



ADOA - ASET
Arizona Strategic Enterprise Technology

Project Investment Justification (PIJ)

*A Statewide Standard
Document for Information Technology Projects*

Project Title: Content Management System (CMS)

**Agency Name: Arizona Department of Education (ADE),
Information Technology**

Date: September 19, 2013; Updated October 3, 2013

Prepared By: Marina Stover and Jocelyn Kilen

TABLE OF CONTENTS

I. GENERAL INFORMATION	6
I.A GENERAL INFORMATION	6
I.B SPECIAL FUNDING CONSIDERATIONS	6
II. PROJECT OVERVIEW	6
II.A MANAGEMENT SUMMARY	6
II.B EXISTING SITUATION AND PROBLEM, “AS IS”.....	8
II.C PROPOSED CHANGES AND OBJECTIVES, “TO BE”.....	8
III. PROJECT APPROACH	9
III.A PROPOSED TECHNOLOGY	9
III.B OTHER ALTERNATIVES CONSIDERED.....	9
III.C MAJOR DELIVERABLES AND OUTCOMES	10
IV. POLICIES, STANDARDS & PROCEDURES	11
IV.A ENTERPRISE ARCHITECTURE	11
IV.B SERVICE ORIENTED ARCHITECTURE PLANNING AND IMPLEMENTATION	11
IV.C DISASTER RECOVERY PLAN AND BUSINESS CONTINUITY PLAN	11
IV.D PROJECT OPERATIONS	11
IV.E WEB DEVELOPMENT INITIATIVE.....	11
V. ROLES AND RESPONSIBILITIES	12
V.A PROJECT ROLES & RESPONSIBILITIES:.....	12
VI. PROJECT BENEFITS	13
VI.A BENEFITS TO THE STATE	13
VI.B VALUE TO THE PUBLIC	14
VII. PROJECT TIMELINE	15
VII.A PROJECT SCHEDULE.....	15
VIII. PROJECT FINANCIALS	15
VIII.A PRE-ASSESSMENT PROJECT FINANCIALS: N/A	15
VIII.B DETAILED PROJECT FINANCIALS	15
VIII.C FUNDING SOURCE	15
VIII.D SPECIAL TERMS AND CONDITIONS (IF REQUIRED).....	15
VIII.E FULL TIME EMPLOYEE PROJECT (FTE) HOURS.....	16
IX. PROJECT CLASSIFICATION AND RISK ASSESSMENT	16
IX.A PROJECT CLASSIFICATION AND RISK ASSESSMENT MATRIX	16
X. PROJECT APPROVALS	18
X.A CIO REVIEW.....	18
X.B PROJECT VALUES.....	18
X.C PROJECT APPROVALS.....	18
APPENDIX	19
A. ITEMIZED LIST WITH COSTS	19
B. CONNECTIVITY DIAGRAM.....	20
C. PROJECT SCHEDULE – GANTT CHART OR PROJECT MANAGEMENT TIMELINE.....	20
D. NOI (WEB PROJECTS ONLY)	20
GLOSSARY	21

PROJECT INVESTMENT JUSTIFICATION (PIJ) TEMPLATE DECISION MATRIX

After determining the category of project, complete the sections of the PIJ or PIJ Lite document as indicated below. All projects with \$25,000 or more in development expense require that a PIJ or PIJ Lite be approved by ASET. All projects with \$1,000,000 or more in development expense require a PIJ to be approved by the Information Technology Authorization Committee (ITAC) as well. ASET may request additional information or require completion of additional sections, if the project is deemed critical in nature.

Category	PIJ Lite	Pre PIJ *	PIJ	ITAC Review
Low Risk projects: Including Operational Infrastructure Upgrades (<i>i.e.</i> PC Replacement/Refresh, Network Upgrades)	●			
Medium Risk projects		Optional	●	
High Risk projects		Optional	●	
Very High Risk projects		Optional	●	
\$1.0M and Above projects		Optional	●	●

Section	Category	PIJ Lite	Pre PIJ *	PIJ	Add for ITAC \$1.0M+
I.	General Information				
I.A	General Information	●	●	●	
I.B	Special Funding Considerations		●	●	
II.	Project Overview				
II.A	Management Summary	●	●	●	
II.B	Existing Situation & Problem, “As Is”	●	●	●	
II.C	Proposed Changes & Objectives, “To Be”	●	●	●	
II.D	Proposed Technology Approach		●		
III.	Project Approach				
III.A	Proposed Technology	●		●	
III.B	Other Alternatives Considered			●	
III.C	Major Deliverables & Outcomes	●		●	
IV.	Policies, Standards & Procedures				
IV.A	Enterprise Architecture	●		●	
IV.B	Service Oriented Architecture Planning & Implementation			●	
IV.C	Disaster Recovery Plan & Business Continuity Plan			●	
IV.D	Project Operations			●	
IV.E	Web Development Initiative			●	
IV.F	IT State Goals			●	
V.	Roles and Responsibilities				
V.A	Roles and Responsibilities	●		●	
VI.	Project Benefits				
VI.A	Benefits to the State			●	
VI.B	Value to the Public			●	
VII.	Project Timeline				
VII.A	Project Schedule	●	●	●	
VIII.	Project Financials				
VIII.A	Pre-Assessment Project Financials		●		
VIII.B	Detailed Project Financials	●		●	
VIII.C	Funding Source	●	●	●	
VIII.D	Special Terms and Conditions (if required)	●	●	●	

