ADOA-ASET

Project Investment Justification

Version 03.31.15

A Statewide Standard Document for Information Technology Projects

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Project Title:

Centralized Database Management System

Agency Name:	**Arizona Commission for the Deaf and the Hard of Hearing**
Date:	**April 29, 2015**
Agency Contact Name:	Jeremy McCown
Agency Contact Phone:	
Agency Contact Email:	

Date

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I. Project Investment Justification (PIJ) Type*

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

II. Business Case

A. Business Problem*

There are three major issues with our current operation. The current operation relies on four sets of "systems" that are at various stages of obsolescence and the needs of the commission have expanded beyond the capabilities of these systems. Secondly the current systems are not integrated, so many manual steps are added to coordinate the sharing of information. Lastly, the State and Federal reporting requirements are not easily met from the systems. Due to these issues our commission is planning on replacing these individual systems with one consolidated system with a common database structure.

B. Proposed Business Solution*

ACDHH has submitted a Pre-PIJ to issue an RFP, RFP bidders were evaluated.

ACDHH has identified a preferred vendor

ACDHH is submitting this full PIJ to gain State CIO approval and subsequently award a contract to the ACDHH preferred vendor.

The solution is an integrated, technology current, secure system that is both expandable and flexible to meet the current and foreseeable needs of the commission and the over 700,000 deaf and hard of hearing individuals throughout the state and over 350 licensed interpreters.

PLEASE NOTE CONCERNING LICENSING This will only be for tracking purposes. No online billing via credit card or check will be designed or implemented at this time.

The solution includes secure external access, integrated pre-programmed and ad-hoc reporting, and no proprietary software is needed.

C. Quantified Benefits*

| X | Service enhancement |
| | Increased revenue |

X	Cost reduction
X	Problem avoidance
X	Risk avoidance

Explain:

Service Enhancement:

We will also be able to serve our customers in a timely manner. The entire system will also streamline our business processes, eliminate paper and paper flow, and eventually allow for electronic payment for services (said project is not included in this PIJ but just being mentioned for thoroughness).

Cost Reduction:

Savings are projected in eliminating the need for hiring 2 additional staff while at the same time providing additional requested services to our constituents.

Problem Avoidance:

Being a newer system it will have a newer architecture and up to date software which will help alleviate potential break/fix issues.

Risk Avoidance:

Since we will be housing this system at the State Data Center we will have deeper technical support knowledge and resources. More consistent backups and Disaster Recovery capabilities. It will also ease our burden on complying with State and Federal reporting requirements.

III.   Technology Approach

A.   *Proposed Technology Solution**

- o Front End Components
  - ▪ Bootstrap CSS/HTML5
  - ▪ AngularJS
  - ▪ JavaScript
  - ▪ Responsive Design compatible with desktop, tablet and mobile
- o Business Logic Layer
  - ▪ Node.js or .NET components
- o Db Components
  - ▪ SQL Server 2012 with stored procedures (if required)
  - ▪ Web services using node.js
- o External interfaces

- PDF file generation for Badge Printing
- External CRM interface for mass mailings
- Other external interfaces as needed (e.g. LDAP)
- Identify tools to be used to develop all software (including development tools, version control, wire-framing tools, etc.)

System will be hosted for development, test and production environments at the State Data Center.

Vendor proposes to follow the Microsoft Solution Framework (MSF) to deliver this project. MSF is an adaptable approach for successfully delivering technology solutions faster, with fewer people and less risk, while enabling a higher quality of results.

Project Discovery Processes

The Project Discovery and Design Phase will entail the following tasks, sub-tasks and processes:

- Define, document and understand the project vision and goals
- Prepare communication plan with communication topics, audience, frequency and responsibility assignments
- Define and document the scope of work for each module and sub-module of all 4 sub-systems
  - Analyze existing systems and features
  - Meet with various Subject Matter Experts to define requirements and understand scope
  - Analyze data elements for data migration
  - Define reporting requirements
  - Define overall security requirements and domain names (e.g. SSL, TLD, etc.)
  - Define use-cases at a high level for each sub-module
- Identify the user and security model for system access
- Refine and establish the proposed technology architecture including all software and hosting components based on any hosting constraints presented by the State of Arizona
- Obtain ACDHH "branding standards" for this project; if no branding standards exist, a responsive template that adheres to industry-standards for similar projects will be proposed
- Develop process flows (swim channel) for all major processes for this project
- Based on the scope, branding standards and requirements, develop wireframes for all primary process flows for this project
- Develop an Entity-Relationship diagram for the new database structure
- Define all primary keys, foreign-keys, relationships, fields, field types and field constraints for all fields within all tables
- Define all look-up table values (also known as "vertical" tables)
- Prepare a Master Project Plan including:
  - Verified Timeframe and Cost
  - Verified Resources
  - Extraction, Transformation, Load (ETL) Plan
- Prepare a Risk Management plan including:

- o Identification of risks
- o Risk mitigation tactics
- o Risk likelihood and consequence
- o Risk thresholds to trigger action
- Prepare Team for Development of System
    - o Based on resource plan, establish all team members

The following are items that will more than likely be required for project completion.

