, communications, and management control?
- What are the skills and competencies of the current IT staff?
- What is the most appropriate IT organization structure to support future needs
- What changes are required to support current and future needs?

III-1. SMHD Environment Assessment – Governance, Control & Process



Assessment Focus: The attitudes and approaches by which SMHD directs and oversees IT activities and investments to ensure they reflect and support both strategic and operational initiatives of SMHD.

Key Issues Addressed

- **SMHD collaboration and coordination of IT activities with ISD and other Departments of the County such as the Medical Center.**
- **Alignment of Division information technology activities and plans with the mission, vision, and goals of SMHD.**
- **What is the appropriate IT oversight structure and membership going forward and what should be its charter and membership?**
- **What are the appropriate IT principles for SMHD, Divisions, and ISD?**

III-1. SMHD Environment Assessment – Governance, Control & Process (Cont'd)

Current SMHD Conformance To Pertinent IT Oversight Principles

IT Oversight Vision: Information Technology is a strategy enabling investment that requires adequate and appropriate oversight, coordinated decision making, collaborative activities, and alignment with SMHD and its Divisions' business, clinical, and financial activities.

1. Standardize on common applications and infrastructure unless there are compelling reasons for exception (L).
2. Align Information Technology and Business Planning activities (M/H) .
3. Provide leadership, sponsorship, decision making, active participation, coordination, and communication regarding information technology strategies and investments (M)
4. Follow consistent selection, implementation, and support methodologies with appropriate management oversight (M/H)
5. Provide appropriate guidance and monitoring of distributed or independent IT activities (M)
6. Insure that each Division have suitable input into the SMHD IT growth plans (L/M)
7. Ensure operational unit (Divisional) ownership and accountability of the strategic and tactical uses of information technology solution (H).
8. Adopt a sequence for decision making that insures that due diligence has been performed prior to approval of specific actions (M/L)
9. Set realistic expectations based on cost, resources, and technology realities (M/L).
10. Clearly, consistently, and constantly communicate IT strategies, plans, and activities throughout SMHD (M).

Legend reflecting current SMHD's IT oversight's conformance to criteria: (L)= Low conformance, (M) = moderate conformance to criteria, (H)= strong conformance to above criteria

III-1. SMHD Environment Assessment – Governance, Control & Process (Cont'd)

Key Findings & Observations

The Health Department is increasingly relying on and recognizing IT as a critical component of its mission, vision, and objectives, however, the current IT governance structure does not adequately support this emerging focus.

- **SMHD Governance.** The IT function and activities within SMHD has risen to a high degree of criticality and complexity which is currently overseen in a isolated manner within each of the Divisions.
  - The responsibility of IT planning, budgeting, and project management resides within each of the Divisions. There is variation on how well organized and cohesive the IT planning function is between the Divisions.
  - Most of the Divisions have a forum to perform IT planning and project evaluation:
    - AAS – Monthly MIS Committee, and the DOTS executive team
    - MH – Pre Info-Tech meeting, monthly Info-Tech, and more recently, a Steering Committee to oversee the new application acquisition and deployment.
    - PH – Monthly Data Group meeting
    - FNS and Corrections do not have any organized forum for IT oversight and planning.
    - EMS performs this function through EMS staff meetings
  - SMHD-wide IT oversight is occurring on an informal basis. Arthur Morris has served in a somewhat informal way as an IT activity coordinator between the Divisions, is the co-chair of the Information Technology Work Group (ITWG), and attends the Division specific IT forums. This coordination and leadership effort is well received.
- **Information Technology Working Group (ITWG).** The ITWG is serving its purpose well of communicating and sharing information regarding SMHD and County IT activities, and to a smaller degree, establishing Health Department IT policy across the Divisions. To date, it has not served any meaningful role as a Health Department governance, prioritization, or decision making forum.

III-1. SMHD Environment Assessment – Governance, Control & Process (Cont'd)

Key Findings & Observations

- **Cross Division IT Needs.** It appears that cross-Division, and cross-Department activities will increase, requiring an IT management function that is appropriately aligned.
  - The Finding Kids and Long term Supportive Services Program (LTSSP) are recent examples of the desire to meet the needs of clients and the community in a coordinated and seamlessly integrated manner.
- **ISD Collaboration.** Historically, ISD was used 'as requested', and did not put forward collaborative options to SMHD. This has recently changed as ISD serves a more collaborative role with its participation in all the existing SMHD IT forums.
  - The appointment of a ISD Relationship Manager to SMHD has been well received, and is proving to be effective in building up a subject matter expertise and fostering a collaborative relationship between ISD and SMHD.
- **Prioritization.** There is no formal prioritization methodology for SMHD projects and ISD resource assignment. As the SMHD does not have an IT oversight function or role, ISD is left the onus of prioritizing projects across Divisions. This sometimes results in a 'squeaky wheel' setting of priorities.
  - Prioritization and funding decisions are made within the Divisions. To the degree that future IT projects will entail cross-Division utilization, the current oversight process will inadequately provide a SMHD-wide perspective of priorities and balancing resource commitments.
- **Contract Management.** The current policy and practice requires that any IT acquisition over $25,000 is to be reviewed by ISD. This is a policy reflective of best practice.

III-2. SMHD Environment Assessment – Programs and Databases

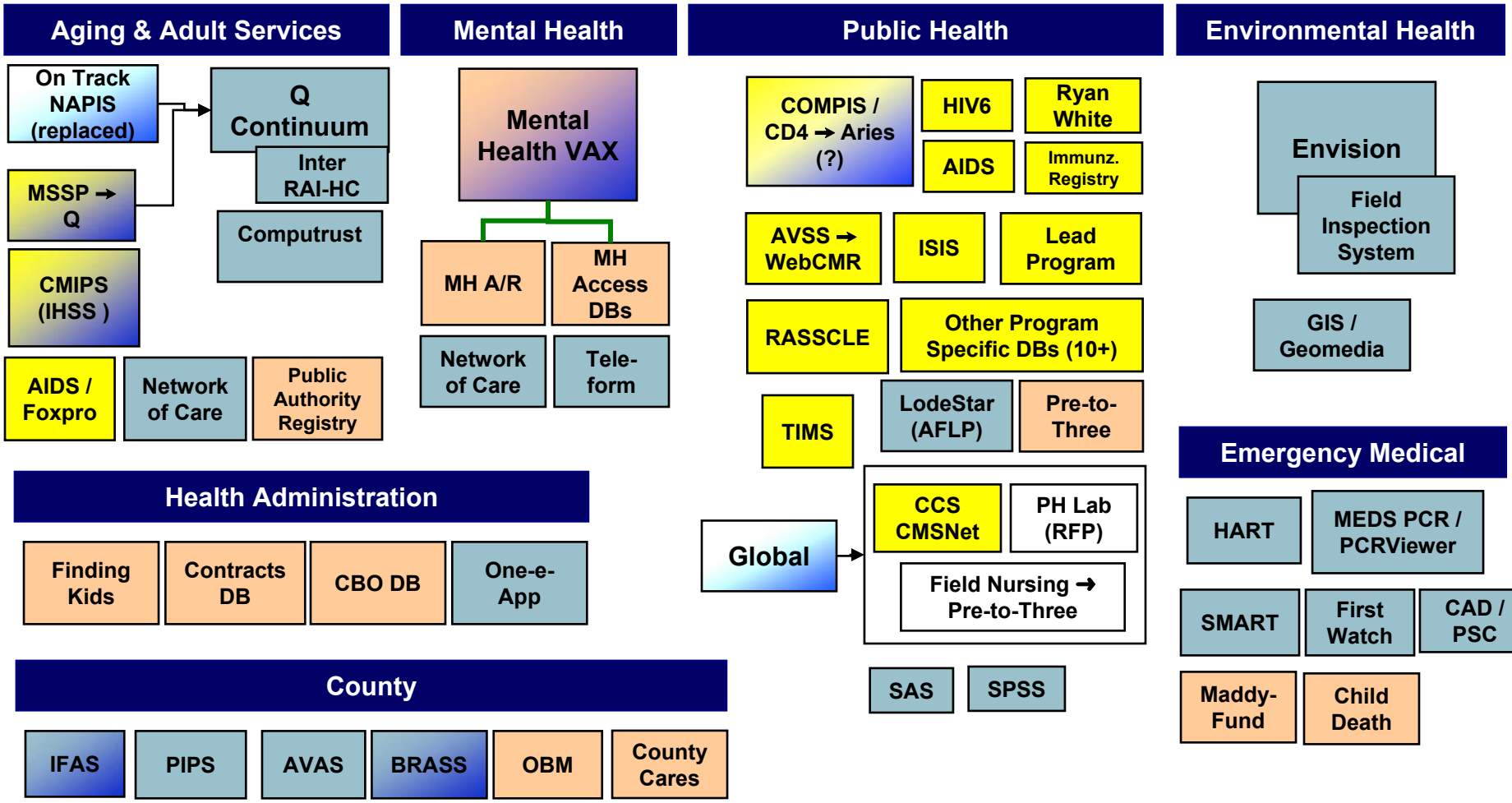
Assessment Focus: The suitability of SMHD's existing applications, programs, and data bases to support current and projected requirements.

