

Datacenter Modernization Phase 0	
Agency Requesting The Project:	
Revenue Department	
Business Unit Requesting The Project:	
Information Technology	
Sponsor Of the Project:	
David Bryant	
Sponsor Title:	
Director	
Sponsor Phone Number:	Extension:
(602) 716-6145	
Sponsor Email Address:	
jedwards@azdor.gov	

Has a Project Request been completed for this PIJ?

N

What is the operational issue or business need that the Agency is trying to solve? (i.e. ...current process is manual, which increases resource time/costs to the State/Agency, and leads to errors...)

ADOA datacenters at Adams and Tucson will be phased out and decommissioned. Specifically the Adams datacenter will be shut down no later than Dec 2019. Sixty percent (60%) of ADOR server hardware is under powered, end of life, or close to being end of life. The increasing strain on the current systems has resulted in backup failures which have led to unrecoverable critical data loss. ADOR is experiencing rapid data growth, expanding virtual server, and application deployments. These dynamics, compounded by demands for faster and easier data recovery, are increasing strain on the current traditional data protection processes that are already broken.

How will solving this issue or addressing this need benefit the State or the Agency?

Replacement of existing end of life distributed system servers. Optimized datacenter infrastructure: On average, the customers reduced their annual datacenter infrastructure costs by nearly \$3.6 million, \$75,778 per 100 users. Efficient IT staff operations: Converged infrastructure technology provides five times faster time to market for new services, from 25 to 5 days. Lower total datacenter costs: Organizations in the study reduced the average annual cost per 100 datacenter users by 50% – \$151,571 to \$75,793 – by lowering maintenance, replacement, and IT staff costs. Reliable IT services: Designed for high availability with best-of-breed components, converged infrastructure technologies delivers a consolidated footprint and a simplified IT environment that frees staff resources and allows customers in the study to reduce downtime hours by 96% per year. Improved IT agility, which reduces the time needed to deliver applications and services and provision datacenter resources; 4.4 times faster time to market for new services/products. Greater business innovation as IT staff spend less time “keeping the lights on” and more time on innovation projects including mobile and analytics; 41% less time spent keeping the lights on. Increased performance. driving higher levels of customer services and satisfaction: 4.6 times more

performance), allowing higher levels of customer service and satisfaction, to times more applications developed/delivered per year. Higher levels of cost-effectiveness, scalability, and reliability in the technology infrastructure — 96% less downtime.

Describe the proposed solution to this business need:

Secure space at a qualified private Data Center (Tier 3). Procure new hardware to replace end-of-life/end-of-support aging infrastructure.

Has the existing technology environment, into which the proposed solution will be implemented, been documented? Y

Indicate where that documentation can be found, or provide the information under separate cover before the meeting, otherwise describe below:

Architecture documents will be sent in separate email to ASET w/ PIJ.

Have the business requirements been gathered, along with any technology requirements that have been identified? Y

Are you submitting this as a Pre-PIJ in order to issue a Request for Proposal (RFP) to evaluate options and select a solution that meets the project requirements? N

Will you be completing an assessment/Pilot/RFP phase, i.e., an evaluation by a vendor, third party or your agency, of the current state, needs, and desired future state, in order to determine the cost, effort, approach (RFP or otherwise) and/or feasibility of a project before submitting the full PIJ? N

Does the project fall into one of the following categories:

- hardware technology refresh/expansion, e.g., replacement/more laptops, radios, peripherals, etc.?

Y

Is there any possibility that project implementation costs could reach \$1 million or more? Y

Is the proposed procurement the result of an RFP solicitation process? N

Is this project referenced in your agency's Strategic IT Plan? Y

Does your agency have a formal project methodology in place? Y

Describe the high level make-up and roles/responsibilities of the Agency, Vendor(s), and other third parties below: (i.e. ...agency will do...vendor wil do...other third parties will do..)

ADOR will be responsible for site acquisition, procurement, and implementation. WWT will be responsible for delivery of hardware, physical installation and documented architecture. Century Link is responsible for collocated datacenter, telecommunications and assisting with physical installations.

