ADOA-ASET

Arizona Strategic Enterprise Technology

Project Investment Justification

Version 01.01

A Statewide Standard Document for Information Technology Projects

Project Title:

Arizona WIC Vendor Web Application Update

Agency Name:	**Arizona Department of Health Services**
Date:	**8/13/2014**
Agency Contact Name:	**Raghu Ramaswamy**
Agency Contact Phone:	
Agency Contact Email:	
Project Manager:	**Ryan Sadler**

I. Management Summary

The Arizona Department of Health Services (ADHS), Bureau of Nutrition and Physical Activity (BNPA), administers the Arizona Special Supplemental Nutrition Program for Women, Infant, and Children (WIC) Program. WIC is a public health nutrition program administered by the United States Department of Agriculture (USDA), Food and Nutrition Service (FNS). Arizona WIC's mission is to safeguard the health of low-income women, infants, and children up to age 5 who are at nutrition risk by providing nutrition and breastfeeding education, referrals to health and human services, and nutritious foods to supplement diets based upon their nutrition needs. The Arizona WIC Program contracts with 21 Local Agencies to provide services to WIC participants in over 120 clinic locations throughout the State of Arizona. These local agencies are comprised of 14 county health departments, six non-profit health centers, and an Indian tribe.

In addition to local agency partnerships, the Arizona WIC Program contracts with over 700 grocery stores in Arizona, California and Utah to provide WIC approved foods through a retail delivery system. The WIC Program refers to food providers as authorized WIC Vendors.

In 2007, the USDA, FNS, announced new WIC Vendor Cost Containment rules. In response to the regulation, the Arizona WIC Program developed a web-based system for vendor management, cost containment, and communication. The solution allows WIC Vendors to submit applications with supporting documentation, conduct price surveys, and retrieve information necessary to maintain compliance. The system also allows vendors to track the volume of their annual WIC sales. A vendor may also use the system to submit price changes for approved items and request the program consider new foods/products for authorization.

While the Vendor Web application has proved invaluable, several areas of opportunity exist. The system is seven-years old and requires an update to overall application architecture to match current web-application standards currently in use by ADHS. In addition to the redesign, the Arizona WIC Program wishes to render the following enhancements:

- Comply with updated cost containment best practices;
- Enhance the Arizona WIC Program's ability to maintain the system internally;
- Improve the efficiency of the data collection and accessibility/portability to collected data; and
- Ensure that the Arizona WIC Program is maintaining a secure system for its vendors.

This project is 100% federally funded and approved by USDA FNS.

II. Project Investment Justification (PIJ) Type

☐ **Yes** ☒ **No** Is this document being provided for a Pre-PIJ / Assessment phase?

10T

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

III. Business Case

A. *Business Problem**

1. Background

1.1. WIC Food Packages

The WIC food packages provide supplemental foods designed to meet the special nutritional needs of low-income pregnant, breastfeeding, non-breastfeeding postpartum women, infants and children up to five years of age who are at nutritional risk. WIC food packages along with nutrition and breastfeeding education are the chief means by which WIC affects the dietary quality and habits of participants.

WIC food packages:

- Promote and support the establishment of successful, long-term breastfeeding,
- Provide WIC participants with a wider variety of foods including fruits, vegetables, and whole grains, and
- Provide WIC State agencies greater flexibility in prescribing food packages to accommodate the cultural food preferences of WIC participants.

WIC clinic personnel issue tailored participant food benefits on paper Food Instruments (FIs) to supplement the WIC participant's nutritional needs. WIC Clinics provide participants the FIs in the form of a Magnetic Ink Character Recognition (MICR) check. The FI MICR check contains a prescription with specific quantities and types of food benefits based on the category of participant, women, infant or child.

1.2. WIC Vendors and Vendor Policy

WIC vendors are stores, grocers, or pharmacies who meet federal and state criteria as set by the Arizona WIC Program. They agree to stock and distribute approved WIC foods, while complying with the Arizona WIC policies and procedures for reimbursement. More than 700+ authorized WIC vendors play a critical role in community health and are vital to the success of the WIC program. Vendors make food prescriptions accessible to the participants and are responsible for ensuring that the participant only receives the quantity and type of WIC approved foods listed on their FIs.

The Arizona WIC Program must frequently communicate with vendors to disseminate information related to WIC approved food items, minimum stocking levels, and policies and procedures for redemption as well as other administrative guidelines related to maintaining their status as an authorized WIC vendor. The WIC vendor may not provide unauthorized food items, nonfood items, cash or credit (including rain checks) in exchange for FIs or cash-value vouchers (CVV). The WIC vendor may not provide refunds or permit exchanges of authorized supplemental foods obtained with FIs or CVVs. In addition, the vendor may accept a FI or CVV only within the specified period of use.

1.3. Cost Containment

The USDA, FNS, requires the Arizona WIC Program maintain a vendor cost containment system that includes a peer group system, competitive price criteria, and allowable reimbursement levels that demonstrate compliance with cost containment provisions. The purpose of cost containment is to maximize the number of eligible women, infants, and children served with available federal funding.