Key Issues Addressed

- **How well are the existing applications and support environment meeting the needs of SMHD and Division end-users and management?**
- **Do the applications support the Department's future goals?**
- **Will the current applications portfolio enable a vision of a fully integrated client and case management – at a Division, Department, and County level?**
- **What is the most appropriate approach to integrate client processes and data?**
- **How best can operational information be exploited to enable policy development, and analysis?**
- **Are applications implemented in an optimal manner to improve processes?**

Exhibit III-2: SMHD Environment Assessment – Programs and Databases (Cont'd)

The SMHD programs and databases portfolio is complex and siloed. Further details on the SMHD portfolio can be found in Exhibit III-3.



III-2. SMHD Environment Assessment – Programs and Databases (Cont'd)

Key Findings & Observations

- **Application Portfolio.** The SMHD application portfolio is complex and siloed. This is largely driven by the categorical requirements imposed by State and Federal government for each program within a Division.
  - Many of the applications are in the midst, or shortly will be, migrating to next-generation solutions. CMSNet, WebCMR, Q Continuum, and next-generation Mental Health are all new applications.
  - There is very little interfacing and integration amongst the SMHD applications. This results in duplicative data entry, and data quality issues.
- **Operational Client and Case Management.** There is a pervasive desire for a strategy for client and case management integration provided across programs at the point of services provision. However, there is minimal capability to support client integration and visibility within operational workflow with the siloed SMHD application portfolio.
  - Finding Kids is the first solution to provide visibility across programs for a single client. This is a retrospective query reliant on demographic data of the client, and not a standard SMHD client ID or equivalent.
  - While there is a core need for client and case management across many of the programs (e.g., IHSS, MSSP, Field Nursing, NAPIS, Mental Health), the current solutions are categorical, siloed, and often manual in addressing case management functionality.
  - This theme for client integration was explored by the Data Workgroup Committee a year ago.
  - In addition, there is a feasibility study and potential pilot for a Homeless Interface project to unify data of the San Mateo homeless population and service utilization across MH, HSA, and SMMC. The source of the data would include Housing Our People Effectively (HOPE), Invision, and Mental Health VAX.

III-2. SMHD Environment Assessment – Programs and Databases (Cont'd)

Key Findings & Observations

- **Client Intelligence.** There also is a pervasive desire to have an analytical data resource combined with reporting and analytical tools that can support a wide spectrum of reporting and analysis needs including program analysis and planning, OBM, services planning, and identifying client population needs. Such a resource does not currently exist for SMHD.
  - **Data Management**. The Mercury data warehouse is sourced only by Invision data at this time. Oracle is the technical data management foundation of Mercury. A small number of ISD employees access the data warehouse, but Mercury is not otherwise exposed to management or analysts for their data needs.
  - **Decision Support**. There is no common decision support toolset shared by the SMHD to support analytical processes. Users predominately use Access and Excel for analysis, and Monarch for report 'scraping' by the Reporting, Building, OBM team. There is a small core of SAS and SPSS users in Mental Health and Epidemiology, who would also like to provide direct access to statistics and data online for Division management users.
    - Preliminary review of the marketplace has begun by ISD for educational purposes.
- **Information Quality.** The functionality of data systems varies considerably across the Health Department, but data is generally viewed as being of high quality.
  - Correctional Health does not collect client specific data electronically.
  - Given the abundance of siloed categorical solutions that do not interface with each other, it is highly likely, absent a study of such, that cross-program synchronization of client information is problematic.

III-2. SMHD Environment Assessment – Programs and Databases (Cont'd)

Key Findings & Observations

- **Mental Health.** Mental Health currently utilizes two internally developed applications. One is 20+ years old and developed for the VAX. A newer application was developed using current Oracle technology, with interfaces.
  - Mental Health does not have internal programming expertise and is reliant on ISD to provide on-going support and maintenance of these applications.
  - An additional Oracle application was developed by a contractor as an intentionally interim project for clinicians to enter and print their progress notes. This is serving the dual purpose of obtaining neat progress notes, and to expose the clinicians to online clinical activities.
  - The Mental Health Services Act (MHSA) is a state-wide Mental Health Planning effort that includes an information technology specification. The Mental Health Division is hoping to leverage MHSA resources to implement the new core application.
  - Mental Health is in the final stage of a collaborative California effort to select and acquire a commercial application. The objective is to replace current MH VAX functionality, and to deploy new clinical automation in subsequent phases of the project. The A/R database will most likely continue to be used as a data management and reporting solution.
- **Public Health.** Public Health is one of the SMHD Divisions that does not enjoy a 'core' application such as Q Continuum, MH VAX, or Invision. This has been driven by the continued fragmentation of new and imminently to be replaced applications for CCS, Lab, and potentially Field Nursing in addition to the numerous other categorical databases and applications.
  - **Global / Public Health Lab.** The PH Lab is supported by the end-of-life Global system. A full RFP to evaluate the marketplace solutions has been issued.
  - **Global / Field Nursing.** Currently supported by Global. Since global is going away, the unmet needs include client registration, integration of registration and daily service reports, as well as the ability for State billing for targeted case management. At this time, PH is assessing a migration to the pre-to-three internally developed solution.
  - **Global / California Child Services (CCS).** Supported by Global, but recently replaced by CMSNet for direct data input into the State's database.

  PH systems are a constellation of numerous categorical databases including DMV, Out of Jurisdiction, Campy, Officer of the Day, Knowledge and Beliefs, TIMS, HCV Counseling, OBM, EPI database, CAHAN, ELI, Social Security, et al.

III-2. SMHD Environment Assessment – Programs and Databases (Cont'd)

Key Findings & Observations

- **Aging and Adult Services.** The core of AAS application function is the new Q Continuum application from CH Mack. AAS is pleased with the application and plans on migrating additional programs and functions (e.g., MSSP, AIDS, possibly IHSS) into the environment. CH Mack is exploring with the State additional categorical program functions within their solution (e.g., IHSS).
  - Computrust will continue to serve a core function for the public guardian program.
- **Correctional Health.** Correctional Health has little automation and relies on manual processes to maintain statistics. There is a need to access Mental Health, Sheriff Systems, CJIS, and Invision that for various reasons has not been accomplished to date.
- **Emergency Medical Services.** EMS utilizes the HART, MEDS, and PCR Viewer applications supplied by American Medical Response, the outsourced ambulance service. Additional categorical databases include FirstWatch, Maddy Fund, and Child Death Review.
  - EMS is pleased with the applications, web portals, and reporting capabilities of the application suite and the general requirement is to increase integration.
  - ISD has minimal involvement in supporting EMS automation needs. EMS uses an outside contractor for custom developed databases.
- **Environmental Health.** Environmental Health uses and is pleased with the Envision application from Decade. Envision is used for billing, time and activity, budget, fees management, household hazardous waste collect event scheduling, and most recently, field inspection units.
  - Geomedia client is used for mapping applications. This is consistent with the County-wide GIS standard.
  - ISD has minimal involvement in supporting Environmental Health automation needs.
- **Human Resources.** There is an expressed need for tracking and managing workforce education and training. In addition, a training platform is also desired. A project was introduced by Environmental Health during the last March IT Working Group for consideration.
  - The Court system's equivalent is being reviewed with this in mind.
  - There is an expressed need for more centralized human resource information management capability beyond what PIPS is providing.

III-2. SMHD Environment Assessment – Programs and Databases (Cont'd)

Key Findings & Observations

- **Business Process Reengineering.** The scope of the KSA ITSP assessment did not evaluate the optimization of application utilization beyond discussing the possibilities going forward.
  - KSA provided introductory education and ITSP implications to the management team on January 10th, 2005.
  - Based on the data gathering surveys and facts from other past assessments, it appears operational processes still rely strongly on paper-forms and data-entry as the primary means of information processing.
  - There is significant opportunities to rethink processes with both current technology as well as new solutions such as the replacement Mental Health system.
  - San Mateo County served as the pilot for One-e-App, the unified eligibility and program enrollment application. Significant process reengineering has occurred to exploit the complete paperless-ness of the application. Such experience and lessons learned should be applied to new technology deployments.

Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Aging and Adult Services	AAS AIDS	Carebase	State of California	Fall 2004	MS Access database to capture data relevant to demographics, diagnosis, and patient histories on AAS AIDS clients. Client information is coded to protect the client. Data is submitted to the State via floppy disk. Localized to the AAS shared network drive.
Aging and Adult Services	Public Guardian	Computrust		Developed in the 1980s	Computrust is used as the central client repository for MSSP, AIDS, IHSS In-Home Supporting Services, and Intake/APS in addition to its primary function of public guardian clients.
Aging and Adult Services	In-Home Support Services (IHSS)	Case Management Information and Payroll System (CMIPS)	Developed by State of California		The State provides a monthly report to AAS as an encrypted email attachment. No real-time reporting available in CMIPS. A RFP was developed by the State to do a visual redesign. It is currently access through 3270 emulation.
Aging and Adult Services	MSSP	Multipurpose Senior Services Program (MSSP)	California Department of Aging	Several generations old	Designs and support MSSP for 36 Counties. Replacement by Q Continuum in Spring 2005.
Aging and Adult Services	National Aging Program	On Track National Aging Program Information System (NAPIS)	Input Automation – sun setting support	Developed in 1997	Provides annual reporting to the state of California in the category of client descriptors, names, definitions and service units, home and congregate meals, adult day care, case management, nutrition counselling and assisted transportation. Replaced by Q Continuum.

Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Aging and Adult Services	National Aging Program and MSSP	Q Continuum System	CH Mack		Replaces ON-Track NAPIS and MSSP solutions
Aging and Adult Services		Uniform Assessment Tool Resident Assessment Instrument-Home Care (RAI-HC)	CH Mack and Inter-RAI	Fall 2005	Integrated Case Assessment System. A Pilot program.
Aging and Adult Services		Network of Care	Trilogy	June 2005	AAS solution for eGov/web presence building upon Mental Health experience. Integrated with County and HD website but outsourced to the vendor.
AIDS	AIDS	AIDS Program Database	Internally Developed		
EMS	EMS	HART	AMR		
EMS	EMS	MEDS PCR / PCRViewer	AMR		
EMS	EMS	PSC CAD	PRC		
EMS	EMS	FirstWatch	FirstWatch		
Environmental Health		Envision	Decade Software		Main application. Please with. Integrate database (Sybase). Used for billing, time and activity, budget, and fees. Decade software.
Environmental Health		GIS	Arcview GeoMedia		The expanded use of GIS (Arcview->Geomedia) will permit different databases to be connected and cross-referenced. This functionality should allow for better analysis and assist in decision-making processes.
Health		Finding Kids	Internal	Dec 2004	Thread query database search that indicates if a client is 'visible' in multiple divisions. Delivered via web browser. Query on name and social.

Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Health		Contracts Database	Internal		
Health		CBO Database	Internal		
Medical Center Public Health (Corrections)		Invision CORE	Siemens	Nov 1999	
Medical Center		Mercury (Data Warehouse)			
Mental Health		Mental Health VAX	Internally Developed		Being Replaced (see CIMH RFP 12/2003). System is used for case management, service tracking, and as the accounts payable system for the contract providers. There is a separate module that handles the Managed Care Plan, and there are interfaces between the two. A/R is a separate system developed in Oracle which interfaces with MH VAX.
Mental Health		Mental Health Accounts Receivable (A/R)	Internally Developed		
Mental Health		Network of Care	Trilogy		MH solution for eGov/web presence. Integrated with County and HD website but outsourced to the vendor.
Mental Health		Teleform	Teleform		Forms processing software for surveys and self-assessment tools. The forms are sent via fax to the Main Mental Health Department at 37th avenue. Teleform picks up the image from the fax and drops the data into the Access database.

Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Public Health		AIDS Program databases	Internally Developed		The database is housed on the County's network and is accessed by 7-8 staff. The data collected is highly clinical. The data entry process relies on chart abstraction and data entry. A DBA in Clinical Trials Unit design, develops, and maintains the database.
Public Health		(COMPIS) CD4 Online Management & Patient Information System	State of California		HIV early intervention reporting to State of California and case management. A monthly report is submitted to the State of California providing a listing of services and referrals. The state is developing and internet based program, which will replace COMPIS as well as the State CMIPS used in Aging and Adult Services. Submitted via Floppy disk.
Public Health		Automated Vital Statistic System (AVSS)	State of California		State Births and Death Certificates tracking. In addition, is used for some additional tracking events such as TB, but these will be replaced by Web CMR.
Public Health	California Child Services	CMS Net	State of California		Minors with congenital anomalies are eligible for CCS services and are connected to a CCS social worker. Outside resources provide the services. The provider forwards information back to CCS as a claim. The controller office reimburses the provider. Moving to a state system called CMS Net.
Public Health		Epidemiology System	Internally Developed		More a collection of tracking, research, and analytical data sets further exploited by SAS and SPSS.

Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Public Health		Global Health Management System	Global HMS		Patient/Client registration, A/R, and reporting, PH Lab support. Phasing out of use due to Invision. RFI being issued for PH Lab function (Strategy question is why not Novius?) The Sun box was moved to SMC data center from San Diego (Rand M.)
Public Health		HIV5 -> HIV6	State of California		Anonymous HIV testing. HIV5 no longer exists. It has been replaced by the State with HIV6.
Environmental Health		Household Hazardous Waste online scheduler	Internally developed		Community can schedule online the pickup of hazardous materials from the home.
Public Health		Immunization Registry	State of California	Live January 2005	Future desire is to expand use of available functionality such as immunization alerts/reminders, and letters to parents.
Public Health		ISIS	State of California		California WIC's automated data system, ISIS, is used to detect health care coverage gaps at individual WIC sites, and to monitor progress in closing them.
Public Health		Lead Program database			
Public Health		LodeStar	Branagh		Case Management for Adolescent Family Life. Unclear if state will be supporting continued development of this software over the long term.

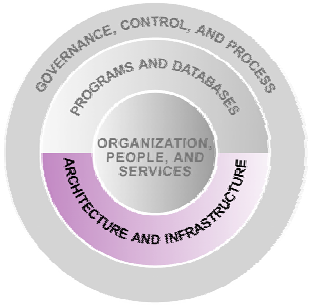
Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Public Health		Pre to Three Program	Custom		Custom developed MS-Oracle database to support the data collection and billing needs of the unit. Clerical staff key in the information from the paper encounter. PH would like to see case management unified for field nursing and pre-to-three.
Public Health		Response and Surveillance System for Childhood Lead Exposures (RASSCLE)	State of California, Department of Health Services		Case management and tracking for high-lead level adolescents. MS-ACCESS database. The data base stores data related to the case management of the child and their home environment. Reporting is sent to the State by a flat file through a query by the end user. A MS Access database.
Environmental Health	Retail Food Inspection Program –	Field Inspection System (FIS)	Envision		Hand held units for field inspection of retail food sites. The Public Pool Program would be the next logical program to implement the use of FIS since this program consists primarily of the same district staff with the addition of one Specialist.

Exhibit III-3: Programs and Databases Portfolio

DIVISION	PROGRAM	APPLICATION / DATABASE	VENDOR	DATE OPERATIONAL	NOTES
Public Health		Ryan White	Inhouse		Federal aids grant case management database. The Ryan White database was recently integrated with the clinical database of the Research Unit of the Medical Center and converted to an Oracle back-end on an Oracle server. Two areas in the Disease Control and Prevention Program which are currently lacking access to systematic collection of data is the Mobile Clinic and the STD Clinic. It is possible that the skeleton of the Ryan White database could be used to develop databases for these two programs or the existing database could be expanded to meet the needs of these two programs.
Public Health		Tuberculosis Information Management System (TIMS)	State of California		
Public Health		WEBCMR (Confidential Morbidity Report)	ITI	Late Summer 2005	State-wide project for web-based form that providers can fill out for reportable clinical events. Includes Notify, Investigate, and Surveillance functions. Will replace some of the AVSS functions for reporting, except vital events – births and deaths. SMHD receives a copy of the data back as a database.
EMS	Maddy Fund		Private Contractor		

III-3. SMHD Environment Assessment – Architecture and Infrastructure



Assessment Focus: The technical infrastructure (e.g., networks, hardware, system software) upon which SMHD applications and databases execute.

Key Issues Addressed

- **In general, does the existing network and computing environment support client, financial, administrative, and operational needs?**
- **Are there emerging needs for new technologies to enable the strategies of SMHD?**
- **Is SMHD adhering to County-wide IT infrastructure standards and policies?**

III-3. SMHD Environment Assessment – Architecture and Infrastructure (Cont'd)

Key Findings & Observations

- There has been a significant degree of standardization and consolidation of infrastructure into the County supported environment.
  - One significant exception is the Environmental Health network that is defined and supported independent of ISD.
- **Data Storage.** A number of the Divisions indicated a need for expanded data storage that is better managed. There are discussions in progress to explore solutions such as Network Attached Storage or Storage Area Networks that could share the cost and support of data storage across application, Divisions, and Departments.
- **Mobile Computing.** An emerging need across Divisions is to bring information access to the field through mobile computing and community wireless access such as being pursued for the PH Hillcrest project, and MH Evidence Based Medicine.
- **Windows Upgrade.** Plan and execute the Windows upgrade from Service Pack 1 → Service Pack 2
- **Software Distribution.** Evaluation and selection of an software distribution platform such as SMS2005 or ZenWorks which is used by the non-Health Network Services team.
- **Community Wireless.** Evaluate the need for community wireless network access across the programs and devise a Health or Health Department-wide solution.
- **Secure Electronic Mail.** ISD is exploring options for a standard secure e-mail platform. The Taveras solution was explored but dropped. An alternative solution, Tumbleweed, has been identified and is moving to production on May 15th. The issue is a point of discontent with SMHD as policy was dictated that secure email was to be used for HIPAA compliance, but no solution provided in a timely manner to enable compliance.
- **Active Directory**. Plan and implement MS Active Directory creating separate San Mateo Health Department domain which will participate in the County Active Directory Forest.
  - Monies have already been committed to server replacement and will be re-purposed for the Active Directory project.

