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Governor



Brian C. McNeil  
Director

ARIZONA DEPARTMENT OF ADMINISTRATION

OFFICE OF THE DIRECTOR

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August 22, 2014

Mr. Brian C. McNeil, Director  
Arizona Department of Administration  
100 N. 15<sup>th</sup> Ave.  
Phoenix, AZ 85007

Dear Brian:

In response to the Project Investment Justification (PIJ) for the **"Mainframe Refresh"** project, my staff has reviewed your proposal to upgrade the ADOA State Data Center (SDC) mainframe to provide existing and new customers the capacity needed to meet IT requirements.

The PIJ implies funding is available from the Fiscal year 2015 (FY15) Automation Projects Fund (APF) in the amount of \$2,878.4 thousand, and the Automation Operations Fund (AOF) in the amount of \$26,146.2 thousand, with additional funding to be requested from the AOF in the amount of \$23,258.4 thousand, for a total estimated five-year life cycle cost for the project of \$52,282.9 thousand.

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. As a result of further planning, procurement, and implementation efforts, should there be a change in the proposed costs or lease agreement terms of 10% or more, the State data Center (SDC) team within ADOA-ASET must amend the PIJ to reflect the changes and present it to ITAC for review and approval prior to further expenditure of funds.

The ITAC is scheduled to meet on August 27, 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 blue ink, appearing to read "AS", written over a light blue horizontal line.

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

Mr. Brian C. McNeil  
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cc: Don Hennington, ADOA-ASET  
Mike Lettman, ADOA-ASET  
Patrick Cravens, ADOA-ASET  
Ken Roundtree, ADOA-ASET  
Andrew Smith, JLBC  
John Arnold, OSPB  
Barbara Corella, SPO  
Phil Manfredi, ADOA-ASET  
Jeffrey Crane, ADOA-ASET

ASET# AD15001

<i>Agency Name &amp; Address</i>	<i>Contact Name &amp; Phone</i>
Arizona Department of Administration 100 N. 15 <sup>th</sup> Ave. Phoenix, AZ 85007	Patrick Cravens 602-364-1576 patrick.cravens@azdoa.gov
<i>Project and Investment Justification Name</i>	<i>Date Submitted</i>
Mainframe Refresh	August 22, 2014

### **Project Overview**

#### **Problem Description**

The State Data Center (SDC), managed by the Arizona Department of Administration (ADOA), currently operates an IBM z10 mainframe system, which was originally approved in Fiscal Year 2010 (PIJ AD10006), and has a processing capacity of 1612 Million Instructions per Second (MIPS). The system provides direct mainframe computing capacity for eight State agencies, including ADOA, Arizona Department of Transportation (ADOT), Arizona Health Care Cost Containment System (AHCCCS), Arizona State University (ASU), Arizona Department of Health Services (ADHS), Pima County, Hawaii Health Care System (HHCS), and indirect processing for Arizona Department of Public Safety (ADPS). System resource utilization rates consistently rise above 90% during business hours with recent peaks at 100%, which results in slow end-user (client) performance. As this occurs, more transactions are scheduled than can be serviced and must wait for system resources, causing a delay in processing. These delays will continue to increase as demand increases until the existing mainframe system is unable to service client demand.

#### **Solution**

ADOA proposes to upgrade to the IBM zEC12 mainframe system, which has a processing capacity of 2389 MIPS, utilizing a five-year Fair Market Value (FMV) lease agreement. The lease contract will allow ADOA immediate use of the zEC12 system and also transition to next generation platform technology when available. Upgrading to the zEC12 mainframe system will allow for integration of multiple operating systems within a single hardware environment. This will accommodate migration of client applications from CICS/MVS to Linux, Windows, or Power platforms.

This PIJ specifies \$2,878,371 in development costs to initiate the delivery of the leased mainframe, installation of upgraded mainframe software, and first year license and maintenance costs along with operational costs (years 1 - 5) estimated at \$49,404,566. This upgrade is considered critical to the Agency's daily operations and the goals and objectives set forth in the ADOA Strategic Plan, including the State's Disaster Recovery (DR) plan. Implementation of the upgraded mainframe will provide additional capacity for existing and new workloads, along with the ability to utilize IBM's Capacity-on-Demand offering for DR purposes.

ADOA conducted an Invitation for Bid (IFB) in order to identify potential vendors capable of delivering the mainframe hardware upgrade solution. International Business Machines (IBM) was the sole respondent to the IFB. IBM proposed a FMV lease alternative, which was selected based on the significantly lower risk and cost considerations associated thereto.

### **Major Deliverables and Outcomes**

ADOA will lease, oversee install, configure and test the new IBM zEC12 mainframe system, and perform a cut-over/migration from the existing IBM z10 system, which will then be de-installed.

A minimal disruption period of 4 to 8 hours is anticipated to operations, administration, and other mainframe dependent activities. Hardware and software licenses will be upgraded to reflect the additional processor capacity.

The initial development cost includes \$753.0 thousand for the mainframe lease for seven months, \$1,166.6 thousand for the one-time mainframe software upgrade, and \$958.8 thousand for the first year software license and maintenance fees. Ongoing operational mainframe hardware lease costs and software licensing and maintenance fees will be funded through the Automation Operations Fund in the amount of \$49,404.6 thousand.

**Benefits**

Implementation of the upgraded mainframe will allow ADOA to provide the increased capacity and greater flexibility required to accommodate multiple mainframe operating system support requests from State agencies/clients. It will also provide the ability to utilize IBM's Capacity-on-Demand offering in support of the State's DR plan. By utilizing a lease agreement financing option, ADOA will be allowed immediate use of the current IBM mainframe platform and system with the ability to transition to the next generation mainframe system platform technology, z/Next, upon availability.

**Project Management**

ADOA technical staff and the vendor will perform the mainframe upgrade according to a defined migration plan.

**Enterprise Architecture**

Compliant

**Summary of Proposed Costs**

<i>All Figures in Thousands (\$000)</i>						
<i>Cost Description</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>Total</i>
Development Costs	2,878.4	0.0	0.0	0.0	0.0	2,878.4
Operational Costs	7,540.5	9,805.8	10,231.6	10,678.6	11,148.0	49,404.6
<b>Total Project Costs</b>	<b>10,418.9</b>	<b>9,805.8</b>	<b>10,231.6</b>	<b>10,678.6</b>	<b>11,148.0</b>	<b>52,282.9</b>

**Recommendation: Approval with Conditions**

1. As a result of further planning, procurement, and implementation efforts, should there be a change in the proposed costs or lease agreement terms of 10% or more, the State data Center (SDC) team within ADOA-ASET must amend the PIJ to reflect the changes and present it to ITAC for review and approval prior to further expenditure of funds.