



# ADOA - ASET

Arizona Strategic Enterprise Technology

**Project Investment Justification**

**Version 01.01**

A Statewide Standard Document for Information Technology Projects

**Project Title: Arizona State Hospital Medical Records System Upgrade**

<b>Agency Name:</b>	Arizona Department of Health Services
<b>Date:</b>	January 2014
<b>Agency Contact Name:</b>	Raghu Ramaswamy
<b>Agency Contact Phone:</b>	
<b>Agency Contact Email:</b>	

## I. Management Summary\*

The Arizona State Hospital (ASH) is a nationally accredited (by The Joint Commission) inpatient care facility under the Arizona Department of Health Services (ADHS), Division of Behavioral Health Services, that provides long-term behavioral health services to the most seriously mentally ill Arizonans. The hospital operates programs for civil and forensic patients, as well as sex offenders who are residents of the Arizona Community Protection and Treatment Center (ACPTC).

The hospital uses an Electronic Medical Records (EMR) system licensed by Netsmart Technologies known as Avatar that was originally implemented in 1999 and upgraded to newer technology in 2004. Avatar is a third-party, commercial off-the-shelf line of products that were specifically designed to meet the needs of behavioral health care providers. Due to statewide budget cuts in 2009 that coincided with the nation's fiscal crisis, ASH struggled to fund the services and staffing levels needed for direct patient care and was, ultimately, unable to adequately maintain its primary automation system. ASH's initial Avatar implementation included core modules which provide the foundation for a basic medical record system but has not kept up with advancing technologies available within Netsmart's current behavioral health footprint.

As a result, the Avatar system is now ten years old, is missing key components of a fully functional EMR and runs on a technical platform that is outdated and unreliable due to poor response times and the lack of a disaster recovery (DR) solution. Additionally, effective October 2014, the Centers for Medicare and Medicaid Services (CMS) requires the use of new diagnostic codes for billing purposes known as the International Classification of Diseases, 10<sup>th</sup> Edition, or ICD-10. The version of Avatar currently in use at ASH is not compatible with the new ICD-10 code structure.

ASH is proposing to upgrade and enhance the existing Avatar software environment. The Avatar product line has been significantly reengineered over the past several years and now provides a modern, user-friendly interface with additional features built into core products that will address current deficiencies and provide a platform for further enhancement in the future.

The project will be implemented in two phases. The first phase will address the most critical risks and issues, including ICD-10 compliance, by upgrading Avatar to the newest release known as myAvatar. Implementation of a document management solution will enable the scanning of documents that exist only in hard copy into the electronic medical record, eliminating the current mix of paper and electronic medical charts. The technical platform will be redesigned/upgraded to improve performance and to provide the redundancy and disaster recovery (DR) capabilities needed for a mission critical application.

During the second phase, three new modules will be implemented that will close the current gaps in missing functionality and transform Avatar into a fully functional and integrated Electronic Medical Records system. The new modules are:

- RxConnect, an inpatient pharmacy management system that will replace the current standalone pharmacy system and will be fully integrated with other Avatar modules.
- Electronic Medication Administration Record (eMAR), which will provide an efficient on-line process for charting medication administration and be fully integrated with the Pharmacy and Physicians Order Entry modules. The eMAR is critical functionality that is currently missing from the ASH's EMR.
- Care Connect, which will provide a platform for a bi-directional exchange of data, such as lab orders and results, with external providers. This is critical functionality that is currently missing from ASH's EMR.

The project is funded by special appropriations from a combination of General, Indirect, and Arizona State Hospital Funds. The existing contract with Netsmart will be amended to include the additional software licenses and professional services needed to complete this project.

Through this project, ASH will have a comprehensive and fully integrated electronic medical record deployed in a secure, stable, and sustainable infrastructure. Benefits include:

- Continued revenue stream through reimbursement from the CMS for billable services.
- Improved patient care and staff efficiencies through access to a comprehensive, electronic medical record.
- Reduced potential for medication errors that could lead to patient safety issues, financial penalties, or loss of accreditation.
- Avoidance of financial penalties for non-compliance with federal regulations, such as the Health Insurance Portability and Accountability Act (HIPAA) of 1996.
- Reduced data security and data quality risks.

## II. Project Investment Justification (PIJ) Type\*

Yes  No Is this document being provided for a Pre-PIJ / Assessment phase?

If Yes,

Identify any cost to be incurred during the Assessment phase.	\$
Based on research done to date, provide a high-level estimate or range of development costs anticipated for the full PIJ.	\$

Explain:

[Click here to enter text.](#)

Yes  No Will a Request for Proposal (RFP) be issued as part of the Pre-PIJ or PIJ?