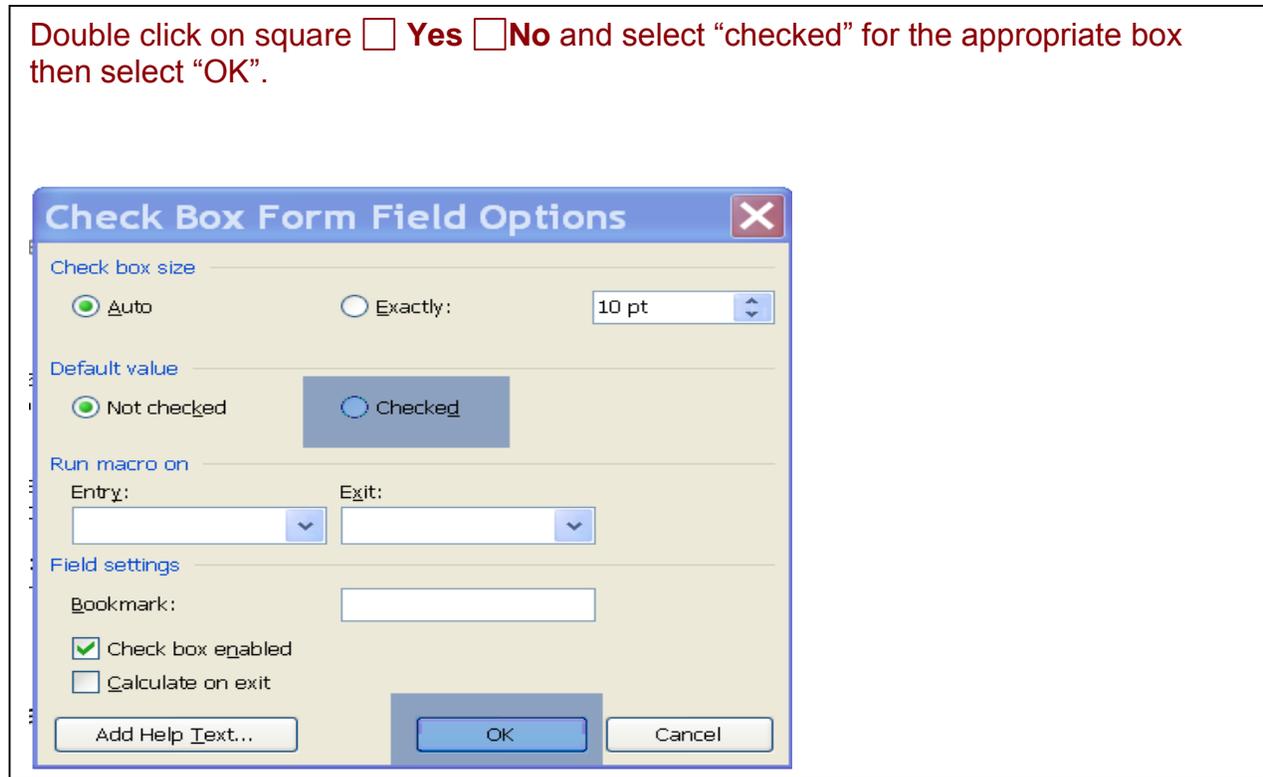
VIII.E	Full Time Employee (FTE) Hours	●		●	
IX.	Project Classification & Risk Assessment				
IX.A	Project Classification & Risk Assessment Matrix	●		●	
X.	Project Approvals				
X.A	CIO Review	●	●	●	
X.B	Project Values	●	●	●	
X.C	Project Approvals	●	●	●	
Appendix					
A	Itemized List with Costs	●		●	
B	Connectivity Diagram				●
C	Gantt Chart, Project Management Summary				●
D	NOI (Web Projects Only)	●		●	

* **Pre PIJ** is optional for agencies seeking approval from external entities to contract for outside labor or resources to assess scope, technology and approach. After the assessment is completed, full project details will be added to the PIJ for final PIJ Approval.

NOTE: Pre PIJ Assessments are not required for all projects but up to the discretion of the Agency.

Document Instructions:

Double click on square **Yes** **No** and select “checked” for the appropriate box then select “OK”.



ASET Forms:

Project forms are available on the ADOA ASET website – see links below

Project Investment Justification Documents - <http://aset.azdoa.gov/content/project-investment-justification>

Project Oversight Status Report and Change Request Form –
http://aset.azdoa.gov/sites/default/files/media/docs/StatusRpt%26ProjChangeForm_0.xls

Web Development Initiatives - Notice of Intent (NOI) form –
<http://aset.azdoa.gov/node/15>

I. General Information

I.A General Information

Agency CIO:	Mark Masterson	Contact Phone:	602-542-3541
Agency Contact Name:	Jolene Newton	Contact Phone:	602.542.4351
Agency Contact Email:	Jolene.Newton@azed.gov	Prepared Date:	July 20, 2013

I.B Special Funding Considerations

Yes No - Does this project require funding approved for a Pre PIJ Assessment phase?

II. Project Overview

II.A Management Summary

I. Problem Description

The Arizona Department of Education (ADE) released a consolidated Request for Proposal (RFP) to secure three instructional support tools (Content Management System, Learning Management System, and Professional Development Administration). The selected vendor was unable to meet ADE's terms and conditions after a thorough vetting and demonstration process.