Will a PM be assigned to manage the project, regardless of whether internal or vendor provided? Y

If the PM is credentialed, e.g., PMP, CPM, State certification etc., please provide certification information below:

State Certified

Is a project plan available that reflects the estimated start date and end date of the project, and the supporting milestones for the project? N

Provide an estimated start and finish date for implementing the proposed solution:

Estimated Start	12/07/16	Estimated Finish	06/30/17
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How were the start and end dates determined:

Funding

Have steps needed to roll-out to all impacted parties been incorporated, e.g. communications, planned outages, deployment plan? Y

Will any phyciscal infrastructure improvements be required prior to the implementation of the proposed solution. e.g., building reconstruction, cabling, etc.? N

Does the PIJ include the facilities costs associated with construction? Y

Does the project plan reflect the timeline associated with completing the construction? N

Are there any known resource availability conflicts that could impact the project? Y

Have the identified conflicts been taken into account in the project plan? Y

Does your schedule have dependencies on any other projects or procurements? Y

Will the implementation involve major end user view or functionality changes? N

Will the proposed solution result in a change to a public-facing application or system? Y

Is a detailed project budget reflecting all of the up-front/startup costs to implement the project available, e.g., hardware, initial software licenses, training, taxes, P&OS, etc.? Y

Have the ongoing support costs for sustaining the proposed solution over a 5-year lifecycle, once the project is complete, been determined, e.g., ongoing vendor hosting costs, annual maintenance and support not acquired upfront, etc.? Y

Have all required funding sources for the project and ongoing support costs been identified? Y

Will the funding for this project expire on a specific date, regardless of project timelines? Y

Provide the dates for the funding availability below:
Estimated Start Estimated Finish

Will the funding allocated for this project include any contingency, in the event of cost over-runs or potential changes in scope? N

Please indicate whether a statewide enterprise solution will be used or select the primary reason for not choosing an enterprise solution:
 center, however, we are not using a state-wide solution for the infrastructure due to costs assoc

Will the technology and all required services be acquired off existing State contract(s)? Y

Will any software be acquired through the current State value-added reseller contract? N

Does the project involve any technology that is new and/or unfamiliar to your agency, e.g., software tool never used before, virtualized server environment? N

Does your agency have experience with the vendor (if known)? Y

Does the vendor (if known) have professional experience with similar projects? Y

Does the project involve any coordination across multiple vendors? Y

Does this project require multiple system interfaces, e.g., APIs, data exchange with other external application systems/agencies or other internal systems/divisions? Y

Have any compatibility issues been identified between the proposed solution and the existing environment, e.g., upgrade to server needed before new COTS solution can be installed? Y

Describe below the issues that were identified and how they have been/will be resolved, or whether an ADOA-ASET representative should contact you:
ORACLE Databases were identified as being required to be updated prior to moving to new infrastructure. ADOR contacted WWT and House of Brick to conduct an assessment and develop a way ahead. The way ahead is currently being planned for implementation.

Will a migration/conversion step be required, i.e., data extract, transformation and load? Y

Is this replacing an existing solution? Y

Indicate below when the solution being replaced was originally acquired?
Existing infrastructure was acquired between 2008 and 2013

Describe the planned disposition of the existing technology below, e.g., surplus, retired, used as backup, used for another purpose:
End-of-life/end-of-support infrastructure will be surplus.

Describe how the agency determined the quantities reflected in the PIJ, e.g., number of hours of P&OS, disk capacity required, number of licenses, etc. for the proposed solution?
ADOR conducted an internal assessment of all infrastructure and turned the assessment over to WWT. WWT in conjunction with VCE translated this assessment into the current hardware requirements.

Does the proposed solution and associated costs reflect any assumptions regarding projected growth, e.g., more users over time, increases in the amount of data to be stored over 5 years? Y

Does the proposed solution and associated costs include failover and disaster recovery contingencies? N

Please select why failover and disaster recovery is not included in the proposed solution.

No funding available

Will the vendor need to configure the proposed solution for use by your agency? Y

Are the costs associated with that configuration included in the PIJ financials? Y

Will any application development or customization of the proposed solution be required for the agency to use the product in the current/planned technology environment, e.g., a COTS application that will require custom programming, an agency application that will be entirely custom developed? N

Have you determined that this project is in compliance with all applicable statutes, regulations, policies, standards, and procedures, including those for network, security, platform, software/application, and/or data/information found at <https://aset.az.gov/resources/psp>? Y

Are there other high risk project issues that have not been identified as part of this PIJ? N

Will the proposed solution be vendor-hosted? N

Will the proposed solution be hosted on-premise in a state agency? N

Will any PII, PHI, or other Protected Information as defined in the 8110 Statewide Data Classification Policy be transmitted, stored, or processed with this project? Y

Describe below what security infrastructure/controls are/will be put in place to safeguard this data:
Current security mechanisms will be migrated to the new infrastructure.