### III. Business Case

#### A. *Business Problem\**

##### **Outdated and Unsupported EMR Software Platform:**

ASH is currently using three modules of the Avatar system that were released in 2004; the fourth module in use was upgraded to the 2006 version. Avatar has not been properly maintained due to a lack of resources. The current release level is no longer supported by the vendor and, therefore, is not compatible with new mandates such as the federal requirement to use ICD-10 codes. Known bugs have been fixed in upgraded versions but fixes will never be released for this version. Some of these bugs need to be worked around, resulting in staff inefficiencies; others cause data integrity issues, such as when alphabetical characters are saved into a numeric field. Software patches were applied inconsistently over time, with installation frequently causing one piece of functionality to malfunction in the process of attempting to fix another; some functionality has been disabled as a result, such as drug interaction and allergy checks.

##### **Cumbersome User Interface – Prone to Errors and Reduced Efficiency:**

The current user interface is extremely challenging to navigate through. Numerous menu options are presented, with lengthy drop down menus displayed underneath, even if the user doesn't have security access to use the functionality. This makes it extremely difficult to locate and quickly retrieve critical information from the patient's medical chart. The user view is limited to what can fit on a single screen and requires tabbing back and forth through a multitude of screens to enter or even to view data. Viewing a single clinical assessment can require tabbing through as many as 40 individual screens, or generating a large report, which consumes system resources. The cumbersomeness of the user interface cannot be overstated. Employees find the system such a barrier to effective patient care that it is often cited as a primary reason for separation from ASH.

##### **Lack of Integration with Other Critical Clinical Systems:**

ASH uses another third party product called vxVista, which is an open source inpatient pharmacy management system. There is currently no interface between Avatar and vxVista for medication orders, which means that all orders for medications must first be entered into the Avatar Physicians Order Entry module and then re-entered by a pharmacist into vxVista. The duplicate data entry is not only inefficient but the extra attention required to avoid the introduction of medication errors is very time-consuming. In addition, Avatar and vxVista use separate databases for the drug formularies. Keeping the two up to date and in synch became so labor intensive and fraught with problems that the functionality that identifies drug-to-drug interactions and allergy alerts in both systems was turned off.

When ASH implemented Avatar for the ACPTC program, that program was not as integrated into the State Hospital as it is today, and it was decided that the data related to ACPTC residents needed to be kept completely separate from the civil and forensic patient records for reasons of confidentiality. There are, in effect, two separate EMRs installed at ASH, with

different clinical assessments and reports developed for each installation. Today, many clinicians provide services to both patients and residents. In addition to having to learn two separate systems, clinicians need to log into and out of ASH Avatar and ACPTC Avatar numerous times a day, creating additional inefficiencies for staff. The separate installations also add to the technical support and maintenance needs.

Currently, ASH patients are transferred to Maricopa Integrated Health System (MIHS) when in need of acute medical attention. MIHS also performs all lab tests and radiology readings on behalf of ASH. There currently is no electronic data exchange between the ASH and MIHS automated systems. Patients are transferred to MIHS accompanied by hard copy printouts of medical records, including medication history, and all lab orders and results are transmitted to and from MIHS via paper records.

#### **Outdated Custom Ancillary Applications – Data Integrity Issues:**

Over time, a variety of ancillary applications and interfaces were developed in-house to supplement the functionality and reports within Avatar, adding to the complexity of applications that end users need to learn and navigate through. Several of the applications were developed in order to combine data from the ASH and ACPTC Avatar installations for reporting purposes, such as the Facility Transport application used to schedule campus transportation for patients and residents. Others were developed to supplement missing functionality, such as the Medication Administration and Chart Review applications/reports. The applications were developed with various technologies (e.g., Visual Basic, MS Access, .Net) by personnel who have since left ADHS, and the data resides on a variety of database platforms (Access, SQL, Cache, and Oracle). Various inbound and outbound interfaces were also developed, resulting in a complex web of technologies that need to be monitored and supported by technical personnel who were not involved in their development. The numerous entry points for capturing patient data have inevitably led to data integrity issues. Data quality issues can negatively impact patient care and increase the risk of financial sanctions or other penalties for non-compliance with regulatory standards, such as those of the CMS or The Joint Commission.

#### **System Performance and Reliability:**

Another issue that needs to be addressed through this project is one of system performance. Performance problems are encountered for three primary reasons:

- 1) The hospital is currently licensed for only 80 concurrent licenses of the Cache database, an insufficient number that can prevent users from logging in or cause extreme slowness because all licenses have been consumed.
- 2) All reports generated from Avatar or ancillary applications are run against the production Cache database. When a large number of users are simultaneously running reports, Avatar almost grinds to a halt.
- 3) The server platform is insufficient to support the number of applications and databases currently in use or the separate environments needed for development, testing, and training.