1. Hardware

- Basic server (probably virtual) for server Application running MS 2008 R2 OS
- Basic server (probably virtual) for database running MS 2007 2008 R2 OS
- (No other required hardware)
- Planned useful life to be 4-7 years
- Expandable to 2x+ memory and 2x+ disk space
- (servers to be of midrange capacity i.e. 24GB memory, 1TB disk, quad core processor, etc. or 1 physical server configured with 2-3 virtual servers) both servers sized 2x of anticipate 1-2 year needs
- These servers will be within the State Data Center and under their maintenance in regards to backups, updates, etc.,

2. Software

- Database software most probably MS SQL 2012 (current release -1)
- Application will be written to only require a browser (i.e. Internet Explorer, Chrome, Firefox, etc.) & are device independent and responsive designed to handle different end user devices.

B. *Existing Technology Environment*

The following are legacy applications that are currently being utilized to perform daily business functions. Due to the antiquity of these systems mission critical functions are creating an undue backlog of work and our agency is not performing as well as it could be for our customers.

1. Contact Management

The systems currently used to manage contact and customer information, and the relationship between the two does not meet the needs of ACDHH. Information is not shared within the organization, and all outgoing communications are manual and labor intensive. The lack of ability to mass message, whether electronically or by post, is a large use of the limited human resources available. It is estimated that ACDHH has in excess of 20,000 current consumers of the offered services, but there is no way to track or log those services when rendered. Of primary concern are the numerous duplicate contact entries that exist within the system, inhibiting accuracy in reporting. Any history that is tracked or logged is done so manually, and without any analysis or reporting functionality tied to it. Though highly regarded, the organization currently has little oversight over customer service and record keeping.

2. Licensing of interpreters

The MS Access based Licensure program (version 4.0) is a tool within the existing technologies and processes at ACDHH. It is a functional resource that meets some but not all, of the assessed licensing needs. Many of the tasks within the program require laborious data entry, and the slight ability to report on the entered data is a major weakness. The program has been in use for almost 10 years, without any maintenance, and it is considered a critical function to ACDHH meeting its legislative requirements. Were the program to corrupt or fail, business continuity would be in jeopardy. For security and support needs the process should be moved to a web based tool available to end users to self-administer some of their own tasks.

3. Device (Inventory) Management

ACDHH uses GearSoft program to manage inventory. The system is isolated within the organization, without correlation to contact management and status. It lacks the ability to manage a major piece of equipment, CapTel, regularly issued by ACDHH. The program is most basic, lacking in detail and functionality. Equipment status is not tracked within the program, leaving any reporting or analysis on equipment status unavailable to ACDHH.

4. Payment Processing

Payment processing is a manual, protracted process and very labor intensive, involving staff from various departments to interface on time sensitive materials and ledger entries. Non-refundable application fees, and applicants renewal dates are very difficult to track, and the potential for error is significant.

5. ViewCenter

ViewCenter is the tool currently used for document archival. Inbound correspondence is manually scanned and stored in the web-based application. The use of the application is labor intensive, and does not provide the expanded search ability required by the ACDHH.

6. Reporting

The existing reporting functions within ACDHH are largely manual and extremely labor intensive. Report customization is lacking, and pre-built reports exist solely through painstaking development by the organization. Adding to the reporting difficulties is the absence of any ability to analyze data in a meaningful way. Search functions and filtering, whether by date or status, are entirely missing from the ACDHH toolset. The required public posting of licensees is currently an Adobe PDF linked to on the ACDHH website, and is manually updated when required.

C. *Selection Process*

An RFP by State Procurement Office was sent out to numerous vendors and based on their responses a preferred vendor has been identified. Selection and award will occur after State CIO approval of this PIJ.

We identified the preferred vendor based on technical background, work references across large and small companies and cost.

IV. Project Approach

A. *Project Schedule**

Project Start Date: 7/13/2015   **Project End Date**: 1/4/2016

B. *Project Milestones*

Major Milestones	Start Date	Finish Date
Discovery and Design phase	7/13/15	8/17/15
Development of System phase	8/17/15	11/16/15
Testing phase	11/16/15	12/14/15
Production/Implementation	12/14/15	1/4/16

C. *Project Roles and Responsibilities*

1. Project Leader
- Responsible for the day to day execution of the project
- Over 8 years of IT support experience
- Has successfully overseen multiple projects from conception to completion
- 8 - years of experience with ACDHH

2. Vendor Project Manager and Team
- Will be assisting with moving the project forward as well as the construction, implementation and testing of the new database.