III-3. SMHD Environment Assessment – Architecture and Infrastructure (Cont'd)

Key Findings & Observations (Cont'd)

- **Virtual Meetings.** Given the geographic dispersion of many of the Divisions, a solution is desired to enable virtual meetings. Solutions could be as complex as WebX meetings, or simple as conference call infrastructure. A long-term desire would be IP video conferencing capabilities in key locations. Current WAN links are not suitable for supporting IP video conferencing.
- **Document Imaging.** A number of Divisions indicated the need for capture of paper documents online.
- **Web.** The web and the County eGov initiative is a significant use of web technology. SMHD uses the web for the most part for community education and access. There is minimal 'transactions' performed via the SMHD website. One exception is the scheduling of hazardous material reclamation.
  - The eGov initiative lost funding priority for ongoing development with the expectation that individual Departments would fund development.
  - Vignette is the content management tool, and each Division has a content manager assigned. There is a varying degree of ease of use by the content managers.
  - The Web Advisory Group oversees the County web initiative and maintains the standards.
  - Mental Health uses and is very pleased with the Network of Care platform supplied by Trilogy. It is integrated seamlessly into the County website.
  - AAS is now also implementing Network of Care for seniors and adults with disabilities with planned operations by June 2005.
- **Servers.** Servers for the most part are in the data center. There still remains a small number of databases and application servers that reside on individual user computers. The servers for Environmental Health are also maintained outside the main Health data center.
  - While KSA has not performed an in-depth analysis, a cursory review indicates there is significant opportunity to consolidate infrastructure components between SMHD, SMMC and the County as a whole.
  - AAS: 2 servers, EMS: 1 Server, Public Health: 2 Servers
  - There are over 80 servers maintained in the data center for both SMHD and SMMC.

III-3. SMHD Environment Assessment – Architecture and Infrastructure (Cont'd)

Key Findings & Observations (Cont'd)

- **Desktop Inventory.** In general, each Division appears to be current on its desktop refresh cycles. Each Division funds replacements under a single leasing arrangement. A new leasing agreement is being negotiated with Dell which would also include deployment, asset management, and warranty support.
- **Desktop Images.** Health maintains 15-20 desktop base Images. More images managed increases the complexity of support services.

Division	Printer	Server	WorkStation	Grand Total
AAS	18	2	121	141
Administration	3		16	19
Correctional Health	6		27	33
EMS	2	1	11	14
Mental Health	35	3	242	280
Public Health	45	3	275	323
Environmental Health	6	3	70	79
Grand Total	**115**	**12**	**762**	**889**

III-4. SMHD Environment Assessment – Organization, People & Services

Assessment Focus: The current IT organizational structure, including scope of services, responsiveness, culture, and management control. Also considers the type of resources and how well they are matched to meet current as well as future needs.

Key Issues Addressed

- How well does the current IT organization meet the needs and expectations of the user community?
- Will the current IT organization be able to support the new IT initiatives that are being considered in terms of resources, skill sets, and/or process/procedures?
- What changes will be needed to ensure success of IT initiatives and the overall IT organization going forward?

III-4. SMHD Environment Assessment – Organization, People & Services (Cont'd)

Key Findings & Observations

- Virtually without exception, interviewees indicated that ISD has materially improved support scope and quality.
- The ISD management is of a high quality and generally well organized.
- **Support Organization.** ISD is traditionally has been used more for maintenance services (e.g., desktop support), and less so for planning, IT project management, and consultation. Direct IT support is decentralized and resides within the divisions to varying degrees of resource levels and formalized skill sets development.
  - The current model of decentralized support appears to work for SMHD. However, consideration should be given to more reliance on ISD resources for future increases in IT support needs.
  - While KSA believes that the level of support provided by ISD is commensurate to the fees paid, is inadequate for the IT environment of an organization the size and complexity of the Health Department.
  - It is the perception that the Division-level analysts/IT Coordinators require more access to system administration rights in order to be effective and responsive to their Division needs. Relying on ISD slows things down.
    - It is recognized that administration rights come with responsibilities and would require training to address ISD and County security and infrastructure standards and policies.
    - The current Division IT analysts serve a useful role of coordinating activities and serving as an ISD Help Desk liaison, but to serve as the envisioned IT Coordinators would require further evaluation of skill sets and availability.
    - While Mental Health has a MIS team, it is the opinion of management that it serves more as a business services function, then an IT system administrator function. The need for a system administrator function will increase with the new replacement MH system.
  - It is the perception that the Medical Center commands the attention of ISD management and resources. The failure of the SMHD Invision project has also created a barrier in SMHD and ISD relations. The recent assignment of a SMHD Relationship Manager appears to be changing this perception to the positive.

III-4. SMHD Environment Assessment – Organization, People & Services

Key Findings & Observations

- **Service Level Agreement.** There is a proposed Service Level Agreement (SLA) between SMHD and ISD, but it has never been ratified.
- **ISD Reorganization.** The Summer 2004 reorganization and the assignment of a SMHD relationship manager is well received by the Divisions.
- **Specialization.** There is little Division subject area specialization within ISD with the exception of Mental Health. This may be the cause of the decentralized model, or the result of. No matter which, it is the general consensus that both organizations can improve their mutual expertise, awareness, and experience to create a more effective collaborative relationship.
  - Mental Health has two dedicated IT analysts that maintain the MH VAX environment.
  - Recent ISD/SMHD horizontal transfers for PH and AAS show evidence of the benefits of cross-training and has improved the mutual understanding of both organizations.
- **Desktop Services.** There currently is a separation of desktop support services between San Mateo campus and the rest of the County.
  - Based on the number of desktops, servers, printers, and users for both SMHD and SMMC, the Health desktop support organization appears to be understaffed. An adequate staffing ratio will change with the new Dell leasing arrangement that will include deployment and warranty services.
- **Help Desk.** A Help Desk call and a subsequent ticket are required for any ISD action. This process is the cause of discontent. While it is recognized that 'break-fix' requests should appropriately go through the Help Desk, requests to collaborate with ISD project managers to discuss new projects, tactical planning, and other related activities are inappropriately managed through the ticketing process. A mechanism needs to be put in place for such requests.
  - There appears to be a disconnect between the Help Desk's awareness of current application analyst relationships with SMHD. Significant delay can occur searching for the appropriate analyst, or reassignment of tickets from one analyst to another.
  - The Help Desk has been known to close tickets before testing and final resolution of problems.
  - There is a desire to receive immediate acknowledgement, and ongoing status information regarding open tickets.

III-4. SMHD Environment Assessment – Organization, People & Services

Key Findings & Observations (Cont'd)

- **Training.** The general consensus is that the office automation training offered by the County is adequate.
- **Contractors.** There is a reliance on contractors reflecting a perception that ISD lacks sufficient subject matter expertise to support a Division, therefore contractors that are already intimate with the environment are used.
  - This use and funding of outside contractors for application development and other IT services diminishes the strategy of building such capabilities internally to the County.
  - In addition, there is an emerging issue of applications not complying with County standards.
- **Decision Support.** SMHD does not have an organized decision support and analysis function to serve the needs of the Department and Divisions. Epidemiology is the closest function that provides data services beyond its epidemiological scope. The ISD Reporting team does not appear to currently support SMHD in any way.
  - Mercury Reporting currently resides, atypically, within an Invision application support team. This is a result of staffing history and the Invision focus of the data warehouse.
  - At the time of KSA data gathering, Epidemiology was in the process of redefining its role which, when completed, should be used to further inform this finding.

III-4. SMHD Environment Assessment – Budget

Key Findings & Observations

- **SMHD IT Budgets**. A significant proportion of IT spending resides in the individual Divisions of the SMHD. Application costs, desktop purchases, and personnel are individually budgeted for within the Divisions.
  - SMHD is spending at a comparable level to 2004 Gartner comparative benchmarks. SMHS is budgeted to spend $5,358 per funded SMHD FTE. This is compared to Gartner Local Government IT category spending measure of $4,104.
  - Such comparison should be evaluated within a wide margin of error that is typical of such surveys. It is included here as a order of magnitude comparison and validation that the Health Department is neither grossly under or over funded.
  - It should also be noted that the nature of public fund accounting is sensitive to peaks and valleys in annual spending as there is little smoothing of 'capital' expenditures over multiple years.
- **Charge Back Model**. San Mateo uses a charge back model for the ISD budget. There is a monthly fee for infrastructure including desktops and printer connections to the San Mateo network. In addition, ISD consultation effort is charged back on an hourly basis using a fixed rate.
  - A common downside of a charge back model of resource allocation is that an organization will do without proper IT consultation as deemed not 'affordable' or 'worth it'.
    - A common approach to alleviate such spending avoidance at the detriment of an IT project, is to budget an annual total estimated usage and plan for the organization. Known and emerging projects are then continuously prioritized and applied to the annual budget and plan. Charge back fees are incurred and recorded as used. This annual budgeting and planning process allows for the service provider to appropriately plan its resources against a known service level agreement.
  - Given that hard to measure usage-based services such as application usage already resides within the Division, the ISD chargeback model is rational. This will become more complicated if a cross-Division application is pursued for Client integration.