### **Inability to Upgrade Desktop Environment:**

The final issue that will be addressed is to upgrade the desktop Operating System from Windows XP to Windows 7. The version of Avatar in use at ASH can only run under XP. Microsoft will be dropping support for Windows XP effective April 2014, exposing the application to security vulnerabilities and potential attacks. MyAvatar is compatible with all versions of the Windows Operating System from XP to Window 8. This project will enable ASH to upgrade the desktops to Windows 7, which is the current standard within ADHS.

### **Summary:**

The current technology environment at ASH consists of a complex array of applications that are used both for direct patient care and administrative purposes, various technologies that are increasingly difficult to support and subject to failure, and outdated hardware and software that are barely responsive to user needs. The current data integrity issues can negatively impact patient care and increase the risk of potential financial or other penalties for non-compliance with standards and regulations.

## ***B. Proposed Business Solution\****

The proposed solution is to upgrade the four modules of Avatar that are currently in use at ASH to the newest version known as myAvatar and to add new modules that will give clinicians the complete functionality they need to provide safe and effective care to their patients. The Avatar product line has been significantly reengineered over the past several years and now provides a modern and friendly user interface with additional features built into core products that will address current deficiencies and provide a platform for further enhancement in the future.

The user view upon logging into myAvatar is customized based on functional role, so that staff will see only options and information that is pertinent to their job function as defined by application security roles. For example, clinicians will be presented with a quick view of their current patient caseload and will be able to quickly navigate to any component of the medical chart with just a couple of mouse clicks. This will eliminate the need to navigate through a maze of menu items in order to enter or retrieve data. The user view is also arranged vertically instead of horizontally, so a complete patient assessment, for example, can be viewed on a single screen simply by scrolling down, instead of tabbing through a multitude of screens.

MyAvatar also presents users with a daily to do list based on the business rules that define when tasks need to be completed. This will assist in meeting regulatory timeframes for completing documentation and avoid potential sanctions. The user view also includes dashboards that will display at a glance whatever information is relevant to the job function – perhaps patient vital signs for nurses, or bed capacity by unit for admissions staff. The user can choose which standard dashboards to display on the home view based on those most frequently used. The user view is extremely important, particularly for clinicians, as one of the

chief complaints today is the difficulty in navigating through Avatar to enter and, especially, to retrieve information in the patient charts.

Because ASH is so far behind in its version of Avatar, the vendor has proposed a fresh installation of the software in lieu of simply applying patches and upgrades. This approach will enable the project team to combine the ASH and ACPTC installations into a single system and database. In addition, the Clinician Work Station module comes with a development tool called RAD Plus. RAD Plus is used to develop site-specific data collection screens for clinical assessments and progress notes. Currently, different assessments and progress notes are being used by ASH and ACPTC. This approach will allow a single set of assessments and notes to be used by all clinicians, whether they are working on Civil, Forensic or ACPTC treatment units. Some amount of rework on all assessments will be required in order to migrate them from the current horizontal view, which is extremely problematic, to the new vertical user view described above and to standardize the assessments across all programs. The single installation will significantly streamline ease of use for clinicians and eliminate the need to maintain two systems. This approach will also allow the team to address the underlying problems that have resulted in data integrity issues by eliminating duplicate entry fields and to retire the reporting applications that were built to combine data from ASH and ACPTC. Other ancillary applications that duplicate core functionality within myAvatar will be decommissioned.

The project is proposed in two phases. Phase I will focus on implementing the ICD-10 by October 1, 2014, in order to achieve compliance with CMS requirements and will entail upgrading the Avatar Practice Management, Client Funds Management, Clinician Work Station and Physicians Order Entry (POE) to the myAvatar version. The existing drug formulary currently connected to the POE module will be replaced with a subscription to MicroMedex, and the drug and allergy alerts will be reactivated. Other activities include converting the current patient and resident data into a single database, end user and technical training, and go live support. It is also anticipated that the Perceptive Document Management software will also be implemented in Phase I as the implementation and training efforts are minimal. The estimated timeframe for Phase I is six months from contract amendment.

During Phase II, the following new modules will be implemented and fully integrated with myAvatar:

- RxConnect, will replace the existing pharmacy system, vxVista. RxConnect will be fully integrated with myAvatar Physicians Order Entry, eliminating the current duplicate data entry process. The MicroMedex formulary implemented in Phase I will now be connected to RxConnect, eliminating the duplicate formularies.
- Electronic Medication Administration Record, or eMAR, will replace the paper MAR and be electronically integrated with myAvatar POE and RxConnect. Any medication ordered through POE or RxConnect will automatically appear in the eMAR, which will be updated when administered to a patient. The Rx Connect system will also be updated with the administration information. In order to enhance patient safety, the eMAR uses

multiple patient identifiers such as patient ID, name, date of birth, and photographs to validate that medications are administered to the correct patient.