ADE faces the following issues without a centralized, statewide Content Management System (CMS):

1. The absence of a centralized system that manages education standards and aligns content to those standards has led to the creation of numerous, siloed applications at ADE. These standards and content data are stored in isolation. This lack of interaction between systems prevents the creation of an integrated inventory of standards, makes it difficult to implement interoperable tools, and hinders the ability of education stakeholders to locate and use content for various instructional and assessment programs.
2. ADE's legacy statewide instructional support system, Integrated Data to Enhance Arizona Learning (IDEAL), houses a self-contained content storage system. IDEAL allows access to only its content, from behind a password, greatly limiting and restricting how content may be accessed by the public. Adding and managing content within IDEAL is not user-friendly and is a cumbersome process. Further, IDEAL does not meet the Data Governance Commission's adopted standards as part of its mandate to improve data quality within ADE, and in its present form supports a maximum of 2,000 concurrent users. This is well below the expected number of users ADE anticipates for the mandates listed in section III. This legacy system does not conform to ADE's long-term, sustainable architecture strategy, as it is not connected to ADE's authentication system nor does it have a connection to any ADE databases such as Enterprise, HQT, etc. ADE has limited in-house resources with the expertise to support the technology IDEAL is built on. Retaining the legacy system would necessitate a substantial engineering effort in order to support K-12 classroom use.

II. Solution

ADE will repurposing an existing application, Assessment Asset Tracker (AAT), to meet the requirements for standards and content management and alignment and to replace those capabilities formerly supported by IDEAL.

1. ADE will implement a statewide, centralized standards management system based on the Ed-Fi education standards data model. The conceptual data and the physical instance of this data model already exists and considerable work has been completed with the AAT initiative to define and deliver this data. The proposed solution is a set of management capabilities in the form of a custom-developed, .NET framework. This framework will have the capability to create, edit and manage the education standards based on various education programs and initiatives (e.g., Arizona's Common Core Standards, K-12 Academic Standards, Adult Education, Ed Tech, InTASC, etc).
2. A central repository to store standards-aligned education content will be built. This repository provides users with appropriate permissions, with content management capabilities (upload, view, and edit), and provides adequate change management functionality (auditing and versioning). It also creates a robust method for aligning content to education standards from the statewide centralized standards management system. Content will be housed on physical servers that are located in secure data centers to ensure security and high availability to end users.
3. AAT interfaces with interoperable tools such as a Learning Management System, a Customer Relationship Management (CRM) system and the Assessment system to deliver and manage content.

III. Quantified Justification

National and state mandates and educational initiatives drive the need to provide education stakeholders with a Content Management System that supports transition from the current Arizona K-12 Academic Standards to the ACCS.

These mandates include:

- Arizona's strategic plan for implementing Arizona's Common Core Standards (ACCS) calls for identifying, developing and providing aligned instructional resources to education stakeholders through an Agency online platform.
- Arizona's Race to the Top (RTTT) grant award requires the development of aligned ACCS instructional resources, accessible to education stakeholders through an agency online platform.
- Maricopa County Education Service Agency's (MCESA) has partnered with ADE to assist in fulfilling the requirements of MCESA's Rewarding Excellence in Instruction and Leadership (REIL) initiative. The REIL initiative is funded by a federal Teacher Incentive Fund (TIF) Grant from the U.S. Department of Education and requires implementation of an Instructional Improvement System (IIS) comprised of capabilities for Educator Evaluation, Student Assessment, and Instructional Planning, Delivery, and Management.
- Arizona has committed to provide access to content from state and national content repositories aligned to Common Core Standards as the size and quality of these free repositories increase over time.

The decision to 'build' versus 'buy' was made on several factors including education market research on content management systems which differ from content management systems in the business industry. The backbone of all content management systems in the education market is standards management, with a number of companies on the market for which their sole purpose is to assist states, districts, and companies with the management of standards alignment to content or assets. ADE also determined that it would be able to leverage an internal system developed at ADE with similar functionality known as AAT. Total cost of ownership and storage costs analysis, cost of ownership of proprietary materials analysis, and the results of the combined LMS/CMS solicitation previously released under the name Instructional Support Tools (IST) also factored into the analysis. Responses from the IST RFP proved it was cost prohibitive to meet our needs with a

commercial off the shelf solution without highly customizing the system such as adding an advanced workflow process for approving content aligned to prescribed standards.

II.B Existing Situation and Problem, “As Is”

The Arizona Department of Education (ADE) released a consolidated Request for Proposal (RFP) to secure three instructional support tools (Content Management System, Learning Management System, and Professional Development Administration). The selected vendor was unable to meet ADE’s terms and conditions after a thorough vetting and demonstration process.

ADE faces the following issues without a centralized, statewide Content Management System (CMS):

1. The absence of a centralized system that manages education standards and aligns content to those standards has led to the creation of numerous, siloed applications at ADE. These standards and content data are stored in isolation. This lack of interaction between systems prevents the creation of an integrated inventory of standards, makes it difficult to implement interoperable tools, and hinders the ability of education stakeholders to locate and use content for various instructional and assessment programs.
2. ADE’s legacy statewide instructional support system, Integrated Data to Enhance Arizona Learning (IDEAL), houses a self-contained content storage system. IDEAL allows access to only its content, from behind a password, greatly limiting and restricting how content may be accessed by the public. Adding and managing content within IDEAL is not user-friendly and is a cumbersome process. Further, IDEAL does not meet the Data Governance Commission’s adopted standards as part of its mandate to improve data quality within ADE, and in its present form supports a maximum of 2,000 concurrent users. This is well below the expected number of users ADE anticipates for the mandates listed in section III. This legacy system does not conform to ADE’s long-term, sustainable architecture strategy, as it is not connected to ADE’s authentication system nor does it have a connection to any ADE databases such as Enterprise, HQT, etc. ADE has limited in-house resources with the expertise to support the technology IDEAL is built on. Retaining the legacy system would necessitate a substantial engineering effort in order to support K-12 classroom use.