Exhibit III-4. SMHD Information Technology Budget

Key Findings & Observations

Division	ISD 04/05 Budget	Division 04/05 IT Budget	Total IT Budget	Division Total Requirements[1]	Funded 04/05 FTEs	% IT of Total	Average $ Per FTE	Gartner 2004 Spending Survey[2]
Adminstration	465,700		465,700	4,409,949	21			
Aging and Adult	351,559	532,270	883,829	17,313,748	117			
Correctional Health	95,548		95,548	5,174,133	53			
EMS	21,046		21,046	777,115	5			
Environmental Health	146,193	296,586	442,779	10,117,974	73			
Mental Health	1,402,189	160,442	1,562,631	85,343,270	274			
Public Health	1,086,518		1,086,518	37,715,454	257			
Total IT Spending	**$ 3,568,753**	**989,298**	**4,558,051**	**$ 160,851,643**	**800**	**2.8%**	**$ 5,697**	**$4,104**

Notes:

1 General Fund, Health Services Administration, Recommended Budget

2 G00124651 Gartner 2004 IT Spending and Staffing Survey Results, Government - Local, 2005 Average IT Operating Budget per Employee

IV. SMHD Information Technology Vision

The SMHD Strategic Plan currently being deployed by SMHD identifies environmental strategic drivers which will influence its needs for support including limited financial resources, growing uncertainty in health care economics and policies, expanding at-risk populations, increased societal needs, rapid technological changes, and opportunities for enhanced community relationships. Specific strategic goals focus on the following:

- Program Evaluation and Development
- Public Health Presence
- Human Resources
- At-Risk Populations
- Quality Improvement.
- Preparedness

Section VI which presents the strategies and recommendations correlates each of the identified technical initiatives with these goals and their related objectives. In line with these goals, we would like to suggest the following SMHD IT Vision:

"The San Mateo County Health Department (SMHD) Information Technology Strategic Plan (ITSP) identifies the technologies and support services required to enable the mission, goals, and objectives of SMHD and its comprising Divisions to serve the Health needs of San Mateo County. This will be done through the procurement, design, integration, implementation, and optimized use of technology solutions that will provide enhanced value and capabilities to SMHD to serve its clients. The SMHD information technology environment will be pursued in collaboration and coordination with the Divisions, Health Administration, and the IT expertise and resources provided by the Information Services Department (ISD) of San Mateo County".

The implications of this SMHD IT Vision along a continuum of IT goals and objectives is shown in **Exhibit IV-1**. The functional, process, and organization components of the SMHD IT Vision are further depicted in **Exhibit IV-2**.

Exhibit IV-1: SMHD Information Technology Vision – Goals and Objectives

PHASE I
Integrate Within

- Consolidate and standardized core applications within divisions
  - AAS
  - EMS
  - Environmental Health
  - Mental Health
- Establish new core application function
  - Public Health
  - Correctional Health
- Adopt standard IT policies
- Increase and enhance ISD relationships – update SLA
- Establish Business Process Reengineering resource
- Maintain and enhance core infrastructure and support services

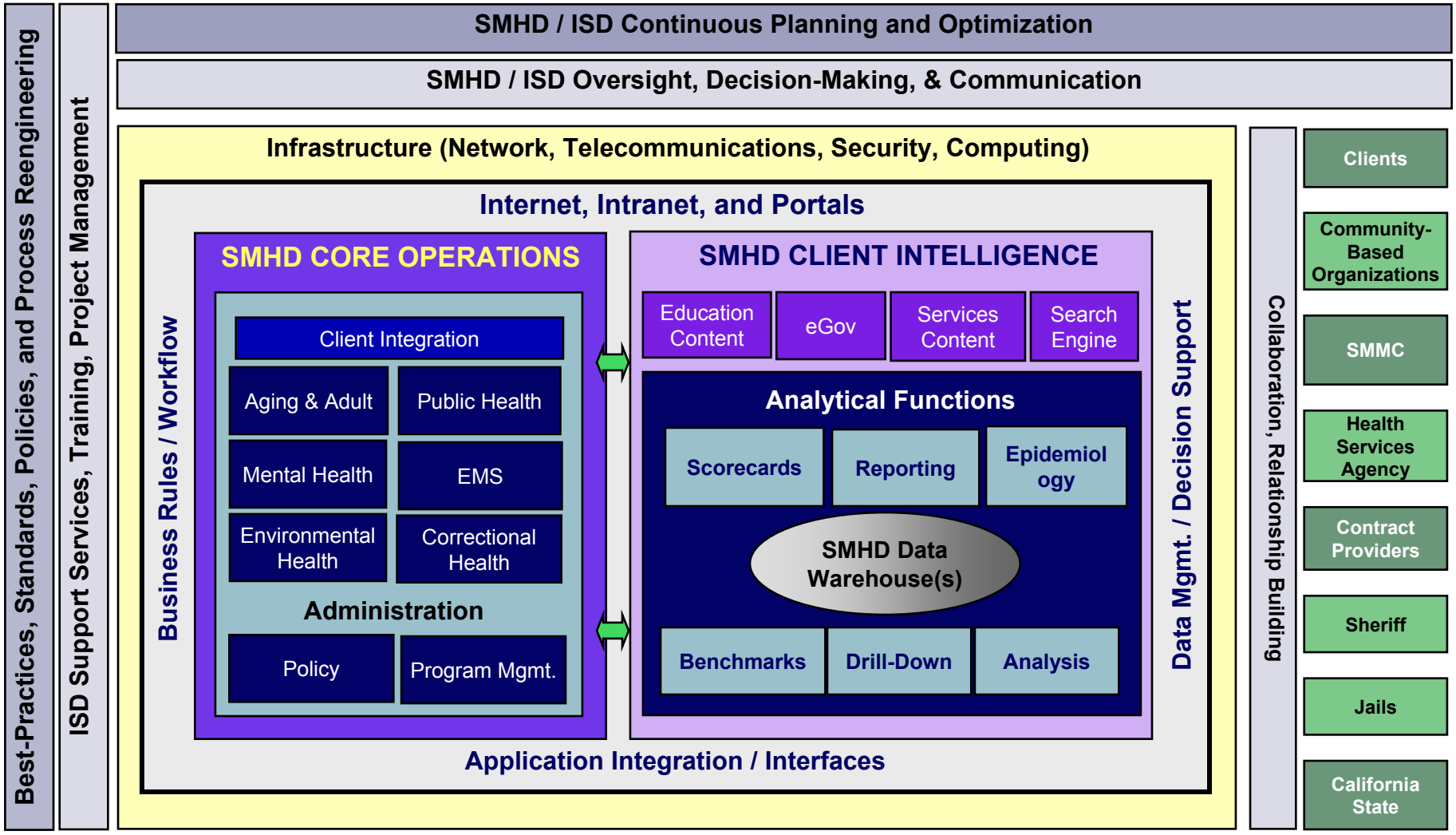
PHASE II
Integrate Throughout

- Formalize SMHD IT role and function
- Consolidate oversight and decision making
- Enhance SMHD IT Coordinators responsibilities and training
- Establish client integration platform
- Define common client identification
- Assess need for integrated case management
- Establish utility model

PHASE III
San Mateo Community Integration

- Establish client intelligence platform
- Expand integration / interfaces with County departments as appropriate
- Enhance eGov platform with Client transactions

Exhibit IV-2: SMHD Information Technology Vision



V. Gap Analysis and Unmet Needs

The gap analysis is intended to identify changes or additions required to governance, primary applications, technical infrastructure, and organization of support resources if SMHD's IT Vision, Goals, and Objectives are to be met. As indicated in **Exhibits V-1 through V-3**, the analysis assigns high, moderate, or low priority designations to specific actions, further categorizing each action in terms of

- "Assess Need" – an action for evaluation of alternative decisions
- "Acquire/Implement"– introduction of an application not currently deployed
- "Replace" – a currently deployed application recommended for replacement
- "Upgrade" – augmentation to a newer release or version
- "Expand" – addition of function or interfaces to a deployed application

It is important to note that these and other recommended actions are converted into Technical Initiatives (under the recommended IT Strategy) and presented in Section VII. Each initiative will embody a description, priority, schedule, risk level, capital cost, ongoing cost, and IT staff implications.

Exhibit V-1: SMHD Needs Gap Analysis – Program and Databases Needs

Priority	ASSESS NEED	ACQUIRE/ IMPLEMENT	REPLACE	UPGRADE	EXPAND
MANDATORY / ESSENTIAL	PG.3 Core System Client Integration	PG.3 Core System Client Integration PG.4 PH Field Nursing & Family Health Services PG.5 PH Lab PG.6 Mental Health	PG.4 PH Field Nursing, Child Health Services, and Pre-to-Three (Global Replacement)		
HIGH	PG.1 Analytical Client Intelligence PG.10 Correctional Health 'Core'	PG.1 Analytical Client Intelligence PG.21 Projects with State	PG.12 BT Alerting / Lanfax	PG.22 Upgrade AAS applications PG.23 Upgrade EHS application	
MODERATE	PG.2 Event Management PG.7 EMS Data Integration PG.17 Survey platform	PG.13 DCPU PG.25 MH Eligibility Platform			PG.11 AAS Data Integration PG.13 DCPU Data Integration PG.14 EPI, STD, HIV Data needs PG.15 GIS PG.16 Finding KIDS DB PG.24 Correctional Health Access expansion
LOW	PG.20 E-Learning environment	PG.8 EMS Ambulance RFP IT inclusion PG.9 EMS Customer Surveys PG.18 DB for Training PG.19 On Line Financial reporting			PG.26 Threaded Queries

Exhibit V-2: SMHD Needs Gap Analysis – Architecture and Infrastructure

Priority	ASSESS NEED	ACQUIRE/ IMPLEMENT	REPLACE	UPGRADE	EXPAND
MANDATORY / ESSENTIAL		AI.8 Secure Email AI.5 Active Directory AI.13 Replacement Cycle	AI.1 Network Infrastructure		
HIGH	AI.3 Storage Planning	AI.4 Storage Area Network AI.7 Intrusion Prevention AI.14 Network Closets Environment AI.19 Policy Enforcement	AI.2 Network Closets AI.9 Desktop replacement AI.26 Server replacements		AI.6 Training AI.30 Align Mobile Computing standards
MODERATE	AI.12 Wireless Network Assessment AI.22 Document Imaging	AI.11 Wireless Policies AI.15 Network Operations Center AI.17 User Account Management AI.18 Centralized Dial In AI.20 Desktop Policy Management AI.21 Security Awareness AI.24 Incident Handling Procedures AI.25PDA Standards			
LOW	AI.10 Wireless point of care AI.27 AAS Bar Coding – Public Guardian AI.28 AAS Voice Recognition / EMR AI.29 Optical storage	AI.16 Help Desk AI.23 Virtual Meetings / Audio Conferences			