- CareConnect, a data exchange mechanism, will enable a bi-directional electronic exchange of data with MIHS for lab referrals, orders, and results. This will eliminate the paper that is currently transmitted to MIHS and filed in the patient records at ASH. The information is transmitted in a standard Continuity of Care Document via standard transactions.

The addition of the above modules will close the current gaps in the EMR functionality, eliminate duplicate data entry, streamline business processes, and have a direct positive impact on patient safety. It is anticipated that Phase II will also include implementation of some functionality that already exists in Avatar but is improved in myAvatar, such as Treatment Plans and automated Scheduling. The Scheduling functionality native to myAvatar will replace a number of site-specific screens that were built within Avatar using the RAD Plus tool.

Other benefits of the proposed solution are that a separate reporting server will be implemented that will eliminate running reports against the production database and will significantly improve performance. The number of concurrent database licenses will be increased from 80 to 200, which will dramatically improve application performance. Although a full analysis has not been completed yet, it is anticipated that most of the ancillary custom applications that have been built over time will be decommissioned, which will significantly improve ease of use for the users, as well as significantly reduce the technical support efforts and complexities.

Netsmart releases bug fixes as needed and full patch releases on a quarterly basis and makes them available to customers for installation by downloading from a Web site. Moving forward, there will be a contractual obligation to apply patch releases to all of the myAvatar applications a minimum of once a year, and upgrades to full new versions will be performed no later than two years after release.

This solution will leverage the hospital's investment in the Avatar products, close the gaps in current EMR functionality, and significantly reduce the technical support required to maintain multiple applications and databases.

**C. Quantified Benefits\***

<input checked="" type="checkbox"/>	Service enhancement
<input type="checkbox"/>	Increased revenue
<input type="checkbox"/>	Cost reduction
<input checked="" type="checkbox"/>	Problem avoidance
<input checked="" type="checkbox"/>	Risk avoidance

**Service enhancement:** This project will result in a single, comprehensive EMR system for ASH, which will improve data collection and consolidate clinical documentation into a single medical chart. A consolidated and easy to use record of care will assist clinicians in improving the delivery of patient care.

**Problem avoidance:** Upgrading the Avatar application to a version that supports federally mandated ICD-10 codes will eliminate potential claim rejections and payment delays. Moving to a current software and hardware platform will provide a stable and technologically sound infrastructure. Going forward, the software will be updated on a regular cycle to avoid the problems that inevitably arise when systems are not maintained. Many of the standalone applications will be retired or phased out, which will reduce and eventually eliminate the data integrity issues related to multiple data entry points and will greatly streamline technical support.

**Risk avoidance:** Improved data collection methods will improve the overall integrity of medical information used to assess patient needs and treatment options. The system comes with built-in decision support mechanisms to guide clinicians through the decision making process. New interfaces will make duplicate data entry unnecessary, reducing the risk of clinical errors that can have negative impacts on patients. A single source for maintaining the drug files will be implemented, reducing the risk of conflicting information from two different systems.

## IV. Technology Approach

### A. *Proposed Technology Solution\**

Upgrading to the myAvatar suite will move the current applications from client/server to browser-based technology. The solution complies with current Healthcare Information Portability and Accountability Act (HIPAA) regulations related to electronic Transactions and Code Sets, as well as HIPAA Security and Privacy rules. In addition, the solution includes appropriate auditing capabilities to satisfy HIPAA regulations.

The technical solution includes a complete refresh of the server environment that will be robust and stable. The current environment for Avatar consists of three Wintel servers deployed in a single tier architecture that supports only production, shadow, and development environments. The servers are located on ASH premises, and there are currently no disaster recovery (DR) capabilities.

The new infrastructure will be an N-Tier architecture deployed at the Arizona Department of Administration's (ADOA) Data Center located at 1510 West Adams Street for production and at the ADOA Tucson Data Center for DR (see architecture diagram). The migration of production from ASH premises to the ADOA Data Center provides a significant improvement in security.

The infrastructure was designed based on recommendations from the vendor and was subsequently validated as an optimal design to support the myAvatar applications.

**Production Environment:**

- 5 Wintel servers in the Application/Web tier running JBoss middleware
- 2 Wintel application servers for document imaging and enterprise reporting
- 10 Oracle X4-2L servers running Red Hat Linux in the Database tier

Both tiers will support separate environments for Production, Build/Development, User Acceptance Testing, and Training.