II.C Proposed Changes and Objectives, “To Be”

A centralized CMS provides ADE a central, well-defined and managed store for education standards, content and resources for education stakeholders, alignment of content with standards and metadata tagging ability for filter, search and usage. Education stakeholders can search and identify publically-accessible content, while allowing ADE to retain intellectual property rights as appropriate for ADE-developed content within the system.

A centralized CMS provides education stakeholders the ability to search and filter content by role and assignment, as well as the ability to search and select standards-aligned content for general or individualized use. These users also have access to state-developed instructional materials aligned to the ACCS and other education standards and an environment for collaborative development of materials (by users with appropriate permissions). A CMS connects users to the National Learning Registry and other shared instructional resources, and grants permission to appropriate users to evaluate, review and rate content instructional materials.

ADE IT will work to define the business requirements, scope the unit of effort and develop, deploy and maintain the system.

This solution leverages the existing effort already invested in the AAT application successfully deployed September 30, 2013 to production and in use by the Accountability and Assessment program area. This approach defines and creates a physical instance of the Ed-Fi based Assessment Operational Data Store (ODS) and integrates with ADEs Identity Management

System (ADEConnect) for user authentication and authorization for identity management and delegation capabilities.

III. Project Approach

III.A Proposed Technology

The proposed solution will be delivered using Microsoft's .NET and SQL technologies. The solution will be a web-based application that uses tested, industry-standard best practices and methodologies, and will be a traditional web application accessing a SQL database housed within ADE. The solution will also provide users with appropriate permissions with content management capabilities (upload, view, and edit) and change management functionality (auditing and versioning). These permissions will be managed through ADE's Identity Management System (ADEConnect) based on their roles and responsibilities.

The project team—a Project Manager, a Solutions Architect, a Database Architect/administrator, .NET developers, a UI/UX Designer a Business Analyst and a Quality Analyst—will deliver this solution using ADE standards and processes. The project team has hard deliverables throughout the implementation process that are described in section III.c below.

III.B Other Alternatives Considered

I. The “Do Nothing” or “Use Existing Systems” Alternative

Do nothing

ADE does not have a centralized, statewide content and standards management system. Dependent systems, like learning management and assessments, will continue to use disparate education standard sources. ADE cannot meet its commitments to MCESA as required by the REIL project and the Teacher Incentive Fund (TIF) grant, and ADE does not have the means to effectively organize and disseminate the extensive content being developed statewide to support the rollout of ACCS.

Use Existing Systems: IDEAL

ADE's legacy instructional support system, IDEAL, contains an integrated content repository that is not accessible from outside of the system. IDEAL can only support a maximum of 2,000 concurrent users. This is well below the expected number of users ADE anticipates for the mandates listed in section III. IDEAL does not conform to ADE's long-term sustainable architecture strategy (see section II.B.2 for a list of examples).

Use Existing Systems: ADE public website

The current WordPress environment at <http://www.azed.gov> could be used to disseminate some instructional resources. However, this approach only supports the storage of files. As designed, the system does not permit front-end users to upload and modify resources, does not support workflows for approving content prior to publishing and will not support standards management and alignment.

II. Commercial Off The Shelf (COTS) Alternative

COTS Alternative: Obtain a new COTS

The option to use a COTS system was evaluated but was found to be a high-risk, costly alternative due to the lack of capabilities and functionalities offered natively by such systems. There was not a COTS system that met the requirements and capabilities as demonstrated in the IIS/IST RFP without significant customization. In addition, this option may not allow ADE to retain intellectual property rights as appropriate for ADE-developed content within the system.

COTS Alternative: Use the LMS Repository

Alternatively, a COTS LMS could provide a small repository that houses learning resources to be used in the LMS courses; however, it cannot be utilized by other systems for content

retrieval. Each user who accesses content would incur a license cost. Customization would be required because the COTS LMS offerings do not employ acceptable standards management processes. ADE's experience during the IST LMS RFP process demonstrated that vendors who integrated a CMS into the LMS offered unfriendly interfaces that often required users to go through the LMS to access content.

COTS Alternative: Use the Assessment System

One of the IST RFP responses for content and standards management came from the vendor awarded ADE's assessment system RFP. Because their system was designed and optimized for storing assessment content, it did not appear ready to store the breadth of content types ADE would want to host. Their solution proposed over more than \$400,000 in customization to fit ADE's needs. The winning vendor's system requires user licenses that would grow to over \$1 million by year five - a fee likely to continue on an annual basis. As with the LMS above, solutions dependent upon accessing aligned content would be tied to a license cost.

COTS Alternative: Use SharePoint

SharePoint is not designed to support education standards, to manage multiple alignments between those standards and content, nor was it designed for users to index, filter and search for stored objects (in this case standards and content) based upon multiple relationships to each other. Users cannot preview files in Question and Test Interoperability (QTI) format. SharePoint's interface would not be intuitive and simple to navigate, necessitating significant customization to make it user-friendly.