3. Project Advisor
- Business Advisor to multiple State Agencies and commissions
- Many years of IT project management
- Previous experience managing selected Web design company on like projects
- Understand State's processes and Procedures
- Highly aware of project risks and potentials
- Previously managed prior phase of work leading up to these three phases
- Committed to meet with Vendor and Project Sponsor / Leader on 2x / month basis to assist in project

4. Steering Committee
- Comprised of leadership team committed to the success of the project
- Will meet monthly and potentially more often as needed

- Will receive monthly status reports from vendors with details of work accomplished, planned and items needing their attention

5. ADOA Resources
- Will be called upon as needed

6. Web Design and Development Consultant
- Successfully conducted prior project for ACDHH on budget and within the time constraints initially outlined
- Team has prior experience doing like projects for AZ State organizations

7. Business User and Other (testers and Power Users)
- Key personnel from the Commission most impacted and committed to the success of the project
- Will commit the time and effort to make the project successful
- Selected by the Project Sponsor and Business Managers

V. Risk Matrix, Areas of Impact, Itemized List, PIJ Financials

All P&O costs were based on RFP responses from preferred vendor inclusive of itemized list items. The vendor bid was fixed price.

Operational Costs were estimated based on past bids by ADOA for State Data Center across multiple organizations. ACDHH is confident that actual costs for operational expenses, once bid has been received from ADOA, will be less than what is presented in this PIJ. At this point and time we are still working with ADOA on a hard bid.

Project Approvals

*A. Agency CIO/ISO Review and Initials Required**

Key Management Information	Yes	No	Inits
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. Have you reviewed and is this project in compliance with all applicable Statewide policies and standards for network, security, platform, software/application, and/or data/information located at https://aset.az.gov/resources/psp? If **NO**, explain in detail in section **"VIII. Additional Information"** below.	X		
4. Will any PII, PHI, or other Protected Information as defined in the 8110 Statewide Data Classification Policy located at https://aset.az.gov/resources/psp be transmitted, stored, or processed with this project? If **YES, the Protected Data section under "VII. Security Controls" below will need to be completed.**	X		
5. Will this project migrate, transmit, or store data outside of the agency's in-house environment or the State Data Center? If **YES**, **the Hosted Data section under "VII. Security Controls" below will need to be completed.**		X	
6. Is this project in compliance with the Arizona Revised Statutes and GRRC rules?	X		
7. 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)	I. PIJ Type - Pre-PIJ Assessment Cost	$
Total Development Cost	V. PIJ Financials tab	$211,105.00
Total Project Cost	V. PIJ Financials tab	$394,016.80
FTE Hours	See Hover text for FTE Hours	1188

*C. Agency Approvals**

Approver	Printed Name	Signature	Email and Phone
Project Manager:	Jeremy McCown		
Agency Information Security Officer:	Jeremy McCown		
Agency CIO:	Curtis Humphries		
Project Sponsor:	Sherri Collins		
Agency Director:	Sherri Collins		

VI.   Security Controls

Collaboration with the ADOA-ASET Security, Privacy and Risk (SPR) team may be needed to complete this section, which is only required for those projects that involve data that is Protected or Hosted outside of the Agency or State Data Center. Additional information can be found in the NIST FRAMEWORK section under RESOURCES at https://aset.az.gov/resources/psp or you may wish to contact ASET-SPR directly at secadm@azdoa.gov for assistance.

A.   *Protected Data*

This database will contain customer names, birthdates and some SSN's. Due to access by our customers on contact information and licensing all web access will be secured through the application and SSL.

B.   *Hosted Data*

☐ Check here if the https://aset.az.gov/arizona-baseline-security-controls-excel spreadsheet is attached. Otherwise explain below what information/ support is needed to complete the spreadsheet and/or why no sheet is attached:

We are hosting out of the State Data Center which is already an approved vendor.

☒ Check here if a Conceptual Design / Network Diagram is attached. Otherwise explain below what information/support is needed to complete the diagram and/or why no diagram is attached:

Click here to enter text.

VII.   Additional Information

VIII.   Attachments

The following are examples of supporting documents that should be sent as email attachments when required:

A.   *Vendor Quotes*
B.   *Arizona Baseline Security Controls spreadsheet*
C.   *Conceptual Design / Network Diagram*
D.   *Other*

IX.   Glossary

Other Links:
ADOA-ASET Website

ADOA-ASET Project Investment Justification Information Templates and Contacts

Email Addresses:
Strategic Oversight

ADOA-ASET_Webmaster@azdoa.gov