**DR Site:**

- 2 Wintel application servers
- 3 Oracle X4-2L servers running Red Hat Linux for Cache Database tier
- 1 Wintel server to support document imaging

The ten Wintel servers will be deployed by leveraging existing enterprise virtual/blade infrastructure (ESX host) and, therefore, will not require any additional hardware investment for this project.

**Additional technologies to be deployed include:**

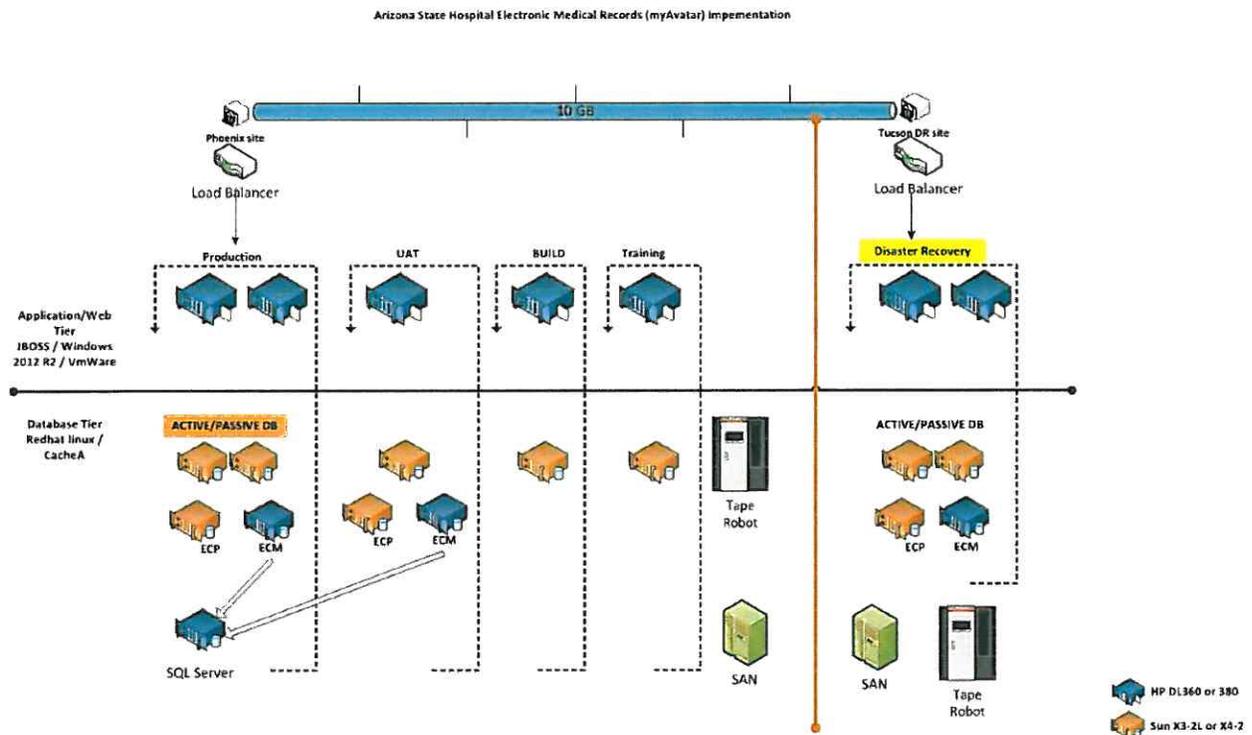
- 2 Barracuda load balancers to optimize application performance and availability – one per site
- Storage Area Network for the production site
- SL150 robotic tape library at the production site to support volume for new functions

**Note:** Netsmart Technologies offers myAvatar hosting via their Plexus Cloud in a SSAE-16 certified data center with Tier 4 capabilities and a fully redundant DR site located 900 miles away. Netsmart currently hosts approximately 250 clients representing approximately 180,000 users in the health industry. Netsmart guarantees 99.9+% uptime with cost-reimbursement for any downtime experienced (outside of normal maintenance windows). Netsmart will assume responsibility for server maintenance, daily back-ups, installation of updates for the operating systems, database and application software, and database/application performance monitoring.

ADHS has received preliminary pricing for this option and discovery to date shows that this may be a more efficient and cost-effective solution for infrastructure maintenance. ADHS will further explore the feasibility of this option, and if the decision is made to host with Netsmart, ADHS will report all findings to ASET for approval prior to proceeding with a contract and update this PIJ to reflect the revised decision and budgets.

## B. Technology Environment

The diagram below displays the architecture for the primary production site in Phoenix and the DR site in Tucson.



