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February 24, 2014

Mr. Will Humble, Director
Arizona Department of Health Services
150 North 18th Avenue
Phoenix, Arizona 85007

Dear Will:

In response to your Project Investment Justification (PIJ) for the "**Arizona State Hospital (ASH) Medical Records System Upgrade**" project, my staff has reviewed your proposal to upgrade and enhance the Avatar software platform and supporting infrastructure.

The PIJ implies funding is available from General Funds in the amount of \$600 thousand and the ASH Fund / Indirect Fund in the amount of \$2,824 thousand for a total of \$3,424 thousand for the five-year life cycle cost of the project.

This is notification of Arizona Strategic Enterprise Technology Office's recommendation to the Information Technology Authorization Committee (ITAC) for **Approval with Conditions** of the technology project as follows:

1. ASH shall not make any purchase commitments for infrastructure components described in the PIJ until a final decision is made in regards to the Netsmart Cloud option. Any changes in direction need to be supported with an amended PIJ submitted to ASET, and to the Information Technology Authorization Committee (ITAC) if necessary, for review and approval prior to any infrastructure expenditure.
2. If Netsmart's Cloud offering is not FedRAMP compliant, ASH shall work with ASET's Security, Privacy and Risk team to coordinate a 3rd party compliance review before any agreements can be considered.

The ITAC is scheduled to meet on February 26, 2014 to review this project. Should the ITAC approve the project, you may then proceed to secure additional approvals as required from the Joint Legislative Budget Committee, the Office of Strategic Planning and Budgeting and the State Procurement Office.

Best Wishes,

A handwritten signature in black ink, appearing to read "A. Sandeen".

Aaron V. Sandeen
State CIO and Deputy Director
Arizona Strategic Enterprise Technology (ASET) Office

rc

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cc: Janet Slawinski, ADHS
Paula Mattingly, ADHS
Raghu Ramaswamy, ADHS
Donna Noriega, DBHS/ASH
Cory Nelson, DBHS
Janet Mullen, ADHS
James Humble, ADHS
Ben Henderson, JLBC
John Arnold, OSPB
Barbara Corella, SPO
Susan Quinn, ASET
Phil Manfredi, ASET
Rachel Carson, ASET

ASET# HS14005

Analyst: Rachel Carson

PIJ Summary – ASET

Project Number: HS14005

Agency Name & Address	Contact Name & Phone
Arizona Department of Health Services 150 North 18 th Avenue Phoenix, Arizona 85007	Raghu Ramaswamy Raghu.Ram@azdhs.gov 602-542-2786
Project and Investment Justification Name	Date Submitted
Arizona State Hospital Medical Records System Upgrade	February 14, 2014 (signed)

Project Overview

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.

ASH's Avatar version is now ten years old and unsupported, is missing key components of a fully functional EMR and runs on a technical platform that is outdated and is 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, 10th Edition, or ICD-10. The version of Avatar currently in use at ASH is not compatible with the new ICD-10 code structure.

Measurements and Deliverables

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. This involves upgrading and adding the following functions:

- Avatar Practice Management
- Client Funds Management
- Clinician Work Station and Physicians Order Entry (POE)

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- The existing drug formulary currently connected to the POE module will be replaced with a subscription to MicroMedex allowing the drug and allergy alerts to be reactivated
- Conversion of the current patient and resident data into a single database
- Perceptive Document Management to enable the scanning of documents that exist only in hard copy into the electronic medical record
- End user and technical training
- Go live support

The technical platform will be redesigned and upgraded, leveraging existing Enterprise Virtual/Blade Infrastructure and HIPPA compliant security to improve performance and to provide the redundancy and disaster recovery (DR) capabilities needed for a mission critical application through the following key deliverables:

- The production environment will be moved from the ASH location to the Arizona Department of Administration's (ADOA) Data Center which will provide additional security capabilities. The Avatar environment includes:
 - 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
 - Load Balancers, Storage Area Network (SAN), and tape libraries will be added to support additional transaction volume
- Establishment of a DR site at the ADOA Tucson Data Center:
 - 2 Wintel Application Servers
 - 3 Oracle X4-2L Servers running Red Hat Linux for Cache Database tier
 - 1 Wintel Server to support Document Imaging

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.

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Benefits

Through this project, ASH will have a comprehensive and fully integrated EMR solution deployed in a secure, stable, and sustainable infrastructure. In addition to migrating to a supported software and hardware platform, improvements in the user-interface, better performance, and ICD-10 compliance, other 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 risk related to data quality and data security

Project Management

Information Technology Services, Division of Planning and Operations, will manage the project, working with the vendor, as well as ASH users, to acquire and implement the required equipment, software and services to complete the project deliverables. There is also commitment from key Executives to serve as project sponsors, champions, and escalation points which is critical to project success.

Enterprise Architecture

Compliant

Summary of Proposed Costs

<i>All Figures in Thousands (\$000)</i>						
<i>Cost Description</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>Total</i>
Development Costs	1,197.0	1,129.0	0.0	0.0	0.0	2,326.0
Operational Costs	52.0	245.0	256.0	266.0	279.0	1,098.0
Total Project Costs	1,249.0	1,374.0	256.0	266.0	279.0	3,424.0

Recommendation: Approval with Conditions

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