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June 10, 2014

The Honorable John Huppenthal
Superintendent of Public Instruction
Arizona Department of Education
1535 West Jefferson Street
Phoenix, AZ 85007

Dear John:

In response to the **Amended** Project Investment Justification (PIJ) for the “**AELAS Standardized Student Data Store**” project, my staff has reviewed your updated proposal to fully operationalize the components of an Ed-Fi compliant data model and framework that are required to capture all Student Transactions into the Student Data Store for state reporting.

The original PIJ implied that Arizona Education and Learning Accountability System (AELAS) funding was available from the FY2014 Automation Projects Fund (APF) in the amount of \$1,550.0 thousand for the total five-year life cycle cost of the project, with \$630.0 thousand allocated for Assessment costs to be incurred during the Pre-PIJ discovery phase. The amended PIJ implies additional funding is being requested from the FY2015 APF in the amount of \$2,200.0 thousand, for a total five-year life cycle cost for the project of \$3,750.0 thousand.

The PIJ was originally **Approved with Conditions** by the Information Technology Authorization Committee (ITAC) on January 22, 2014, as follows:

1. As a result of final development, analysis and design, and/or implementation efforts, should additional hardware, software or consulting services be required, or if there are significant differences in the proposed technology, scope of work, or implementation schedule, ADE must amend the PIJ to reflect the changes and submit it to ASET for review and approval prior to expenditure of funds.
2. In conjunction with the approval of this full PIJ, ADE must continue to provide quarterly budget and milestone reports to ADOA-ASET, along with monthly financial reporting, as required for funds release per the schedule and terms identified in the previously executed Automation Projects Fund (APF) Interagency Service Agreement (ISA).

This is notification of the Arizona Strategic Enterprise Technology Office's recommendation to the Information Technology Authorization Committee (ITAC) for **Approval with Conditions** of the **Amended** technology project as follows:

1. Given the required independent third-party reviews of project progress, ADE will make the results of the reviews available to ITAC as of the end of each calendar quarter, if requested.
2. Prior to any acquisition other than Professional & Outside Services identified in the approved PIJ, ADE must provide detailed information, including pricing, quantity, and description, regarding the proposed technology or services and obtain approval from ADOA-ASET, and ITAC if required, before proceeding with the planned expenditure.
3. If ADE requires any funding on this project beyond the FY2015 APF allocation, ADE must submit a new PIJ to reflect the additional scope of work, for ADOA-ASET and ITAC review and approval.

The ITAC is scheduled to meet on June 24, 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,



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

ec

cc: Elliott Hibbs, ADE
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ASET# ED14004_A

Analyst: Eddy Cheng

PIJ Summary - ASET

Project Number: ED14004_A

<i>Agency Name & Address</i>	<i>Contact Information</i>
Arizona Department of Education 1535 West Jefferson Street Phoenix, AZ 85007	Komal Dubey 602.364.0434 Komal.Dubey@azed.gov
<i>Project and Investment Justification Name</i>	<i>Date Submitted</i>
AELAS Standardized Student Data Store	January 17, 2014 - Original PIJ May 20, 2014 – Amended PIJ

Project Overview

Problem Description

Local Education Agencies (LEAs) within the State are required to submit student-related data to various business units within the Arizona Department of Education (ADE), in order to meet reporting mandates. Program areas across the Agency currently operate in silos, resulting in multiple and redundant data submissions. Data is also submitted in different formats from different program areas, which can cause incorrect reporting and incorrect funding. A large task force within ADE is dedicated to supporting LEA data integrity issues, while specialized team members are also required at the LEAs to support these data submissions and track the multitude of format and requirement changes. In addition, the primary system which ADE uses to process student level data submitted by LEAs is a fragile application, with an outdated architecture and technology that is difficult and costly to maintain. Many program areas within ADE have established their own data stores and processes, due to the perceived lack of integrity within the Student Accountability Information System (SAIS).

Solution

ADE has determined that a standardized data model for collecting student-related data must be established. Adopting the Ed-Fi standard and maintaining compliance will ensure reporting continuity, data integrity and compliance with requirements across district, state and federal levels. The proposed model will be compliant with Ed-Fi, a universal education data standard and tool suite established by the Ed-Fi Alliance. Along with the Common Education Data Standards (CEDS), Ed-Fi has been adopted by the Arizona Data Governance Commission as the state standard moving forward for any new development or procurement. The Ed-Fi solution includes a unifying data model, data exchange framework, application framework, and sample dashboard source code. The solution is open, XML (Extensible Markup Language) based, and CEDS-aligned, allowing vital academic information on K-12 students to be integrated and consolidated from a broad range of data systems, while leaving the management and governance of that student data within the owning districts and states.

Out of the 16 data domains needed to comply with the Federal Ed-Fi Model, ADE will finish creating three (3) data domains, and a portion of a fourth data domain, in FY2014. With this Change Request, ADE is proposing to utilize FY2015 APF funding to finish the fourth domain, and create five (5) additional domains. This will allow ADE to fully operationalize the Student Data Store for state reporting. While not yet defined or included in the scope of work for this project, ADE will continue to work with the LEAs and vendor community to determine an approach, if possible, for integrating the remaining 7 data domains of the Federal Ed-Fi Model.