## C. Selection Process

ASH reached out to other members of the Western Psychiatric State Hospitals Alliance to obtain information about what automated systems similar facilities were using and what their strategies were for ICD-10 compliance. Most of the states are either using myAvatar or are planning to upgrade from Avatar to myAvatar shortly. Detailed technical discussions were held with both Oregon State Hospital and New Mexico State Hospital both of which are similar to ASH in that they are long-term behavioral health facilities with civil, forensic, and sex offender programs. Oregon upgraded to myAvatar in July 2013. The technical director stated that Netsmart had exercised significant reengineering muscle in redesigning the products and called myAvatar a “game changer” in terms of clinical acceptance and use of the system. New Mexico is currently in the process of upgrading to myAvatar. Although New Mexico is on a much later version than Arizona is, the technical director did not anticipate that the retraining effort would be significant due to the intuitive nature of the redesigned products.

Several demos of myAvatar were presented to ASH clinicians, initially nursing staff, since nurses are the highest number of ASH clinicians. The new look and feel was so dramatically different from the current system that it was immediately looked upon with favor. The additional features of the eMAR and the automated lab orders and results were enough for the clinicians to ask how quickly they could have myAvatar. Additional demos were presented to the doctors including the Chief Medical Officer, the ASH Chief Executive Officer, and the ADHS Deputy Director for Behavioral Health Services. Upon receiving a proposal from the vendor for services and new licensing costs, the findings were presented to the ASH Steering Committee, and the myAvatar solution was approved by ADHS executive management.

The software solutions selected are all third party products that are licensed and maintained by Netsmart Technologies, a leading software vendor within the behavioral health arena. Netsmart has over 21,000 customer organizations in the behavioral health care community, including 40 state user systems. The software meets all standards established by the Health Insurance Portability and Accountability Act of 1996 and has been certified by an Office of the National Coordinator Authorized Certification Body (ONC-ACB) in accordance with the criteria adopted by the Secretary of the U. S. Department of Health and Human Services for Meaningful Use. Upgrading to the myAvatar suite will move the current applications from client/server to browser-based technology.

Netsmart's support model includes hosting two conferences a year, which provide opportunities for networking and information exchanges with other customers. There are numerous user groups (technical, as well as functional groups for clinicians, billing staff, etc.) that have monthly conference calls. Participants in these calls can help set the agenda for new product functionality as well as priorities for bug fixes or patches. The calls also are invaluable in making connections with other customers and building relationships with key staff vendor support staff. Netsmart also hosts regular educational Webinars and has on-line courses available through Netsmart University.