Exhibit V-3: Technical Initiatives Definition

Technical Initiative	Action	Definition
PROGRAMS AND DATABASES (PG)		
PG.1 Analytical Client Intelligence	Assess Need / Acquire / Implement	Assess the need for SMHD analytical information, and evaluate the ability of current solutions, both data warehousing and analytical toolsets, to support the identified SMHD requirements. Assessment with external assistance of needs, strategy and solution set for data management and decision support tools. Assumes ISD/external assistance to facilitate and advise. ISD resource assumed to be adequate for architecture provisioning. Existing Oracle solution is assumed to be exploited, but new decision support tool. Possibility of sharing decision support investment across multiple Departments. Outside consultant support included in one-time costs.
PG.2 Event Management	Assess Need / Acquire / Implement	Assess needs, and initiative marketplace review and selection effort.
PG.3 Core System Client Integration	Assess Need / Acquire / Implement	Achieve the SMHD strategy to identify and increase the visibility of clients within SMHD and the County. Assess the requirements, strategy, and technical solutions for client integration including an approach to common registration and case management integration.
PG.4 PH Field Nursing, Child Health Services, and Pre-to-Three (Global Replacement)	Replace	Replacement automation for PH services. Initiate acquisition process to assess requirements, current solutions, and commercial marketplace for a replacement solution. Integrate activities with Client Integration and PH Lab actions.
PG.5 PH Lab	Acquire / Implement	Replacement automation for PH lab services. Newly reengineered processes and expansion of functionality to support new levels of staff and customer satisfaction, increase Lab througput, and other efficiency gains as a result of automation. Continue evaluation of commercial application solutions to replace Global PH Lab function, RFP, and acquisition.
PG.6 Mental Health	Acquire / Implement	Replacement as well as new clinical automation for Mental Health services. Newly reengineered processes and expansion of functionality to support new levels of staff and client satisfaction.
PG.7 EMS Data Integration	Assess Need / Acquire / Implement	Assess the integration of data between key EMS and other County application systems. Projects could include recently expanded Website, HARTS, MEDS PCR, bioterrorism (and EMS system) surveillance, EMS provider electronic patient records, Maddy Fund Database, Child Death Review database, and invoicing.
PG.8 Ambulance Service RFP	Implement	Include ISD and IT input into issuance and analysis of EMS ambulance service RFP.
PG.9 EMS Customer Surveys	Implement	Design and deploy on the County website, an opportunity for EMS customers to submit various satisfaction and suggestions for improvement. Consider shared solution with PG.17 PH survey unmet needs.

Exhibit V-3: Technical Initiatives Definition (Cont'd)

Technical Initiative	Action	Definition
PG.10 Correctional Health Core	Assess Need	Assess the need and requirements for a correctional health/inmate clinical and administrative information system in coordination with County Jail.
PG.11 AAS Application Integration	Expand	Expanding the integration and consolidation of AAS client information into the Q Continuum environment. This includes development of APS functionality, IHHS integration with CMIPS, MDS_HC, MSSP; and Computrust GUI. .
PG.12 BT Alerting and Communication	Replace	Upgrade or replace current LAN FAX which has reached EOL- Project proposal submitted. Satellite expansion needs.
PG.13 PG DCPU Data Integration	Expand	Pre to 3_PM160_Field nursing; 'Mobil clinic; TB db conversion, TB_DOT Billing; WEB CMR, CCS, and WIC data integration. Could include EPI, STD, HIV needs.
PG.14 EPI, STD, HIV Data Needs	Expand	2 upcoming meetings for assessment. STD program. Request to develop a db to improve patient tracking, svc utilization, QC, and reporting
PG.15 GIS expansion	Expand	Proposal:TBD - Request for implementation of GIS for census, disease, ... Tracking - requires interoperability w. Geomedia (system used by the county assessor)
PG.16 Finding Kids DB expansion	Expand	Assess and determine expansion needs and implement improvements throughout expansion.
PG.17 PH Survey Platform	Assess Need	Assess need and solution for support of online PH surveys for customer satisfaction, outbreak investigations, and other community input activities. Assess shared solution with PG.9 EMS Customer Surveys unmet need.
PG.18 DB for Training	Implement	Tracking training, Licensing - MH division has an in house DB.
PG.19 On-Line Financial Reporting	Implement	Online management reporting utilizing county IFAS information.
PG.20 E-Learning	Assess Need	Environmental Health request, but MH division with numerous clinics through out the county can benefit with the major upcoming implementation.

Exhibit V-3: Technical Initiatives Definition (Cont'd)

Technical Initiative	Action	Definition
PG.21 Projects with State of CA	Implement	State efforts to move programs to the local county level require major infrastructure and resources. IE Upcoming CCSM_MTU and WEB CMR Projects. Completed WIC and BIH projects this FY.
PG.22 AAS Major System Upgrades	Upgrade	Computrust to GUI.
PG.23 EHS Major System Upgrades	Upgrade	Environmental Health ENVISION System migration from Sybase to SQL.
PG.24 Correctional Health integration and access	Expand	Increase access to existing San Mateo County information systems as appropriate. Assess the need, strategy, and acquisition/enhancement of information technology to support correctional health administrative and clinical needs. information systems include the Medical Center, AAS, Mental Health, Sheriff's Department, and Probation.
ARCHITECTURE AND INFRASTRUCTURE (AI)		
AI.1 Network Infrastructure	Replace	Follow current 18-month plan for critical replacement of network equipment that is entering end of life and will no longer be supported by vendor.
AI.2 Network Closets	Replace	Replacement of closet UPS systems to obtain remote management capabilities to improve ability to monitor and manage devices by enabling remote management. Requires facilities (HVAC) work or independent HVAC units; requires IT-based monitoring capabilities.
AI.3 Storage Planning	Assess Need	Conduct a full assessment of storage requirements over the three-to-five year horizon to enable improved SAN planning and ability to leverage a common, shared infrastructure. Move to a utility model relying upon County ISD as technology services provider. Funding for study and planning.
AI.4 Storage Area Network	Acquire	Implement a Storage Area Network to consolidate all server-based storage, accommodate growth in data storage due to existing and new applications, centralize backup infrastructure, and prepare for imaging applications (e.g., document imaging, DICOM store)
AI.5 Active Directory	Acquire	Continue with implementation plans for Active Directory while also developing a separate SMHD Active Directory Domain. Incremental dollars necessary to establish independent SMHD Active Directory in-trust relationship with SMMC
AI.6 Training	Expand	Continue to fund and allocate time for technical training for staff
AI.7 Intrusion Prevention	Acquire	Acquire intrusion prevention systems for server and network; integrate into Network monitoring. Ascertain ability to share resources for monitoring at a County-level utilizing a utility service model.

Exhibit V-3: Technical Initiatives Definition (Cont'd)

Technical Initiative	Action	Definition
AI.8 Secure Email	Acquire	Acquire and implement secure email solutions for secure provider-to-patient communication of Protected Health information. Ascertain ability to share resources for secure email at a County-level utilizing a utility service model.
AI.9 Desktop Replacement	Replace	Continue with plans for total replacement of desktops computers and peripherals with four-year rotation and professional services for swap outs. Already funded and underway
AI.10 Wireless Point of Care	Assess Need	Undertake pilot for use of wireless point of care devices for mobile SMHD professionals. Pilot only. .5 FTE marginal resource.
AI.11 Wireless Policies	Implement	Develop policies governing use and security of wireless; ban all departmental wireless infrastructures without written ISD network services permission
AI.12 Wireless Network Assessment	Assess Need	Conduct an assessment of the adequacy and future enhancement needs of the wireless network
AI.13 Replacement Cycle	Implement	Implement useful life approach to funding and replacement of all technical infrastructure components; utilizing asset tracking and budgeting systems
AI.14 Network Operations Center	Acquire	Implement full Network operations Center including enterprise-class monitoring infrastructure. Excludes construction costs. Move to a utility model relying upon County ISD as technology services provider. 2 marginal FTEs.
AI.16 Help Desk	Acquire	Acquire fuller featured help desk system that incorporates diverse Health Department needs. Move to a utility model relying upon County ISD as technology services provider. Incorporate 'self-service' functionality to track status of tickets.
AI.17 User Account Management	Implement	Automate handling of user account management; potentially as part of fuller-featured Help Desk solution
AI.18 Centralize Dial-In	Implement	Centralize dial in for all vendor-managed systems
AI.19 Policy Enforcement	Implement	Enforce password and other security policies.