Major Deliverables and Outcomes

During the Assessment phase, ADE contracted resources gathered information from both internal and external Subject Matter Experts, to deliver the requirements, technology approach, and schedule, effort and cost associated with implementing the standardized data store. Deliverables for the development phase of the project include:

- Stand up and configure and test servers
- Ed-Fi Data interchange: This deliverable will receive student enrollment, attendance, student course connection and other student information from the LEA SIS. ADEConnect integration will enable the SIS to authenticate and securely transmit data to the web service.
- Student Information Rule Service: Several different rule engines will be put into place to extract student information, store business rules on attendance, enrollment and course connection data.
- Agency ODS ETL (Operational Data Store - Extract Transform and Load): The ETL process to load Student information data is required for Post-Secondary and SLDS from current SAIS Student-Details database into the Agency ODS.

Deliverables for Release 1, to be completed by June 30, 2014, include the following Data Domains:

- ***Enrollment***
- ***Student Attendance***
- ***Student Identification and Demographics***
- ***Teaching and Learning (Part 1)***

Deliverables for Release 2, to be completed by June 30, 2015, include the following Data Domains:

- ***Alternative/Supplemental Services (4 sub-domains)***
- ***Assessment***
- ***Discipline***
- ***Staff***
- ***Student Academic Record***
- ***Teaching and Learning (Part 2)***

In order to fully operationalize the Student Transaction ODS, ADE will also complete the following as part of the scope of Release 2:

- ***Review/update one-time load from the old ADE Enterprise System to new EdOrg architecture.***
- ***Review/update one-time loads and implement recurring loads for 1 non Ed-Fi domain and 5 Ed-Fi domains:***

Non Ed-Fi Domain
LEA School Calendar

Ed-Fi Domains
Student Identification and Demographics
Student Enrollment

***Student Attendance
Teaching and Learning (partial);
Staff (partial)***

- ***Configure and implement additional Ed-Fi domains:***
 - Staff (Partial)***
 - Teaching and Learning (for elements not identified in Release 1)***
 - Student Discipline***
 - Student Academic Record***
 - Assessments***
 - Alternative/Supplemental Services (4 sub-domains)***
- ***Configure and implement additional Assessment Sources needed to provide test scores needed for the Alternative/Supplemental Services domains.***

Benefits

Improvements in ADE's data assets will eventually lead to replacing numerous applications with an integrated platform of core capabilities such as identity management, reporting, and a single business rules engine to meet the legislative changes in an efficient manner. Improvements at the agency will enable districts and charter schools to reconsider their resource allocation to data management, cleanup, and reaction to the constant requests from ADE for more data.

- Reduce the number of data elements utilized for LEA reporting
- Reducing the number of data collection points will eliminate the silo affect within the agency thus ensuring the data integrity
- Eliminate the redundancy of many student data elements collected by the various program areas within the agency
- Student Data elements used for reporting will be standardized within the agency
- Enable student-related data sharing in such a way as to minimize replication and errors
- Provide interoperability between the numerous program areas

The proposed changes to the project will enable ADE to fully operationalize the Student Transaction Data Store with available Ed-Fi compliant data domains.

Project Management

ADE contracted resources are expected to manage the project and create the deliverables, including requirements and documentation to be provided by the assigned Business Analysts, a test strategy and approach to be provided by a Quality Analyst, and the technology approach and design to be provided by the Technical Lead, Data Architect, Solution Architect, and Data Analyst and Developers to be assigned to the project.

Enterprise Architecture

Compliant.

Original Summary of Proposed Costs

<i>All Figures in Thousands (\$000)</i>						
<i>Cost Description</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>Total</i>
Development Costs	1,550.0	0.0	0.0	0.0	0.0	1,550.0
Operational Costs	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Costs	1,550.0	0.0	0.0	0.0	0.0	1,550.0

Amended Summary of Proposed Costs

<i>All Figures in Thousands (\$000)</i>						
<i>Cost Description</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>Total</i>
Development Costs	1,550.0	2,200.0	0.0	0.0	0.0	3,750.0
Operational Costs	0.0	0.0	0.0	0.0	0.0	0.0
Total Project Costs	1,550.0	2,200.0	0.0	0.0	0.0	3,750.0

Recommendation: Approval with Conditions

1. Given the required independent third-party reviews of project progress, ADE will make the results of the reviews available to ITAC as of the end of each calendar quarter, if requested.
2. Prior to any acquisition other than Professional & Outside Services identified in the approved PIJ, ADE must provide detailed information, including pricing, quantity, and description, regarding the proposed technology or services and obtain approval from ADOA-ASET, and ITAC if required, before proceeding with the planned expenditure.
3. If ADE requires any funding on this project beyond the FY2015 APF allocation, ADE must submit a new PIJ to reflect the additional scope of work, for ADOA-ASET and ITAC review and approval.