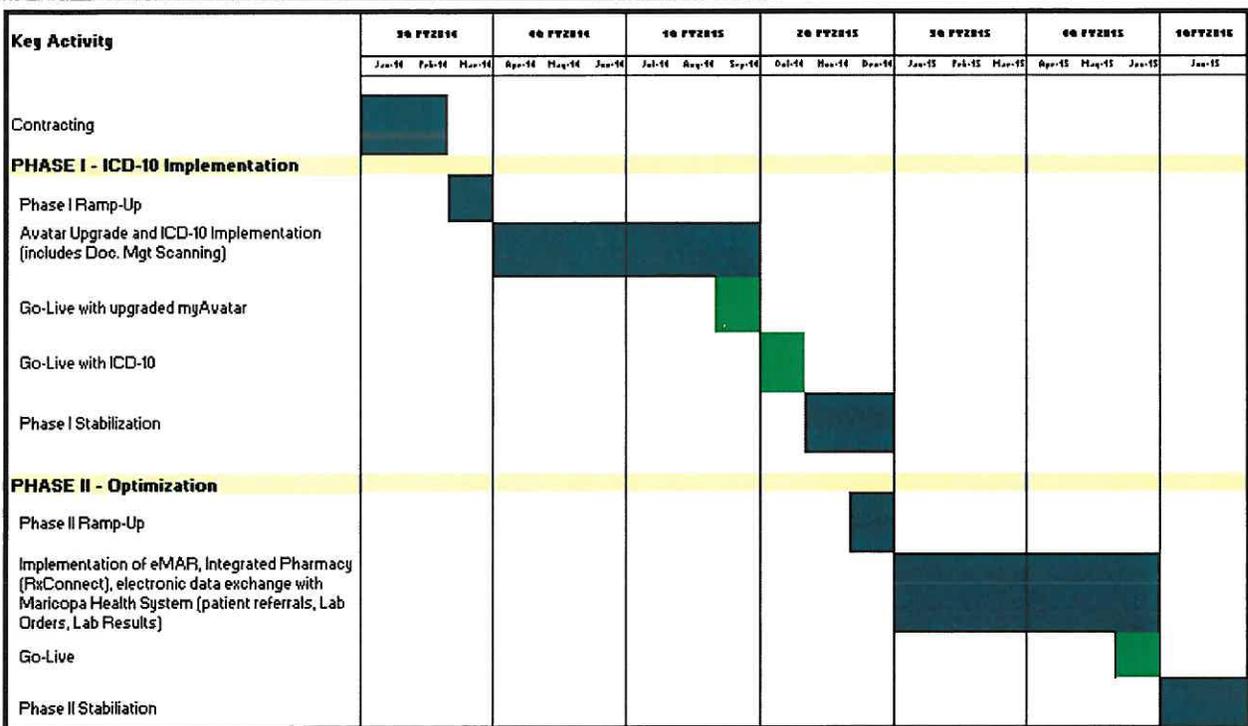
## V. Project Approach

Netsmart will provide the professional services needed to install and configure all software modules and perform any reconfiguration work required to redesign the site-specific clinical assessments. Professional services also include solution design, data conversion, end user training, and technical training. A train the trainer approach will be used for end user training.

### A. *Project Schedule\**

**Project Start Date:** 3/1/2014      **Project End Date:** 8/15/2015

## B. Project Milestones



Major Milestones	Start Date	Finish Date
<b>Phase I</b>	3/14	10/14
Contracting/PIJ Approval	12/13	2/14
Hardware/Software Procurement, Installation and Configuration	4/14	6/14
Solution Design	5/14	7/14
Testing, Training	8/14	9/14
Go live my Avatar with ICD-10 and Document Management	<b>10/1/14</b>	<b>10/1/14</b>
<b>Phase II – Optimization/Additional</b>		
Installation and Configuration (RxConnect, eMAR, CareConnect)	1/15	3/15
Solution Design	2/15	4/15
Testing, Training	5/15	7/15
<b>Go live RxConnect, eMAR, CareConnect</b>	<b>7/15/15</b>	<b>7/15/15</b>
Stabilization/Project Closeout	7/15/15	8/15/15

## VI. Roles and Responsibilities

### A. Project Roles and Responsibilities

#### **Project Sponsors**

**Cory Nelson, Deputy Director, Division of Behavioral Health Services**

- *Project champion, provides direction and support to the team*

**Janet Mullen, Deputy Director, Division for Planning & Operations**

***This position will be accountable to ensure resource availability at the Agency level and to meet the goals within the budget and timeline.***

- *Monitoring business value*

**Donna Noriega, CEO, DBHS/ASH**

***This position will provide approval for project scope. Specific responsibilities will include (but not be limited to):***

- *Project champion, provides direction and support to the team*
- *Approves project scope and funding*
- *Assigns appropriate end user resources to provide management decision making, end user testing, training and requirements.*

**Information Technology Executive – Paula Mattingly, Assistant Director / Chief Information Officer**

***This position will be accountable to assign the necessary Information Technology resources to meet the goals within the budget and timeline. Specific responsibilities will include (but not be limited to):***

- *Project champion, provides direction and support to ITS team*
- *Implement necessary Infrastructure and meet the immediate business needs*
- *Monitoring business value*
- *Management of IT staff or other resources*

**Chief Financial Officer – James Humble**

***This position will be accountable to ensure resource availability at the Agency level to meet the goals within the budget and timeline.***

**ITS Application Services Manager - Raghu Ramaswamy**

***This position will provide overall leadership and oversight of solution delivery and efforts necessary to align technology to meet the Department needs. This position will report to CIO. Specific responsibilities will include (but not be limited to):***

- *Coordinating resources assigned to the project*
- *Assessing needs and bridging gap between Technical and functional needs*
- *Direct and delegate approved plan*
- *Providing status reports to the Executive Management and GITA as required*
- *Coordinating the operational needs and performance troubleshooting and resolution.*

**Information Technology Project Manager – Janet Slawinski**

***This position will provide the overall project management throughout the entire lifecycle of this project implementation and in parallel assessing the future technology needs of the State Hospital.***

***Specific responsibilities will include (but not be limited to):***

- *Allocating resources to ensure project completion on schedule, within scope, and within budget*
- *Coordinating operational needs and working closely with Business units*
- *Executes approved plan and report on project performance*
- *Oversight of Implementation, control and assigns budgets and master project schedule(s).*
- *Change control processes, issue tracking, Vendor Management*
- *Contract Management and amendments, review and authorize to release payments to vendor*

**Information Technology Services Manager – Dave Gilbert**

**This position will provide oversight for installation and configuration of the APM solution on agency’s server for monitoring and administering the network performances, technical analysis, configuration, testing and deployment support.**

**Vendor Resources, Netsmart Technologies**

***This position will ensure that the appropriate vendor resources are allocated and made available for the proposed duration of the project, including a Project Manager, technical staff, and trainers.***

