



# ADOA - ASET

Arizona Strategic Enterprise Technology

## Project Investment Justification

Version 01.4

A Statewide Standard Document for Information Technology Projects

### UPS Statewide Upgrade

<b>Agency Name:</b>	Arizona Department of Transportation
<b>Date:</b>	August 12, 2014
<b>Agency Contact Name:</b>	Jesse MacDonough
<b>Agency Contact Phone:</b>	
<b>Agency Contact Email:</b>	

## I. Management Summary

Uninterruptible power supplies (UPS's) provide surge protection and a short-term, battery driven power source for servers, voice and data communication equipment, and other hardware when a building's primary power source fails. Without this protection, even very brief power outages can cause an office's critical core technology infrastructure to shut down and stay in that state after building power is restored, leaving occupants without voice and data communication services. This can result in extended service interruptions and affect the flow of business until technicians can arrive and perform the proper equipment boot up procedures. Additionally, data corruption and loss may occur when equipment is not powered down properly. As with other rechargeable battery technologies, UPS equipment must be appropriately monitored and maintained on a routine basis.

## 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.	\$0
Based on research done to date, provide a high-level estimate or range of development costs anticipated for the full PIJ.	\$0

Explain:

6T

Yes  No Will a Request for Proposal (RFP) be issued as part of the Pre-PIJ or PIJ?

## III. Business Case

### A. Business Problem

The present UPS equipment used by the Agency is in a state of disrepair. Additionally, they have been in operation far beyond the manufacturer's recommended product lifecycle. Battery backup capacity is also unreliable due to age and overheating, creating the potential for the sealed lead acid cell cases to rupture and discharge toxic gases, affecting the safety and health of employees and the public.

Since August, 2010, we have had three significant incidents at ADOT offices involving overheating of UPS equipment and the rupturing of batteries.

### B. Proposed Business Solution

The primary purpose of this project is to mitigate ADOT's risk exposure to further safety incidents by removing all 422 outdated, potentially hazardous UPS units from the department's statewide offices. The proposed solution is to bring all in-scope UPS units into conformance with the manufacturer's recommended and supported configuration to provide adequate runtime capacity during brief power outages.

ITG will also establish a preventive maintenance and support regimen to ensure UPS units operate safely and effectively.

### 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

Anticipated Outcomes:

- **Service Enhancement:** UPS units will help minimize business impact by providing short-term power for up to 30 minutes during a power outage.
- **Problem Avoidance:** The Struxureware software will provide proactive monitoring and alerting on the status and health of UPS units.
- **Risk Avoidance:** Reduce ADOT's exposure to further risk events related to overheated and ruptured UPS batteries.

## IV. Technology Approach

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

The proposed solution is to replace all current equipment with new, appropriately sized UPS units to provide adequate surge protection and 30-minute, off-grid runtime for all equipment housed in ADOT's telecommunication and server rooms throughout the state. All new UPS equipment will be connected to the network for real-time, proactive monitoring and alerting through vendor provided StruxureWare software.

ITG will assume responsibility for ongoing support, preventive maintenance and replacement of UPS equipment and batteries, in accordance with the manufacturer's recommended service intervals.

The UPS units' health and status will be proactively monitored by ITG. This monitoring software will collect and distribute critical alerts and key information, providing a unified view of physical infrastructure environments from anywhere on the network.

The manufacturer recommends the replacement of UPS batteries every 5 years.

### B. **Technology Environment**

The current UPS units are in various states of disrepair and running well beyond the manufacturer's recommended product lifecycle. Battery backup capacity is unreliable. The proposed solution is to remove all outdated and potentially hazardous UPS equipment from the department's offices, statewide.

The new solution will provide full surge protection and 30-minute power loss runtime for all equipment housed in ADOT's telecommunication and server rooms throughout the state. All new UPS equipment will be connected to the network, providing real-time, proactive monitoring and alerting through a vendor-provided StruxureWare software. The software includes 5 years support and maintenance.

**C. Selection Process**

Struxureware Data Center software was selected based on the fact it was designed to work with APC uninterruptible power supplies. It also provides the best capability of real-time monitoring and instant fault notifications.

**V. Project Approach**

**A. Project Schedule**

**Project Start Date:** 9/30/2014      **Project End Date:** 11/30/2015

**B. Project Milestones**

Major Milestones	Start Date	Finish Date
Purchase Hardware and Software	9/30/2014	10/31/2014
Install and Configure Software	10/03/2014	10/31/2014
Deploy Hardware	11/03/2014	10/30/2015
Closeout Project	11/02/2015	11/30/2015

**VI. Roles and Responsibilities**

**A. Project Roles and Responsibilities**

Name	Title	Role
Rich Nacinovich	ADOT ITG/EIS Manager	Project Sponsor
Bruce Bosco	ADOT PM and Program Manager	Program Manager
Ben Villegas	ADOT Project Manager	Project Manager

**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**

<b>Total Full-Time Employee Hours</b>	3,520
<b>Total Full-Time Employee Cost</b>	

**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 <a href="http://aset.azdoa.gov/security/policies-standards-and-procedures">http://aset.azdoa.gov/security/policies-standards-and-procedures</a> , and applicable to this project? If <b>NO</b> , 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 <b>YES</b> , 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	\$0
Total Development Cost	VII. PIJ Financials tab	\$619,097
Total Project Cost	VII. PIJ Financials tab	\$939,788
FTE Hours	VI. Roles and Responsibilities	3,520

### C. Agency Approvals

Contact	Printed Name	Signature	Email and Phone
Project Manager:	Ben Villegas		
Agency Information Security Officer:	Thomas Branham		
Agency CIO:	Doanh Bui		
Project Sponsor:	Rich Nacinovich		
Agency Director:			

## 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](#)

[ADOA-ASET\\_Webmaster@azdoa.gov](mailto:ADOA-ASET_Webmaster@azdoa.gov)