What help could ASET offer to increase the probability of project success?
Partnership w/ ADOR Project Management Team as well as availability to ADOR Leadership.

Summary of PIJ Financials

Total of Development Cost:	\$	3,999,971
Total of Operational Cost:	\$	300,825
Total Costs:	\$	4,300,795

Project Cost - Itemized

Item	Description	Category	Development (Implementation) or Operational (Ongoing)	Fiscal Year Spend	Qty or Hours	Unit Cost	Extended Cost	Enter Tax Rate if Applicable (Generally 8.6% for PHX)	Tax	Total Cost
1	Purchase of Vblock for IO including installation & configuration	Hardware	Development	1	1	\$3,365,479	\$3,365,479		\$229,215	\$3,594,694
2	Purchase of Viprion Devices	Hardware	Development	1	1	\$237,592	\$237,592		\$20,164	\$257,756
3	Viprion Maintenance	License & Maint Fees	Operational	1	1	\$56,423	\$56,423		\$0	\$56,423
4	IO Datacenter Initial Installation Costs	Hardware	Development	1	1	\$141,276	\$141,276		\$0	\$141,276
5	IO Datacenter Initial Recurring Costs	Hardware	Operational	1	7	\$34,915	\$244,402		\$0	\$244,402
6	Vendor Relocation of Equipment Costs for VMAX move (EMC)	Prof & Outside Services	Development	1	1	\$6,245	\$6,245		\$0	\$6,245
7		[-Select-]	[-Select-]	[-Select-]						
8		[-Select-]	[-Select-]	[-Select-]						
9		[-Select-]	[-Select-]	[-Select-]						
10		[-Select-]	[-Select-]	[-Select-]						
11		[-Select-]	[-Select-]	[-Select-]						
12		[-Select-]	[-Select-]	[-Select-]						
13		[-Select-]	[-Select-]	[-Select-]						
14		[-Select-]	[-Select-]	[-Select-]						
15		[-Select-]	[-Select-]	[-Select-]						
16		[-Select-]	[-Select-]	[-Select-]						
17		[-Select-]	[-Select-]	[-Select-]						
									Total Development Cost	\$3,999,971
									Total Operational Cost	\$300,825
									Total Itemization of Costs:	\$4,300,795

Summary of Funding Sources			
Fund Type	% of Project	\$ of Project (Available)	\$ of Project (To Be Requested)
Base Budget	100.00%	\$4,300,795.48	
APF			
Other Appropriated			
Federal			
Other Non-Appropriated			

Total costs available to distribute between funding sources
\$0.00

PIJ Development & Operational Cost Summary

Description	Type	Year 1	Year 2	Year 3	Year 4	Year 5	Extended Cost
Professional & Outside Services	Development	\$6,245	\$0	\$0	\$0	\$0	\$6,245
	Operational	\$0	\$0	\$0	\$0	\$0	\$0
Hardware	Development	\$3,993,726	\$0	\$0	\$0	\$0	\$3,993,726
	Operational	\$244,402	\$0	\$0	\$0	\$0	\$244,402
Software	Development	\$0	\$0	\$0	\$0	\$0	\$0
	Operational	\$0	\$0	\$0	\$0	\$0	\$0
Communications	Development	\$0	\$0	\$0	\$0	\$0	\$0
	Operational	\$0	\$0	\$0	\$0	\$0	\$0
Facilities	Development	\$0	\$0	\$0	\$0	\$0	\$0
	Operational	\$0	\$0	\$0	\$0	\$0	\$0
Licensing & Maintenance Fees	Development	\$0	\$0	\$0	\$0	\$0	\$0
	Operational	\$56,423	\$0	\$0	\$0	\$0	\$56,423
Other	Development	\$0	\$0	\$0	\$0	\$0	\$0
	Operational	\$0	\$0	\$0	\$0	\$0	\$0
Development Cost:		\$3,999,971	\$0	\$0	\$0	\$0	\$3,999,971
Operational Cost:		\$300,825	\$0	\$0	\$0	\$0	\$300,825
Total Cost:							\$4,300,795