III.c Major Deliverables and Outcomes

1. Build the Content Management System by leveraging the code base of AAT.
2. Build existing approved standard frameworks, leveraging the existing Assessment ODS to house all information related to education standards.
3. Migrate existing content in alignment to the standards, leveraging the existing Assessment ODS to house all information related to content.
4. Implement version and audit capabilities around content, standards, and alignment of content to standards.
5. Create a web application to act as the change management gateway of the content. This application will provide users with the ability to view and consume this content online in a web browser or via the proposed Learning Management System. This web application will provide forms to enable users to view, add (upload), modify and delete content based on their role and permissions granted to them via ADE's Identity Management System (ADEConnect).
6. Create documentation so that future systems may seamlessly integrate with data dictionaries, coding guidelines and taxonomy guidelines.
7. Create a set of loosely coupled business-aligned services to share content and standards alignment information with the proposed LMS.

The following diagram gives a visual view of the proposed solution and the phases of its evolution:

IV. Policies, Standards & Procedures

IV.A Enterprise Architecture

Yes **No** – Does this project meet all 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> as applicable for this project?

If NO please describe NEW or EXCEPTIONS to Standards {Network, Security, Platform, Software/Application and/or Data/Information}:

IV.B Service Oriented Architecture Planning and Implementation

Yes **No** – Does this project qualify as an SOA application by improving application delivery for technology reuse and /or application reuse and / or services reuse?

IV.C Disaster Recovery Plan and Business Continuity Plan

Yes **No** – Does this project require a Disaster Recovery Plan and Business Continuity Plan?

IV.D Project Operations

Yes **No** – Is there a written assessment of short-term and long-term effects the project will have on operations?

IV.E Web Development Initiative

Yes **No** – Is this a Web Development initiative? If **YES**, a Notice of Intent (**NOI**) must be provided. Link: <http://aset.azdoa.gov/node/15>

IV.F IT State Goals

Please check which goal the project is in support of; if more than one, indicate only the primary goal.

- Accelerate Statewide Enterprise Architecture Adoption
- i. Champion Governance, Transparency and Communication
- Invest in Core Enterprise Capabilities
- Proactively Manage Enterprise Risk
- Implement a Continuous Improvement Culture
- Adopt Innovative Sustainability Models
- Reduce Total Cost of Ownership
- Improve Quality, Capacity and Velocity of Business Services
- Strengthen Statewide Program and Project Management
- Build Innovative and Engaged Teams
- Other _____

V. Roles and Responsibilities

V.A Project Roles & Responsibilities:

Please identify Project Roles & Responsibilities:

Project Manager (PM)

- Overall project delivery execution
- Assist in the removal of obstacles and impediments
- Communications to the project team and business stakeholders
- Overall strategic planning of the project execution
- Project resource, budget and timeline delivery management
- Contribute and approve project deliverables
- Accountable for the completion of all project deliverable and program artifacts

Business Analyst (BA)

- Accountable to the project manager and business stakeholders.
- Responsible for capturing all the business requirements by conducting a series of interview with business stakeholders and accessing the existing legacy applications.
- Assist the project manager to baseline requirements, creation of the BRD and user stories.
- Assist the quality analyst in validating the test cases for the testing the developed user stories.
- Responsible for writing end user documentation and training materials.

Solutions Architect (SA)

- Review integration from an ADE EA perspective.
- Data flow diagrams, conceptual and logical architecture diagrams for integration, data import/export standards (Ed-Fi/CEDS) coordination. This is to ensure enterprise standards are adhered to and align to AELAS strategic approach.

Database Architect/Data Steward (DBA)

- Technical expertise in data dictionaries and migration.
- Ensure data integrity and ADE standards.
- Design and development of physical data model.
- Develop ETL scripts to feed data from CRUD to Master copy of Enterprise.
- Do one time manual load in to CRUD from Enterprise

.NET Developers

- Design, develop, enhance and test web applications and windows services.
- Understand business requirements and develop applications that meet those requirements for new and existing products.
- Research, design, document and modify software specifications throughout the product life cycle in an agile environment.
- Development of processes utilizing the Microsoft stack of technologies and tools including Visual Studio 2010/12 and Team Foundation Server.
- Implementation of Object Oriented design using C#.
- Web application development using ASP.Net MVC.

User Interface/User Experience (UI/UX) specialist

- Architect and design the technical aspects of AAT.
- Create elegant UI experiences with HTML, CSS3, JavaScript and j Query for the application.
- Rapidly analyze and solve issues.

Quality Assurance Analyst (QA)

- Develop test plans, scenarios and test case/scripts.
- Manage test data as input for test execution. Validate test results and record defects.
- Prioritize test defects, defines and manage defect reporting and resolution.

Please indicate Project Manager Certification:

The **project manager** assigned to the project is:

- Project Management Professional (PMP) Certified
- State of Arizona Certified
- PM Certification not required

VI. Project Benefits

VI.A Benefits to the State

Score: 0=None, 1=Minor, 2=Moderate, 3=Considerable, 4=Substantial, 5=Extensive.