Exhibit V-3: Technical Initiatives Definition (Cont'd)

Technical Initiative	Action	Definition
AI.20 Desktop Policy Management	Acquire	Acquire and implement central desktop policy management infrastructure and apply to all devices. Move to a utility model relying upon County ISD as technology services provider.
AI.21 Security Awareness	Implement	Create and promulgate on an ongoing basis security awareness training -- repeat annually; develop regular reminders
AI.22 Document Imaging	Assess Need	Assess the need of document imaging in coordination with a storage solution approach. Includes scanning equipment for pilot locations. Consider a shared service across County Departments.
AI.23 Virtual Meetings / Audio Conferencing	Implement / Assess Need	Assess need, strategy as well as implement short-term solution for virtual meeting capabilities. Short-term solution assumes setting up audio conference call infrastructure utilizing a service provider.
AI.24 Incident Handling Procedure	Implement	Develop comprehensive incident handling procedures, including detection, documentation, evidence preservation, and management escalation.
AI.25 PDA Standards	Implement	Establish SMHD standard for personal digital assistants (PDAs) and synchronization platforms with desktop personal automation.
AI.26 AAS Server Replacements	Replace	There are a number of servers that require replacement to remain current and to prepare for major system upgrades.
AI.27 AAS Bar Coding – Public Guardian	Assess Need	Bar Coding. implementation for Public Guardian inventory system. In fact, there needs to be a Public Guardian inventory system with a provision for Bar Coding the inventory.
AI.28 AAS Voice Recognition / EMR	Assess Need	Voice Recognition Software (following the Brevion Demo) relative to the Electronic Medical Record.
AI.29 Optical Storage	Assess Need / Acquire / Implement	Explore feasibility of acquiring optical storage capabilities across SMHD
AI.30 Mobile Computing Standards	Assess Need / Acquire / Implement	Align with County mobile computing standards

VI. Alternatives Strategies and Recommendations

This section considers alternative strategies for key IT unmet needs that SMHD could adopt for the FY 05/06 – through – FY 08/09 planning horizon, and identifies the recommended strategies which best support SMHD goals and objectives. The section is divided into the following components that address primary and significant strategies for consideration:

- Section VI.1 – Governance, Process and Control
- Section VI.2 – Software and databases
- Section VI.3 – Organization, people, and services
- Section VI.4 – Architecture and Infrastructure

VI-1: Recommendations - Governance, Process and Control

Institutionalize Information Technology as a critical component of SMHD strategy and objectives through appropriate governance that balances and coordinates the needs of the Department with that of the Divisions.

- **Establish SMHD-Wide IT governance and decision making process as an agenda item within RAP.** Rather than create a new committee layer that would provide SMHD governance and decision making, a preferable approach would be to exploit the existing senior management Responsibility - Accountability – Predictability (RAP) forum. **Exhibits VI.1 and VI.2** summarize the recommended scope of oversight and decision making. Information Technology should be a regular agenda item of RAP.
- **Broaden the responsibilities of the ITWG to serve as an advisory function to RAP.** This will require further evaluation of the current membership to ensure appropriate Division IT and business leadership representation, establishment of its charter, and definition of decision making scope and responsibilities.
- **Formalize the SMHD IT Management Function as an assigned Health Administration position.** It is recommended that SMHD define a role and its responsibilities for a SMHD IT management function. This role will serve as the SMHD-wide coordinator, planner, and manager of SMHD IT activities and will be the primary liaison to ISD. The recommended roles and responsibilities are summarized in **Exhibit VI.3**.
- **Consistently apply a rational and structured prioritization methodology to significant IT investments decisions**. All significant SMHD IT investments should be made using a rational set of criteria to ensure alignment with the SMHD Strategic Plan and the priorities of infrastructure investment, client services, compliance, and regulations. **Exhibits VI.4 and VI.5** depict a recommended prioritization criteria and decision tree.

VI-1: Recommendations - Governance, Process and Control (cont'd)

- **Involve ISD expertise and project management appropriately in all significant Health Department IT initiatives, investments, and implementation projects.** Support the up-front involvement of ISD in any significant systems upgrade or procurement. For example, the Mental Health application acquisition is an imminent and sizable project. ISD will continue to serve its collaborative role in technology selection and implementation planning, however in addition, the experience should further inform the most effective model for IT contract negotiations, installation integration and testing, ongoing change order management, and contract compliance monitoring. The most effective way to achieve this is through designation of an ISD Project Manager collaboratively responsible, with Mental Health and the Vendor, for the successful outcome of this application acquisition and implementation.

Exhibit VI-1: Recommended IT Governance & Decision Making Scope

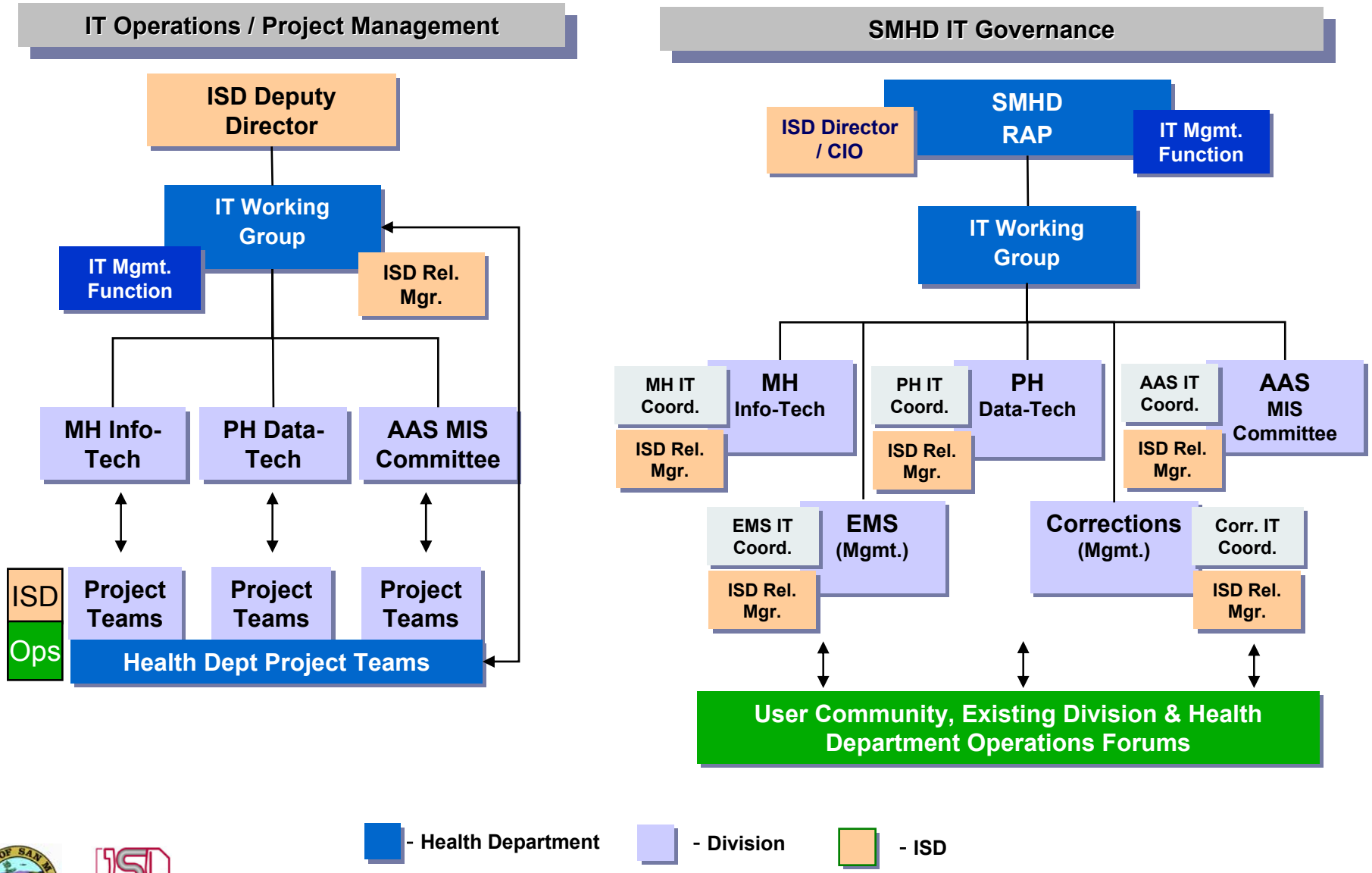


Exhibit VI-2: Recommended IT Governance & Decision Making Scope

ROLE	RESPONSIBILITIES
RAP	Provide strategic leadership and direction, establish Health Department IT policy and funding guidelines, and approve final SMHD IT Strategic Plan and long-term investment levels.
ISD Director / CIO	Establish County IT strategies and standards. Ensure optimal coordination of IT activities across County Departments, enable economies of scale, and provide guidance and leadership to SMHD IT planning and decision making.
SMHD IT Management Role	Direct Health Department IT strategic planning, drive SMHD reengineering efforts, SMHD project request evaluation, project monitoring, and work collaboratively with ISD leadership and operations. Exhibit VI.3 further details role and responsibilities.
ISD Deputy Director	Manage and lead Medical Center and Health Department ISD resources and projects. Ensure optimal coordination of ISD activities across County Departments, provide guidance and leadership to SMHD IT planning and decision making, serve as primary liaison to the SMHD IT Management Role.
ISD Relationship Manager	Serve as primary liaison to SMHD and the IT Manager to coordinate and manage ISD support resources, activities, and projects applied to SMHD and Division activities.
IT Working Group	Support the development of the Health Department and Division IT plans serving in an advisory role to SMHD senior management. Make recommendations, prioritize activities, communicate, and monitor progress.
Division Management & Info-Tech / Data-Tech	Provide Division focus to approve local IT strategy, identify unmet needs, evaluate, justify, prioritize, recommend, and monitor all local IT projects, and allocate resources.
Division IT Coordinator	Conduct Division IT strategic and tactical planning, project request evaluation, operational oversight, project monitoring, and serve as member of the ITWG and primary liaison to the ISD relationship manager.
Project Teams	Support Health Department and Division projects through teams comprised of appropriate sponsors, operations, and ISD staff to evaluate, select and implement IT solutions, lead process reengineering efforts.