Areas of Impact

1 Application Systems

- | | | |
|-------------------------------------|---|--|
| <input type="checkbox"/> | Application Enhancements | |
| <input type="checkbox"/> | Internal Use Web Application | |
| <input type="checkbox"/> | Mobile Application Development | |
| <input type="checkbox"/> | Arizona Enterprise Solution Platform (AESP) based Application | |
| <input type="checkbox"/> | New Application Development | |
| <input type="checkbox"/> | az.gov Web Portal Application | |
| <input checked="" type="checkbox"/> | Other: (Please specify below) | Physical to Virtual migrations of all Applications residing on end-of-life/end-of-support physical hardware. |

2 Database Systems

- | | | |
|-------------------------------------|--|--|
| <input type="checkbox"/> | Data Warehouse/Mart | |
| <input type="checkbox"/> | Database Consolidation/Migration/Extract Transform and Load Data | |
| <input type="checkbox"/> | Database Products and Tools: | |
| <input type="checkbox"/> | Oracle | |
| <input type="checkbox"/> | MySQL | |
| <input type="checkbox"/> | DB2 | |
| <input type="checkbox"/> | MS SQL Server | |
| <input checked="" type="checkbox"/> | Other: (Please specify below) | migrations of all Applications residing on end-of-life/end-of-support physical hardware. |

3 Software

- | | | |
|-------------------------------------|--------------------------------|--|
| <input type="checkbox"/> | COTS Application Customization | |
| <input type="checkbox"/> | COTS Application Acquisition | |
| <input type="checkbox"/> | Mainframe Systems Software | |
| <input type="checkbox"/> | Open Source | |
| <input type="checkbox"/> | PC/LAN Systems Software | |
| <input checked="" type="checkbox"/> | Virtualization | |
| <input checked="" type="checkbox"/> | Other: (Please specify below) | migrations of all Applications residing on end-of-life/end-of-support physical hardware. |

4 Hardware

- | | |
|-------------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> | LAN/WAN Infrastructure |
| <input type="checkbox"/> | Mainframe Infrastructure |
| <input checked="" type="checkbox"/> | Storage Area Network Devices |
| <input type="checkbox"/> | Public Safety Radios, Systems |
| <input type="checkbox"/> | PC Purchases, Peripherals |
| <input checked="" type="checkbox"/> | Tape Libraries/Silos |
| <input checked="" type="checkbox"/> | UPS Devices |
| <input type="checkbox"/> | Other: (Please specify below) |

5 Hosted Solution (Cloud Implementation)

- State Data Center
- Commercially Hosted:
 - Amazon (AWS) GovCloud
 - Century Link - I/O Data Center
 - AWS (non-government) cloud
 - Microsoft Azure
- Vendor Hosted
- Other: (Please explain below)

6 Security

- Encryption
- Security Appliances:
 - Firewall
 - Intrusion Detection System (IDS)
 - Intrusion Prevention System (IPS)
 - SecurityControls/Systems - Other: (Please specify below)
- Physical Controls (Badging Systems, Iris Scanners, Other: (Please specify below)
- Other: (Please specify below) Adding security cameras, badging system to collocated datacenter.

7 Telecommunications

- Network Communications Infrastructure
- Telephone Upgrade-Business-Specific
- Cabling
- Wireless Access Points
- Telephony Upgrade-EIC Solution
- Trenching
- Videoconferencing
- Other: (Please specify below)

8 Enterprise Solutions

- Business Intelligence System
- E-Signatures
- Geographic Information Systems
- Other Imaging - Photos, Fingerprints, etc.
- Document Management/Imaging
- eLicensing
- Management Systems - Financial, Grants, Asset
- Disaster Recovery/Business Continuity
- Other: (Please specify below)

9 Contract Services/Procurement

- Contracted Project Management
- Contractor Support Services
- Install/Configuration Contract Services
- State Contract
- Vendor provided
- Procurement (RFP, IFB, DPR, etc.)
- Other: (Please specify below)

