



Arizona Strategic Enterprise Technology

Project Investment Justification

Version 01.00

A Statewide Standard Document for Information Technology Projects

Project Title:
Mainframe CPU Enhancement

| | |
|------------------------------|-------------------|
| Agency Name: | ADOA-ASET |
| Date: | 6/13/2014 |
| Agency Contact Name: | Donald Hennington |
| Agency Contact Phone: | |
| Agency Contact Email: | |

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I. Management Summary*

The current mainframe computing system at the State Data Center (SDC) for the Arizona Department of Administration (ADOA) provides direct mainframe computing capacity for eight (8) key partners: Arizona Health Care Cost Containment System (AHCCCS), Hawaii Medicaid, Arizona Department of Administration (ADOA), Arizona Department of Transportation (ADOT), Arizona Department of Corrections (ADOC), Arizona State University (ASU), Arizona Department of Revenue (ADOR) and PIMA County. Additionally the Arizona Department of Public Safety (ADPS) has a critical dependency on the ADOT mainframe application. This current environment replaced individual mainframe computers at several of these agencies, consolidating State mainframe computing needs into a single service provider.

Following the consolidation of these systems, the represented agencies' processing demand had been growing at a normalized rate of approximately 5-7% per year. During 2010, the processing demand had risen to a level that required replacement of the then current infrastructure. The IBM z/10 processor that is installed today was that replacement machine.

Today, the State is facing similar issues. Over the course of the past three years, processing demand has risen organically at a 6% rate and now the system resource utilization rate consistently rises to 95% and above during the business day. The net effect of that utilization rate to the user community is slower performance. As the individual logical partitions compete for physical resources, the system has to slow down to be able to accommodate the increased processing requests. As an example, a Department of Corrections employee submits a request to update a prisoner's banking information record. When the system is experiencing utilization at or above 95%, that request might take several seconds to process, when, under more normal circumstances, sub-second response is the norm. The system doesn't stop; it slows to allow processes to complete.

This current processing challenge has been managed with system workload management software and constant monitoring of resources. However, even with these efforts, individual Agencies are frequently approaching the upper limits their maximum processing utilization. Recently, our partner Agencies have experienced slowdowns in work through-put, as well as delays in servicing Arizonan's request for services; recent television news stories has linked system performance with long lines the Motor Vehicle.

Over the period from December 2013 to May 2014, ADOA-ASET has been working with our vendor partners and consultants to ensure we are correctly identifying the root cause of the mainframe system capacity, including the exploration of alternative solutions, such as shifting of Agency workload to alternative times, or the shifting of employee work schedules. We have reached the conclusion that these potential proposals are insufficient for ameliorating the current capacity shortfall.

This proposal is to allow for an interim solution to reduce the potential processing risk to our partner Agencies by enabling two (2) additional mainframe system processors to help provide interim relief of our immediate capacity needs as we move forward with a replacement strategy of the current mainframe system. This interim solution will make these two mainframe processors available for 90 days only.

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***

Cross agency usage of the mainframe is approaching the maximum mainframe Central Processing Unit (CPU) capacity. Continuing to utilize the system capacity at this level (95-98%) has caused several agencies to experience slow response times which has affected their daily business. As an example, on ADOT's Motor Vehicle Division's (MVD) high-volume days, the Mainframe utilization for MVD is extremely high, and this high usage contributes to a potential system slowdown which could impact the public and be reported by the press. Additionally, MVD has deployed new function, the Central Credential Issuance (CCI) process, which is a critical component of the Agency's strategy to improve security for Arizona credentials. It is a significant change to credential processing for the public, and has received a lot of attention in the public domain. It is essential that this new process remain available to the MVD offices to minimize potential impact to the public.

B. **Proposed Business Solution***

- Work with our Mainframe business partner IBM to turn on CPU's resident with the current z10 which will enable a ~20% increase (305 MIPS) in total system capacity.

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 |

Explain:

- Service enhancement: Agencies will see an improvement of overall system response time.

- Problem avoidance: Agencies will experience fewer work slow-downs and stoppages, MVD customers will be able to reduce their time in the various MVD offices while renewing licenses and registrations.
- Risk avoidance: Lower potential production processing risk by providing additional interim capacity for agency mainframe customers.

IV. Technology Approach

A. ***Proposed Technology Solution****

- Receive microcode licenses for CPU's in the current Mainframe system from IBM, enter codes into the Mainframe. This will turn on the remaining CPU's and increase the CPU capacity.

B. ***Technology Environment***

Mainframe

C. ***Selection Process***

Enhancing current service

V. Project Approach

A. ***Project Schedule****

Project Start Date: 6/16/2014 Project End Date: 9/30/2014

B. ***Project Milestones***

| <u>Major Milestones</u> | Start Date | Finish Date |
|----------------------------|-------------------|--------------------|
| Submit PIJ | 6/16/2014 | 6/16/2014 |
| Receive letter of Intent | 6/18/2014 | 6/18/2014 |
| Submit to IBM | 6/18/2014 | 6/18/2014 |
| Receive Codes | 6/23/2014 | 6/23/2014 |
| Install Codes on Mainframe | 6/24/2014 | 6/24/2014 |
| | | |

VI. Roles and Responsibilities

A. ***Project Roles and Responsibilities***

Donald Hennington – Main ADOA contact for IBM,
 Terri Johnson – ADOA SPO Contact,
 Patrick Cravens – Mainframe System's manager for code installation.

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

| | |
|---------------------------------------|-------|
| Total Full-Time Employee Hours | 4 |
| Total Full-Time Employee Cost | \$400 |

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 http://aset.azdoa.gov/security/policies-standards-and-procedures , and applicable to this project? If NO , 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 YES , 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 | \$ |
| Total Project Cost | VII. PIJ Financials tab | \$450,000 |
| FTE Hours | VI. Roles and Responsibilities | 4 |

C. Agency Approvals*

| Contact | Printed Name | Signature | Email and Phone |
|--------------------------------------|-------------------|-----------|-----------------|
| Project Manager: | | | |
| Agency Information Security Officer: | Mike Lettman | | |
| Agency CIO: | Aaron Sandeen | | |
| Project Sponsor: | Donald Hennington | | |
| Agency Director: | Brian McNeil | | |

IX. Optional Attachments

A. *Vendor Quotes*

X. Glossary

XI. Additional Information

Links:

[ADOA-ASET Website](#)

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

Email Addresses:

[Strategic Oversight](#)

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