***Provides issue escalation and resolution, and assists with change management and scope control.***

**B. Project Manager Certification**

- Project Management Professional (PMP) Certified
- State of Arizona Certified
- Project Management Certification not required

**C. Full-Time Employee (FTE) Project Hours**

<b>Total Full-Time Employee Hours</b>	<b>7,540</b>
<b>Total Full-Time Employee Cost</b>	<b>\$339,125</b>

**VII. Risk Matrix, Areas of Impact, Itemized List, PIJ Financials**

VIII. Project Approvals

**A. Agency CIO Review\***

Key Management Information	Yes	No
1. Is this project for a mission-critical application system?	X	
2. Is this project referenced in your agency's Strategic IT Plan?	X	
3. Is this project in compliance with all agency and State standards and policies for network, security, platform, software/application, and/or data/information as defined in <a href="http://aset.azdoa.gov/security/policies-standards-and-procedures">http://aset.azdoa.gov/security/policies-standards-and-procedures</a> , and applicable to this project? If <b>NO</b> , explain in detail in the "XI. Additional Information" section below.	X	
4. Will this project transmit, store, or process sensitive, confidential or Personally Identifiable Information (PII) data? If <b>YES</b> , in the "XI. Additional Information" section below, describe what security controls are being put in place to protect the data.	X	
5. Is this project in compliance with the Arizona Revised Statutes (A.R.S.) and GRRC rules?	X	
6. Is this project in compliance with the statewide policy regarding the accessibility to equipment and information technology for citizens with disabilities?	X	

**B. Project Values\***

The following table should be populated with summary information from other sections of the PIJ.

Description	Section	Number or Cost
Assessment Cost (if applicable for Pre-PIJ)	II. PIJ Type - Pre-PIJ Assessment Cost	\$
Total Development Cost	VII. PIJ Financials tab	\$2,325,052
Total Project Cost	VII. PIJ Financials tab	\$3,423,505
FTE Hours	VI. Roles and Responsibilities	7,540

**C. Agency Approvals\***

Contact	Printed Name	Signature	Email and Phone
Agency CIO:	Paula Mattingly		
Applications Services Manager:	Raghu Ramaswamy		
Deputy Director, DPO	Janet Mullen		
Chief Financial Officer, ADHS	Jim Humble		
Agency Director:	Will Humble		

IX. Optional Attachments

A. *Vendor Quotes*

X. Glossary

XI. Additional Information





### C. **Functionality Table – Upgraded vs. New Modules**

The table below displays which modules will be upgraded and which will require new licenses or subscriptions. (There are no additional licenses fees for existing modules, except to increase the number of concurrent licenses for the Cache database).

<b>Phase I</b>			
<b>Module</b>	<b>Upgrade</b>	<b>New</b>	<b>Functionality</b>
Practice Management	X		Patient Demographics; Admissions, Discharges and Transfers (ADT); Patient Finance and Patient Billing.
Clinician Work Station (CWS)	X		Clinical Assessments, Treatment Plans and Progress Notes
Physicians Order Entry (POE)	X		Entry of all physicians orders for medications, labs, radiology readings, etc. The upgrade will include a subscription for the MicroMedex drug formulary and re-implementation of drug interaction and allergy files.
Client Funds Management System (CFMS)	X		Patient Banking
RAD Plus	X		Development tool used to build data collection screens for site-specific elements not included with the core product. Bundled with CWS
InterSystems Cache (database)	X		The licensing model for intersystem Cache has changed. This license increases the number of concurrent users from 80 to 200 running in a multi-server environment.
ICD-10 and DSM-5	X		Upgraded subscription to the new code set tables for diagnostic codes.
MicroMedex	X		Upgraded drug formulary and interactions (replaces First Data Bank).
Perceptive Document Management		X	Functionality to scan and index hard copy documents into the medical record such as patient consent forms.
<b>Phase II</b>			
RxConnect		X	Pharmacy Management System
CareConnect		X	Provides platform for data exchange with other EMR systems, in this case the MIHS Epic system.
Lab Referrals, Orders and Results		X	Subscriptions to enable the submittal of lab orders, receive results, and transmit a Continuity of Care Document.
Electronic Medication Administration Record (eMAR)		X	The eMAR will provide a comprehensive record of all medications and the record of administrations, a key component of the EMR that is currently missing from Avatar.

Additional Modules under Consideration			
Incident Reporting		X	To replace an existing Visual Basic/Oracle Incident Reporting Database.
iPad Application for Observations		X	A mobile application that clinicians can use to document patient observations every 15 minutes.
Enlighten Analytics		X	An enhanced data analysis tool for predictive modeling and forecasting.

Links:

[ADOA-ASET Website](#)

[ADOA-ASET Project Investment Justification Information Templates and Contacts](#)

Email Addresses:

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