DEPT: Strategic Business Technology   ⁀MC   BOARD AGENDA # *B-12

Urgent ☐   Routine ■   AGENDA DATE March 15, 2011

CEO Concurs with Recommendation YES ■ NO ☐   4/5 Vote Required YES ☐   NO ■
(Information Attached)

SUBJECT:

Approval to Issue a Request for Proposal for the Strategic Business Technology Fiber Channel Shared Storage System Solution for Data Recovery and Storage

STAFF RECOMMENDATIONS:

1. Authorize the General Services Agency - Purchasing Division to issue a Request for Proposal (RFP) for the Strategic Business Technology Fiber Channel Shared Storage System Solution.

2. Authorize opening and acceptance of proposals and return to the Board of Supervisors to recommend an award.

FISCAL IMPACT:

Strategic Business Technology has identified up to $200,000 of existing fund balance to pay for the expansion or replacement of the existing fiber channel shared storage system for mission critical systems.

BOARD ACTION AS FOLLOWS: No. 2011-162

On motion of Supervisor ___ DeMartini ___, Seconded by Supervisor ___ Withrow ___
and approved by the following vote,
Ayes: Supervisors: _____ O'Brien, Chiesa, Withrow, DeMartini, and Chairman Monteith _____
Noes: Supervisors: _____ None _____
Excused or Absent: Supervisors: __ None _____
Abstaining: Supervisor: _____ None _____

1) __X__ Approved as recommended
2) _____ Denied
3) _____ Approved as amended
4) _____ Other:
MOTION:

ATTEST: *Christine Ferraro* CHRISTINE FERRARO TALLMAN, Clerk   File No.

Approval to Issue a Request for Proposal for the Strategic Business Technology Fiber Channel
Shared Storage System Solution for Data Recovery and Storage
Page 2

DISCUSSION:

Background

County business processes have become ever more dependent upon information technology
systems. Every IT system should have some process for data recovery from a critical failure as
part of a Business Continuity Plan. Frequently, this takes the form of data backup to some
storage medium. Traditionally this is executed via a tape-based system. Some Information
Technology systems, like Strategic Business Technology's, which provide a variety of mission
critical business functions, require more robust backup systems and plans to ensure that data is
not lost forever.

An enterprise shared storage system is very efficient and robust with full redundancy in
controllers, drives, power supplies, connectivity, and provides multiple security levels for data
protection and a high level of performance. Since 2004, Strategic Business Technology (SBT)
has been using a fiber channel shared storage for mission critical systems such as the primary
cluster file system, Oracle Financial Management System, PeopleSoft Human Resource
Management System databases, StanCERA System, Revenue Recovery Collection System,
other databases, GroupWise email post offices, and virtualization infrastructure.

Shared storage systems provide the following benefits over local storage in an enterprise data
center:

- Data safeguards with fully redundant controllers, disks, and power supplies.
- Increased performance and flexibility due to the amount of hard disks running together in a
  redundant array of independent disks.
- Very easy to expand capacity.
- More efficient disk space utilization. Storage is kept in pools which allow the exact amount of
  space to be allocated directly to the servers that need it. Local servers may have lots of extra
  disk space that is not in use, but there is no way to re-allocate that space to another server.
- Allows for high availability server services such as clustering.
- Can be mirrored to another like storage system in an off-site location for real time backup and
  redundancy.
- Can optimize performance for the specific tasks the server will need to perform.
- Faster, centralized backup to tape.
- Provides TIER 1 level up time (99.999% storage availability to servers).
- Reduced power consumption as compared to local storage.
- Provides flexibility and time savings when servers are upgraded.

Approval to Issue a Request for Proposal for the Strategic Business Technology Fiber Channel
Shared Storage System Solution for Data Recovery and Storage
Page 3

Shared storage allows SBT to make data readily available and greatly improves operational efficiency. However, with the expansion of technology and increased use of software applications and databases, the SBT shared storage system has been at capacity for the past two (2) years. The lack of shared storage space has required SBT to use the local storage on physical servers. If one of these servers goes down, it will take hours or even days to move the data/applications to another system. County staff could have significant downtime in the case of server failure, regular maintenance period, or server replacement. In order to minimize County staff downtime, SBT currently schedules regular maintenance or server replacement after hours.

The shared storage system is of great use not only for server failures or problems, but during regular maintenance periods when servers need to be upgraded/patched or a server needs to be physically replaced because it is at the end-of-life. Patches are updated every two (2) weeks and application and operating system upgrades performed 2-3 times per year on one hundred-eighty (180) servers. At this time, there are up to one hundred and ten (110) servers that are not part of the existing shared storage system.

Infrastructure staff time utilization would be extremely more efficient if all of the servers were on the shared storage system. Although server failure is rare (maybe a couple of times in the past five years), the County's exposure to risk and data loss increases as the number of servers, applications and databases continue to grow.

The critical delivery and security of electronic information mandates that County departments be efficient and effective when delivering these services. The County has been strategically approaching content and document management from an integrated, enterprise approach. An Electronic Data Management (EDM) solution provides significant document management capability, allowing more efficient management, flow, and storage of vast amounts of required paper records. For an EDM solution to be effective, a County infrastructure must provide scanning options, document management, search and retrieval functionality, secure and redundant storage methods and a robust network.

The increase in utilization of EDM continues to grow rapidly because it can greatly reduce the requirements of paper storage, decrease the time required to produce and share records and ensure compliance with federal and state records regulations. Because the shared storage system has been at capacity for over two (2) years, the EDM documents are currently stored on the local storage of a physical server. Once this server local storage is full, no additional documents can be stored.

In order to ensure business continuity of mission critical systems and data, improve the County's ability to recover from a disaster, allow for continued growth and use of technology resources, make daily operations more efficient, and reduce the risk of lost data or County staff time, SBT has identified a critical need to expand or replace the existing fiber channel shared storage system.

Approval to Issue a Request for Proposal for the Strategic Business Technology Fiber Channel
Shared Storage System Solution for Data Recovery and Storage
Page 4

Strategic Business Technology Shared Storage System Solution

SBT has researched and assessed a large variety of storage platforms from low end stand alone configurations to high end enterprise systems. With the substantial investment already made to virtualization and the significant shared storage space requirements, SBT has established the best option would be an enterprise level, fiber channel capable shared storage system. A fiber channel storage system will provide consistent performance and reliability, while allowing capacity expansion options to meet the County's future needs. Also, SBT has engineers trained in fiber channel storage system management and has been managing this type of environment for over six (6) years.

It is recommended that the Board of Supervisors authorize the General Services Agency - Purchasing Division issue a Request for Proposal for the fiber channel shared storage system that will provide consistent performance, reliability, capacity of up to 30 terabytes, and expansion capacity to meet the County's future needs. Strategic Business Technology has identified up to $200,000 of existing fund balance to pay for the expansion or replacement of the existing fiber channel shared storage system.

POLICY ISSUES:
The Board should consider whether approval to issue a Request for Proposal for the Strategic Business Technology Shared Storage System Solution is consistent with the Board's stated priorities of the *Efficient Delivery of Public Services.*

STAFFING IMPACT:
Existing staff from the General Services Agency and Strategic Business Technology will prepare and issue the Request for Proposal. There are no additional staffing requirements associated with this item.

CONTACT INFORMATION:
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