<i>Description</i>	<i>Score</i>
Agency Performance: The extent to which duties and processes will improve or positively affect business functions. Consider reduced redundancy and improved consistency for the agency.	4
Productivity Increase: The improvements in quantity or timeliness of services or deliverables. Consider improved turnaround time or expanded capacity of key processes.	5
Operational Efficiency: Efficiencies based on improved use of resources, greater flexibility in agency responses to stakeholder requests, reduction or elimination of paperwork, legacy systems, or manual tasks.	4
Accomplishment Probability: The extent to which this project is expected to have a high level of success in completing all requirements for the division or agency.	4
Functional Integration: The impact the project will have in eliminating redundancy or improve consistency. Consider the impact of information sharing between departments, divisions, or agencies in the State.	5
Technology Sensitive: The implementation of the right types of technology to meet clear and defined goals and to support key functions. Consider technologies and systems already proven within the agency, division, or other similar organizations.	4
Total	26
Additional Information (provide details on Benefits that score > 3)	
<p>Agency Performance – Will provide superior system for dissemination of high quality ACCS resources from ADE.</p> <p>Productivity Increase – Most of the standards and content is managed manually at the state. The reduction in manual tracking and scheduling will increase productivity, accuracy and availability.</p> <p>Operational Efficiency – The improvements in accuracy and availability and online service level integration will benefit dependent systems such as learning management, and assessments.</p> <p>Accomplishment Probability: The agency is taking the LMS and CMS initiatives seriously and has formed a Steering Committee with executive sponsorship and Task Force teams to execute and progress the initiative.</p> <p>Functional Integration – Standards management, content management, and alignment is an area with needs that cross applications. Implementing these capabilities will eliminate redundancy and improve sharing of content and resources and collaboration with other applications.</p> <p>Technology Sensitivity: The team which developed Assessment Asset Tracker (AAT) will be used to create the CMS and has a deep understanding of standards alignment technologies which is critical to the success of the product implementation because teachers, administrators and even parents will seek college and career content aligned materials. Alignment is essential to the success of this initiative.</p>	

VI.B Value to the Public

Score: 0=None, 1=Minor, 2=Moderate, 3=Considerable, 4=Substantial, 5=Extensive.

<i>Description</i>	<i>Score</i>
Client Satisfaction: Rate how stakeholders may respond to anticipated improvements. This could apply to health and welfare services, quality of life or life safety functions.	5
Customer Service: Rate anticipated improvements to internal and external customer service delivery. Give consideration to faster response, greater access to information, elimination or reduction in client complaints.	5
Life Safety Functions: Applies to public protection, health, environment, and safety. Consider how this project will reduce risk in these functions.	0
Public Service Functions: Applies to licensing, maintenance, payments, and tax. Consider how this project will enhance services in these functions.	2
Legal Requirements: Consideration should be given to projects mandated by federal or state law. Other consideration could be given if there are interfaces with other federal, state, or local entities.	4
Total	16
Additional Information (provide details on Value to the Public scores > 3)	
<p>Client Satisfaction and Customer Service – The CMS described in this PIJ meets an emerging need for increased ease, accessibility, and alignment to the Arizona Common Core standards. Applications dependent upon standards-aligned content (e.g., learning management systems and assessment systems) are currently looking for solutions to better manage standards and content. As a result, the timing for implementing these solutions is critical. Identifying needs and making high-quality solutions available to these applications and users is a valuable service that ADE can provide, freeing individual users and LEAs from researching, and implementing individual solutions for a common need.</p> <p>Legal Requirements: The Quantified Justification section in this PIJ outlines the two most critical mandates (A) implementation of the Arizona Common Core Standards which through an Executive Order of Governor Brewer is now referred to as Arizona’s College and Career Ready Standards, and (B) Arizona’s Race to the Top grant award requirements.</p>	

VII. Project Timeline

VII.A Project Schedule

Provide estimated schedule for the development of this project. These dates are estimates only; more detailed dates will be required at project start up once the project schedule is established.

Project Start Date: **October 14, 2013** Project End Date: **June 30, 2014**

VIII. Project Financials

Project Funding Details

Select One

- Pre PIJ Assessment Funding Details Only
 Full PIJ Project Funding Details

VIII.A Pre-Assessment Project Financials: N/A

VIII.B Detailed Project Financials

Development and Operational Project Funding Details

Funding Categories:

Professional and Outside Services: The dollars to be expended for all third-party consultants and contractors.

Hardware: All costs related to computer hardware and peripheral purchases for the project.

Software: All costs related to applications and systems related software purchases for the project.

Communications: All costs related to telecommunications equipment, i.e. switches, routers, leased lines, etc.

Facilities: All costs related to improvements or expansions of existing facilities required to support this project.

License & Maintenance Fees: All licensing and maintenance fees that might apply to hardware, software and any other products as up-front costs to the project (ongoing costs would be included under Operational expense).

Other: Other IT costs not included above, such as travel, training, documentation, etc.

VIII.c Funding Source

(Double click on table below – add funding in **whole dollars** and then click outside the table to return to Word doc)

* Ongoing operational costs of the CMS will be funded through the collection of LMS cost recovery course fees.

VIII.D Special Terms and Conditions (if required)

Special Terms and Conditions (if required)

VIII.E Full Time Employee Project (FTE) Hours

Provide estimated FTE Development hours that will be utilized for the duration of the project. Include IT as well as Business Unit FTE hours, if available. Enter into Project Values table on Approvals page. Enter FTE costs (if known) as well.

Total Full Time Employee Hours	\$0
Total Full Time Employee Cost	\$0

This project will be implemented with 100% contracted resources.

IX. Project Classification and Risk Assessment

IX.A Project Classification and Risk Assessment Matrix

Rate each question to determine risk level at Low (0), Medium (1), High (2), Very High (3).