Project Milestones/Deliverables

Major Milestones/Deliverables	Estimated Start Date	Estimated Finish Date
ITAC Approval	12/07/16	12/07/16
Procurement of datacenter space	12/07/16	12/31/16
Procurement of infrastructure	12/07/16	01/31/17
Installation of infrastructure	01/31/17	02/28/17
Deployment of initial telecommunications	01/31/17	02/28/17
Configuration of infrastructure	02/28/17	05/31/17
Telecommunications Cutover to ADOA Network	06/01/17	07/01/17

PIJ Review Checklist

Role	Name	Email Address	Date Reviewed
Agency Project Sponsor*	David Bryant	dbryant@azdor.gov	12/05/16
Agency Chief Information Officer (CIO) (or designee)*	Sandip Dholakia	sdholakia@azdor.gov	12/05/16
Agency Information Security Officer (ISO) (or designee)*	Johnathon Edwards	jedwards@azdor.gov	12/05/16
ADOA-ASET Engagement Manager *	David Tischler	david.tischler@azdoa.gov	12/05/16
Agency CPO or State Procurement Office (SPO) representative	Robert Ryan	rryan@azdor.gov	12/05/16
Agency CFO or Finance representative (if different from CPO)	Tom MacConnel	tmacconnel@azdor.gov	12/05/16
Others to Review (if applicable):			
SR Infrastructure Project Manager	Russell Cunningham	rcunningham@azdor.gov	12/05/16
Business Integration SR Manager	George Simanson	gsimanson@azdor.gov	12/05/16
Applications Development SR Manager	Elizabeth Neeley	eneeley@azdor.gov	12/05/16
Deputy CIO	Tom Ferruccio	tferruccio@azdor.gov	12/05/16
IT Customer Service SR Manager	Michael Piatt	mpiatt@azdor.gov	12/05/16

* Required Attendee

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x	Has the value of the IT project to the public and the State been identified?
x	Does the proposed solution address the stated problem or situation?
x	Has the budget unit demonstrated competency to carry out the project successfully?
x	Have all applicable questions in the PIJ been addressed?
x	Have the Areas of Impact associated with the project been identified?
x	Is sufficient sponsorship and support by budget unit leadership evidenced in the meeting?
x	Has the compatibility of the proposed solution with other budget unit solutions been addressed?
x	Has a reasonable Project Plan been provided?
x	Has the compliance of the proposed solution with all applicable statewide standards been confirmed?
x	Have any potential risks or issues associated with the project or the proposed solution been identified and appropriately addressed to minimize unintended consequences?
x	Have the cost estimates for the project been vetted for accuracy?
x	Have the PIJ Financials been completed?
x	Have any/all of the following startup costs to implement the project been included under Development in the financial tables, if applicable - tax; shipping; upfront maintenance and support; professional services (P&OS); ancillary software to run on equipment; ancillary hardware to install equipment, e.g., cables; other associated costs, e.g., training, travel, documentation, etc.?
x	Have any/all of the following ongoing/5-year support costs, once the project is implemented, been included under Operational in the financial tables, if applicable - ongoing vendor hosting costs, including any projected increase over time; annual maintenance and support not acquired upfront; extended costs after warranty expiration; P&OS commitments beyond implementation?
x	Have you confirmed that no Full Time Employee (FTE) related costs have been included in the project costs?
x	Have quotes been provided for all itemized costs in the PIJ, e.g., professional services, hardware, software, licensing, etc.?
x	Do the quotes match the itemized list and only reflect those items and costs (within 5%) associated with this project?
	If not, describe below how the costs in the PIJ differ from the quotes, e.g., if quantities are different, costs are comprised of portions of multiple quotes provided, etc.:

If any of the above are not complete, the PIJ cannot be approved at this time.....

<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

PIJ Disposition	
	ITAC Recommendation
X	ITAC Recommendation with conditions
	Not Approved
Strategic Program Manager Analysis	
The Department of Revenue has a critical need to modernize their infrastructure and replace hardware that has already reached End-of-Life status. Additionally, this PIJ will allow them to begin transitioning to the new State datacenter and ensure they are aligned with the State Strategic Plan.	
Authorized Recommender:	David Tischler
Recommendation Date:	12/5/16

Condition (If Applicable)
Should the final costs exceed the estimated costs by 10% or more, or should there be significant changes to the proposed technology, scope of work or implementation schedule, the Agency must amend the PIJ to reflect the changes and submit it to ADOA-ASET for review and approval prior to further expenditure of funds.