Health Services
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*To improve health through leadership, service and education*

July 14, 2009

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

**AUTHORIZE PURCHASE OF A CENTRAL ENTERPRISE STORAGE AREA NETWORK (ALL SUPERVISORIAL DISTRICTS) (3 VOTES)**

CIO RECOMMENDATION: APPROVE (X) APPROVE WITH MODIFICATION ( ) DISAPPROVE ( )

## SUBJECT

Authorize a fixed asset purchase of a central enterprise Storage Area Network for the Department of Health Services Virtualization and Hospital Picture Archiving and Communication System (PACS).

## IT IS JOINTLY RECOMMENDED THAT YOUR BOARD:

Authorize the Internal Services Department (ISD), as the County's Purchasing Agent, to proceed with the acquisition and installation of a central enterprise Storage Area Network (SAN) for the Department of Health Services (DHS) with a total cost of $967,000 because this purchase request will exceed the $250,000 fixed asset threshold established by your Board.

## PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

Approval of this action will enable DHS to acquire an EMC CX960 SAN to replace the existing IBM DS8100 SAN. In order to increase current storage capacity as required to maintain virtualization environments, support existing clinical archival requirements, and accommodate projected future growth of 36 months, the existing equipment needs to be replaced. The EMC CX960 consists of disk drives that are expandable within the same chassis and will be capable of supporting future growth requirements beyond the current design configuration being purchased.

The SAN supports DHS Information Technology mission critical virtualization and patient care Digital Imaging Communications (DICOM) archival operations. The equipment enables DHS to continue providing Health Insurance Portability and Accountability Act (HIPAA) required archival and disaster recovery capabilities for all DHS Hospitals. The enterprise SAN is being used by both Fuji PACS and Philip Xcelera applications supporting DICOM operations for DHS Hospitals. Additional County clinical DICOM services (modality processing) continue to drive increased requirements for storage capacity. DICOM services include Radiology, Cardiology, Endoscopy, Mammography, and other services.

Martin Luther King, Jr. Multi-Service Ambulatory Care Center has completed requirements concerning DICOM archival storage and started using the central enterprise SAN this spring. Rancho Los Amigos National Rehabilitation Center and High Desert Health System are also requiring additional archival storage space. Medical images are very dense and therefore take up a large amount of space when stored. Current DICOM storage utilization associated with the existing central enterprise SAN complex (IBM DS8100) is at 87 percent of capacity and it is anticipated that the current SAN will support existing operations only for four to six more months. The EMC CX960 SAN is needed to provide the necessary storage capacity for multiple PACS modalities (medical imaging services) utilizing this central archive service. The storage consolidation of multiple DICOM archival environments in a central enterprise SAN yields additional economies of scale savings inherent of sharing resources and eliminates the need for "stand alone" archival SANs at each facility.

**Implementation of Strategic Plan Goals**

The recommended action supports Goal 4, Health and Mental Health, of the County's Strategic Plan.

**FISCAL IMPACT/FINANCING**

The total aggregate cost for purchase of the SAN components and a three-year equipment maintenance agreement is $967,000. Funding is included in HSA Fiscal Year 2008-09 Final Budget.

**FACTS AND PROVISIONS/LEGAL REQUIREMENT**

On October 16, 2001, your Board approved the classification categories for fixed assets and new requirements for major fixed asset acquisitions requiring County departments to obtain Board approval to purchase or finance equipment with a unit cost of $250,000, or greater, prior to submitting their request to ISD.

Patient records and medical images must be retained for seven years (Pediatrics longer) to ensure compliance with DHS Policy 881 and other mandated governmental, and HIPAA regulations required for Medical Records and Images. The EMC CX960 SAN will support continued compliance with these mandates.

The County's Acting Chief Information Officer recommends approval of this request (see attached analysis).

## CONTRACTING PROCESS

This is a commodity purchase under the statutory authority of the County Purchasing Agent. The purchase will be requisitioned through, and accomplished by the Purchasing Agent in accordance with the County's purchasing policies and procedures, established by ISD.

## IMPACT ON CURRENT SERVICES (OR PROJECTS)

If the existing SAN is not replaced the equipment will reach capacity and no longer be able to archive critical patient records and medical images. If that occurs, physicians and clinicians will no longer have access to critical patient archived medical records and images for ongoing treatment.

Respectfully submitted,

John F. Schunhoff, Ph.D.
Interim Director

Reviewed by:

Richard Sanchez
Interim Chief Information Officer

JFS:rs

Attachment

c: Chief Executive Officer
Acting County Counsel
Executive Officer, Board of Supervisors
Director, Internal Services Department

Central Enterprise BL

# CIO ANALYSIS

**REQUEST BY THE DEPARTMENT OF HEALTH SERVICES (DHS) FOR AUTHORIZATION TO ACQUIRE AND INSTALL A CENTRAL ENTERPRISE STORAGE AREA NETWORK (SAN) SYSTEM AND EQUIPMENT-RELATED SERVICES**

**CIO RECOMMENDATION:** ☒ APPROVE ☐ APPROVE WITH MODIFICATION ☐ DISAPPROVE

**Contract Type:**

☐ New Contract ☐ Contract Amendment ☐ Contract Extension
☐ Sole Source Contract ☒ Hardware Acquisition ☐ Other