RISK EVALUATION RANGES

LOW RISK PROJECT	0 – 8
MEDIUM RISK PROJECT	9 – 25
HIGH RISK PROJECT	26 – 42
VERY HIGH RISK PROJECT	43 +

PIJ Project Classification & Risk Evaluation					
PHASE 1					
PIJ Project Classification & Risk Evaluation	Low (0)	Medium (1)	High (2)	Very High (3)	Score
Project Management Complexity					
Project Team Size (# of people)	1-5	6-10	11-15	> 15	1
Project Manager (PM) Experience	Deep experience in this type of project	Some experience in this type of project and able to leverage subject matter experts	Some experience in this type of project and has limited support from subject matter experts	New to this type of project	0
Team Member Availability	Dedicated staff for project activities only as assigned	Staff is in place, few interrupts for non project tasks are expected and have been accounted for	Available, some turnover expected, some interrupts for non project issues likely	Dedicated team not available; staff will be assigned based on capacity	0
# of Agencies involved in Development activity	1	2	3	> 3	1
Vendor (if used)	No Vendor required	Vendor has been used previously with success	Vendor has been used previously with some management support required	New Vendor and/or multiple vendors	0
Project Schedule	Schedule is flexible	Schedule can handle minor variations, but deadlines are somewhat firm	Scope or budget can handle minor variations, but deadlines are firm	Scope, Budget and Deadlines are fixed and cannot be changed	1
Project Scope	Scope is defined and approved	Scope is defined and pending approval	Scope being defined	High level definition only at this point	2
Budget Constraints	Funds allocated	Funds pending approval	Allocation of funds in doubt or subject to change without notice	No funding allocated	1
Project Methodology	Defined methodology	Defined methodology, no templates	High level methodology framework only	No formal methodology	0
IT Solution Complexity					
Product Maturity (if purchased)	Product implemented & working in > 1 state agency or business of similar size	Product implemented & working in 1 agency or business of similar size	Product implemented & working only in an agency or business of smaller size	Product not implemented in any agency or business	3
Solution Dependencies	No dependencies or interrelated projects	Some minor dependencies or interrelated projects but considered low risk	Some major dependencies or interrelated projects but considered medium risk	Major high-risk dependencies or interrelated projects	1
System Interface Profile	No other system interfaces	1-2 required interfaces	3-4 required interfaces	> 4 required interfaces	1
IT Architectural Impact	Follows State IT approved design; principles, practice & standards	New to the State but follows established industry standards	Evolving "industry standard"	No standards, leading edge technology	0
Deployment Impact					
Process Impact	No business process changes	Agency wide process changes	Multi-State Agency process changes	State-wide process changes	1
Scope of End User Impact	Department or Division level only	Multiple Division or Agency wide impacts	Multi-Agency impacts	State-wide impacts	0
Training Impact	No training is required	Minimal training is required	Considerable training is required	Extensive training is required	1
Total Risk Score					13

X. Project Approvals

X.A 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 consistent with agency and State policies, standards and procedures?		X	
4. Is this project in compliance with the Arizona Revised Statutes and GRRC rules?		X	
5. Is this project in compliance with the statewide policy regarding the Accessibility to Equipment and Information Technology for Citizens with Disabilities?		X	
6. Is this project mandated by law, court case or rule? If yes, cite the federal requirement, ARS Reference or Court Case.		X	
Details: ARS 15-249 supports this initiative.			

X.B Project Values

The following table contains summary information taken from the other sections of the PIJ document.

Description	Section	Significance
Economic Benefits	VI. Benefits to the State	26
Value Rating	VI. Value to the Public	16
Total Development Cost	VIII. Project Financials	\$ 469,105
Total Project Cost	VIII. Project Financials	\$ 776,145
FTE Hours	VIII. Project Financials	0
Project Risk Factors	IX. Risk Summary	13

The PIJ must be transmitted to ASET by email as a Word document. Project approvals may be sent to ASET by email in PDF format. Include the Project Title below for identification. Send to your ASET Oversight Manager, or if not sure who is assigned to your Agency, PIJ docs can be sent to ASET_Projects@azdoa.gov.

X.C Project Approvals

Select One Pre PIJ Assessment Approval Only PIJ Project Approval

Project Title: Content Management System (CMS)

Responsibility	Printed Name	Approval Signature	Date
Project Manager	Ashman Deokar		
Domain Manager	Jolene Newton		
CIO	Mark Masterson		
Project Sponsor	Peter Laing		
Deputy Superintendent	Jennifer Johnson		
Deputy Superintendent	Elliott Hibbs		

Appendix

A. Itemized List with Costs

Cost Breakdown for Fiscal Year 2014

Overall Project Effort (BUILD AND MIGRATE EXISTING APPROVED CONTENT TO CMS)

Resource	Rates	Project Effort %
Project Manager	90	0.25
Business Analyst	70	0.75
Solution Architect	118	0.30
Data Steward	100	0.40
.NET DEV	85	2.00
UI/UX designer	70	0.75
QA	70	0.30

Stage Wide Breakup of Effort (BUILD AND MIGRATE EXISTING APPROVED CONTENT TO CMS)

Resource	Diagnostic	Discovery	Design, Develop, and Deploy	Debrief
Project Manager	0.1	0.1	0.4	0.1
Business Analyst	0.1	0.1	0.5	-
Solution Architect	0.1	0.1	0.3	0.1
Data Steward	0.1	0.1	0.4	0.1
.NET DEV	-	0.1	0.6	-
UI/UX designer	-	0.1	0.5	-
QA	-	-	0.6	0.1

See attached worksheet (Attachment A) for FY2015-2018 breakdown of costs and (Attachment B) Phase 2 & 3/Diagnostic cost estimations.