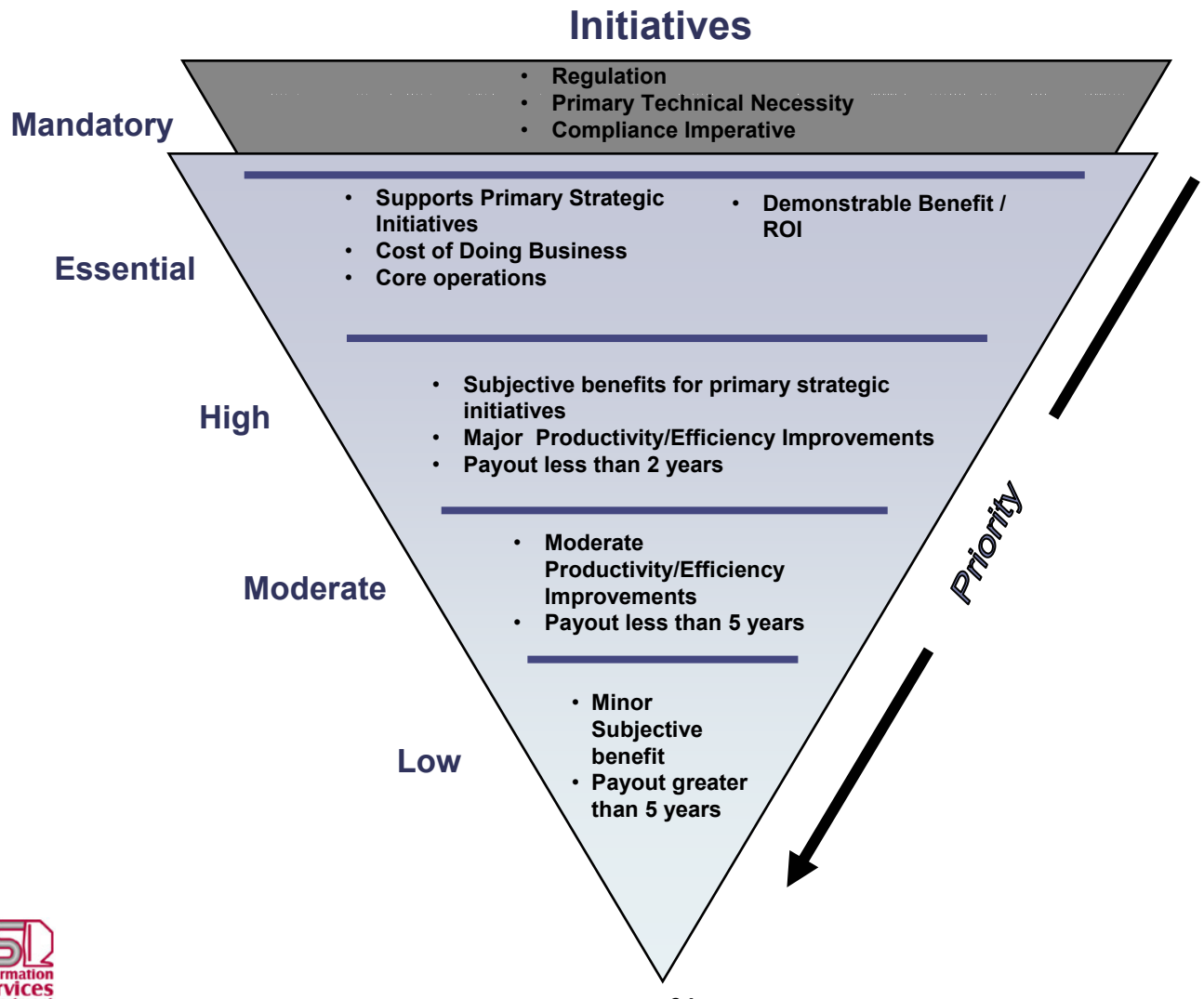
Exhibit VI-3: Recommended SMHD IT Management Function

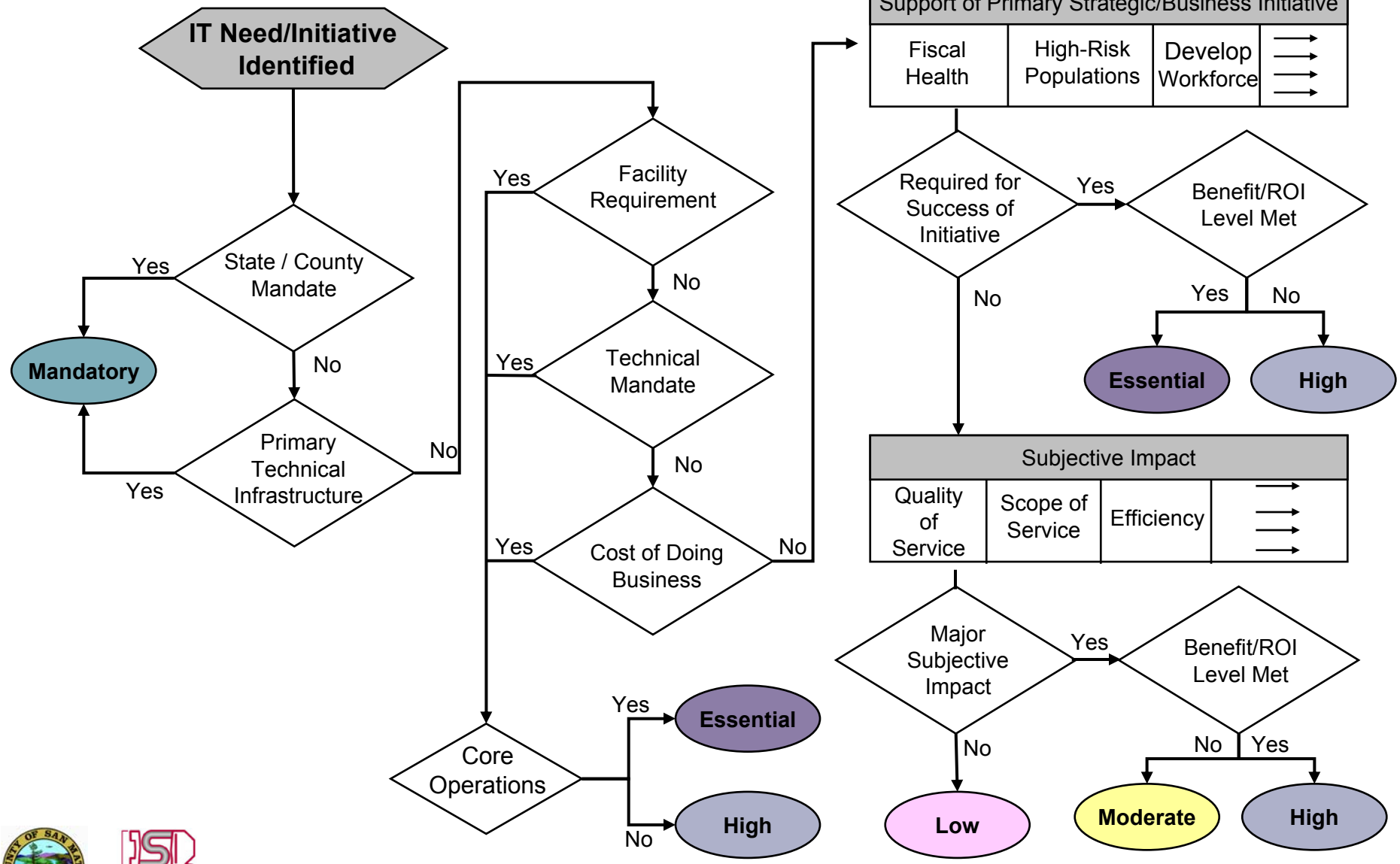
Roles & Responsibilities

- Extend and champion the SMHD IT Vision and build consensus for future information technology endeavors.
- Coordinate, lead, and be accountable to RAP for the IT agenda.
- Establish credibility with the Senior Management team, Division leadership, the County Manager, and ISD leadership and operations.
- Facilitate and coordinate complex parallel activities across Divisions and with ISD.
- Develop and manage the Information Technology operating and capital budgets to promote cost efficiency. Maintain budgetary and cost control mechanisms and processes.
- Foster teamwork within and outside the information technology function across Divisions and ISD.
- Collaborate with ISD analysts and Project Managers to work on specific IT projects within the San Mateo Health Department/Divisions.
- Provide leadership and facilitation for reengineering activities in conjunction with information technology deployments.
- Develop and foster a culture of responsive customer oriented services and internal accountability.
- Develop effective channels of communication and forums for information technology resources and the various user communities.
- Represent SMHD in County-wide IT committees.

Exhibit VI-4: Recommended Conceptual Prioritization Process

A structured prioritization process should be applied to all potential IT Initiatives to ensure alignment of IT investments and resources to SMHD requirements.





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