**New/Revised Contract Term:** Base Term: 3 Yrs # of Option Yrs NA

**Contract Components:**

☐ Software ☒ Hardware ☐ Telecommunications
☒ Professional Services

**Project Executive Sponsor:** John F. Schunoff, Ph.D, Interim Director, Department of Health Services

**Budget Information :**

| | |
|---|---|
| Y-T-D Contract Expenditures | $0 |
| Requested Contract Amount | $967,000 |
| Aggregate Contract Amount | $967,000 |

**Project Background:**

| Yes | No | Question |
|---|---|---|
| ☐ | ☒ | Is this project legislatively mandated? |
| ☐ | ☒ | Is this project subvented? If yes, what percentage is offset? |
| ☐ | ☒ | Is this project/application applicable to (shared use or interfaced) other departments? If yes, name the other department(s) involved? |

**Strategic Alignment:**

| Yes | No | Question |
|---|---|---|
| ☒ | ☐ | Is this project in alignment with the County of Los Angeles Strategic Plan? |
| ☒ | ☐ | Is this project consistent with the currently approved Department Business Automation Plan? |
| ☒ | ☐ | Does the project's technology solution comply with County of Los Angeles IT Directions Document? |
| ☒ | ☐ | Does the project technology solution comply with preferred County of Los Angeles IT Standards? |

| | | |
|---|---|---|
| ☐ | ☒ | This contract and/or project and its milestone deliverables must be entered into the Information Technology Tracking System (ITTS). |

**Project/Contract Description:**
Request for Board approval to purchase and install IT equipment to support Central Enterprise Storage Area Network (SAN) system for DHS' Virtualization and Hospital Picture Archiving and Communication System (PACS).

**Background:**

DHS has identified areas across its enterprise (Martin Luther King, Jr. Multi-Service Ambulatory Care Center, Rancho Los Amigos National Rehabilitation Center and High Desert Health System) that are in critical need of additional archival storage capacity for digitally captured medical records. Accordingly, DHS wishes to purchase and install an EMC CX960 Storage Area Network (SAN) system, together with three years of equipment-related services, to provide the necessary storage capacity of those records. This equipment will also support compliance of DHS Policy 881, HIPAA and other federally mandated regulations required for medical records and image storage.

**Project Justification/Benefits:**

This acquisition will allow DHS to replace its existing IBM DS8100 storage equipment and substantially increase its storage capacity by allowing for the consolidation of multiple Digital Imaging Communications (DICOM) archival operations. DHS estimates that its current DICOM storage utilization associated with its current IBM DS8100 equipment is at 87 percent of capacity and based on projected needs will exceed full capacity within four to six more months.

The DICOM services being supported by this equipment include Radiology, Cardiology, Endoscopy, Mammography, and other similar services that store and access highly complex and very dense medical images, requiring inordinately large amounts of storage space. Because the EMC CX960 consists of disk drives that are expandable within the same chassis using virtualization software tools, this purchase will provide DHS with the capability of supporting existing clinical archival requirements and accommodating projected future growth of up to 36 months.

The storage consolidation of multiple DICOM archival environments in a central enterprise SAN yields additional economies of scale savings inherent of sharing resources and eliminates the need for "stand alone" archival SANs at each facility.

**Project Metrics**

The overall success of the acquisition and installation of this equipment can be measured by the increased archival storage capacity, ease of maintenance of a centralized Storage Area Network (SAN) and savings that will be realized over the long-term by the elimination of multiple stand-alone SAN systems at the facilities impacted by this purchase.

**Impact on Service Delivery or Department Operations, If Proposal Is Not Approved**

At the current rate of growth anticipated by DHS over the next 36-month period, its mission critical patient records storage requirements would be overly taxed if this equipment is not acquired. The central storage facility at DHS HSA will serve as a shared resource for all DHS HSA virtual environments. This operational consolidation would result in additional cost savings versus separate disc storage systems, yielding further "economies of scale" that would not be realized is this purchase were not made.

**Alternatives Considered:**

DHS' strategy to consolidate multiple archival operations and virtualize their enterprise SAN environment are consistent with the County's adopted strategic direction relating to Storage Area Network equipment and software technologies, so consideration of other alternatives was not necessary. Further, although the equipment being purchased by DHS for this purpose is brand-specific, it is will be acquired by DHS through a highly competitive bid process, resulting in a the best deal and highest value possible for the County.

**Project Risks:**

No significant risks have been identified by moving forward with this purchase.

**Risk Mitigation Measures:**

No risk mitigation measures are deemed necessary.

**Financial Analysis:**

The total cost contemplated for the SAN System equipment and a 3-year equipment maintenance services component is $967,000. Funding is included in HSA Fiscal Year 2008-09 Final Budget

**CIO Concerns:**

None

**CIO Recommendations:**

The Chief Information Office recommends approval of this purchase.

**CIO APPROVAL**

Date Received: June 19, 2009

Prepared by: Earl S. Bradley

Date: June 19, 2009

Approved: Theresa Melendez

Date: 7/1/2009