B. Connectivity Diagram

N/A

C. Project Schedule – Gantt chart or Project Management Timeline

Enterprise – Build and migrate existing approved content to CMS				
PMO Milestones	Tasks	Resources	Duration	Deliverables
Diagnostics	Work stream planning	PM, BA, SA and DS	1 month	PIJ, Project Charter, Resource planning
Discovery and Design	Gap analysis: Define Data of interest, logical data model for crud, Determine business owner of data entities, wireframes for change management web app	PM, BA, SA and DS	1 month	BRD, Logical Data model, Standard coding guidelines, Detailed Use Cases, Technical spec,
Develop and Deploy	Build physical model for crud, web front end that relies on IMS to authenticate users and provides a basic workflow to manage data. Do one time data cleanse and Load.	PC, BA, SA, DA, 2 .Net developers, 1 UI/UX developer and 1 QA.	6 months	Test plan and test Cases Functional change management application
Debrief	Post go live support	PM, SA, DS	1 month	Technical docs, UAT Doc

D. NOI (Web Projects Only)

There is currently no Notice of Intent document at the ASET site at <http://aset.azdoa.gov/node/15>.

Glossary

Acronym	Definition	Additional Detail
AAT	Assessment Asset Tracker	<p>Assessment Asset Tracker (AAT) is an assessment item storage system under development at ADE. AAT is being developed to provide secure, long-term storage for existing high-stakes assessment items (e.g., AIMS, AIMS A, and AZELLA) and for new item banks (e.g., PARCC, NCSC).</p> <p>Among AAT’s native features that translate well into a Content Management System are the capabilities to:</p> <ul style="list-style-type: none"> • Define and control permissions-based access by program • Allow remote access • Import content from legacy applications • Define new programs, import or reference associated standards, and create item banks for the new program • Add, manage, and view standards and content associated to those standards • Apply standards to content as needed within the system to facilitate targeted learning • Update existing items, passages and associated media • Allow users to search, sort, and filter content
ACCS	Arizona Common Core Standards	<p>Arizona’s Common Core Standards (ACCS) are the result of a state-led effort coordinated by the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO). Governors and state commissioners of education from 48 states, 2 territories and the District of Columbia committed to developing a common core of state standards in English language arts and mathematics for grades K-12.</p>
CEDS	Common Education Data Standards	<p>The Common Education Data Standards (CEDS) is a specified set of the most commonly used education data elements to support the effective exchange of data within and across states, as students transition between educational sectors and levels, and for federal reporting.</p>
DSRS	Decision Support and Reporting Service	<p>The Decision Support and Reporting Service (DSRS) is a group of programs within the IIS effort that integrate data and reporting across professional development, evaluation/observation, content/curriculum, and assessment services.</p>
ED-FI	Ed-Fi Alliance	<p>The Ed-Fi solution is an educational data standard and tool suite (unifying data model, data exchange framework, application framework, and sample dashboard source code) that enables vital academic information on K-12 students to be consolidated from the different data systems of school districts while leaving the management and governance of data within those districts and states. Ed-Fi components act as a translator of academic data, integrating and organizing information so that educators can start addressing the individual needs of each student from day one, and can measure progress and refine action plans throughout the school year. http://www.ed-fi.org</p>

Acronym	Definition	Additional Detail
MCESA	Maricopa County Education Service Agency	Under the direction of County Superintendent of Schools Dr. Don Covey, the Maricopa County Education Service Agency (MCESA) and its staff of expert practitioners and service-oriented professionals are dedicated to ensuring that the more than 700,000 school-age children in the county graduate college- and career-ready.
REIL	Rewarding Excellence in Instruction & Leadership	Rewarding Excellence in Instruction and Leadership (REIL), an initiative of the Maricopa County Education Service Agency (MCESA), engages five Maricopa County school districts in implementing systemic change aimed at transforming how schools recruit, retain, support, and compensate effective teachers and principals. The ultimate goal is building the capacity of educators to improve student learning. The five-year initiative, which will culminate in 2014-15, was initially funded in October 2012 for a \$51.5 million Teacher Incentive Fund grant from the U.S Department of Education. MCESA was awarded a second TIF grant for 57.8M to extend the scope of the project
TIF	Teacher Incentive Fund	The Teacher Incentive Fund (TIF) is a federal program that supports efforts to develop and implement performance-based teacher and principal compensation systems in high-need schools.

Term	Definition
ADE	Arizona Department of Education
AZELLA	Arizona English Language Learner Assessment
IDEAL	Integrated Data to Enhance Arizona's Learning
InTASC	The Interstate Teacher Assessment and Support Consortium
IT	Information Technology
ODS	Operational Data Store
SLDS	Statewide Longitudinal Data Systems

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Contacts: **ASET Oversight Managers:** <http://aset.azdoa.gov/content/project-investment-justification>
Web Design (NOI Contact): <http://aset.azdoa.gov/webtools>

Attachments:

A. FY 2015-2018 Breakdown of Costs

B. Cost Estimations Phase 2 & 3 / Diagnostic