The Arizona WIC Program has established peer groups by type of store, sales dollar volume, and percent of WIC sales dollars against total sales dollars as listed below:

- Pharmacy
- National/Regional or Local Chain
- Super Centers
- Large Urban Independent – more than $750,000 total gross annual sales
- Small Urban Independent – less than $750,000 total gross annual sales
- Large Rural Independent – more than $750,000 total gross annual sales
- Small Rural Independent – less than $750,000 total gross annual sales
- Above 50% Vendor (A-50) – WIC sales account for more than 50% of total food sales

Cost containment is performed for each FI type and peer group. Every week, the Arizona WIC Program assigns and updates a Not-To-Exceed (NTE) price to each FI for each peer group. Using the previous 30-day redemption data, the Arizona WIC MIS solution, Arizona in Motion (AIM), calculates the weekly NTE values.

Specific requirements for above 50% vendors include:

- Distinguished from other vendors with a separate peer group, or groupings of vendors with similar sales and demographic characteristics, and distinct competitive price selection criteria;
- Reassess new vendors within six months of authorization to reassess if vendors are Above 50% vendors, and must take necessary follow-up action such as terminating the vendor or reassigning the vendor to the appropriate peer group;
- Compare A-50 vendor pricing against the prices of vendors that do not meet the above 50% criteria in determining whether the Above 50% vendors have competitive prices and in establishing allowable reimbursement levels for such vendors; and
- Ensure that the prices of A-50 vendors do not inflate the competitive price criteria and allowable reimbursement level for the peer groups or result in higher total food costs.

1.4 WIC MIS - HANDS\AIM

The Arizona WIC Program has been in the process of replacing its current benefits issuance system, AIM, with the Health and Nutrition Delivery System (HANDS). Currently, the Vendor Web application relies upon tables of data replicated from AIM. Nightly, system End-Of-Day (EOD) processes merge the data between the two systems to allow each to complete their separate functions for vendor management. As part of this Vendor Web system update, the contractor will merge the Vendor Web database with the HANDS database.

1.5. Vendor Web

In 2007, the Arizona WIC Program developed a web-based system for vendor management and communication to ensure a successful implementation of the new WIC Vendor Cost Containment rules. It was determined that there was a need for a web interface where WIC vendors would:

- Submit applications,
- Provide documentation,
- Conduct price surveys, and
- Retrieve information necessary to maintain compliance.

Implementation of these features also streamlined the efforts of the Arizona WIC Vendor Management team by reducing double work and time spent on data entry. For WIC vendors, the site represents a resource for information on:

- Compliance;
- Tracking the volume of annual sales revenue derived from WIC;
- Report pricing changes on WIC items; and
- Submit new items for consideration as WIC Approved Food.

Initial development provided A-50's vendors a method for looking up their NTE prices by FI Type. The application also highlighted prices reduced in the last month. The second phase provided all remaining WIC vendors with access to the NTE values by peer group for FI Types. The latter phase of the web-based application provided vendors with the following functionality:

- Complete and submit applications;
- Request supplies;
- Make changes and updates to their information stored in AIM;
- Get WIC authorized products updates; and
- Enter their own price survey information into the AIM System.

1.6 WIC MIS Maintenance

An outsourced service provider, CMA Consulting Services, maintains the software portion of AIM and the WIC Vendor Web application; this includes system enhancements. In addition to being the system maintenance contractor, CMA is the Design, Development, and Implementation (DDI) contractor for the HANDS project.

2. Business Need

After annual review, it was discovered that the number of approved A-50 vendors now account for less than one percent of total redemptions. The Arizona WIC program originally made the decision to offer this information based on the number of A-50 vendors requiring pricing guidance. Due to the change in the percentage of participating A-50 vendors, there is no longer a need to communicate NTE values at this level of detail. Ultimately, it is in the best interest of the Arizona WIC Program to address these issues by updating the WIC Vendor Web system.

2.1. Disclosure of Not-To-Exceed Values

The Arizona WIC Program participated in the USDA Fiscal Year (FY) 2012 State Technical Assistance Review (STAR) and Management Evaluation (ME) where Federal auditors traveled to Arizona and assessed Vendor Management and Food Delivery services. These reviews evaluate the State and Local Agency programmatic operations and measure the performance of established WIC Program policies, regulatory requirements, and quality standards. After review, the evaluation produces a report that highlights areas of achievement, innovation, as well as areas of opportunity.

The STAR and ME assessments observed that the Arizona WIC Program publishes a list of NTE amounts for all FIs by peer group via the Vendor Web application.

The impetus for initially making this information available was the 2007 Vendor Cost Containment Rule, which stipulated that A-50's must be cost-neutral to the Program and not paid more on average than all other approved vendors receive.

Given that, the payment system for A-50s moved to an artificial pricing system not driven by the marketplace. Arizona decided to provide A-50s with the NTE amounts for each FI to prevent rejected check charges. In the interest of fairness, Arizona also chose to make this information available to all vendors.

The audit encouraged the Arizona WIC Program to discontinue immediately its current practice of making NTE rates available to all authorized vendors. Most of the Arizona WIC Program's 700-plus regular vendors have no need for this information, since they are (or should be) pricing to the marketplace and not specifically to WIC customers.

In addition, by publishing NTE amounts the Vendor Web system presents a threat to vendor cost containment and may result in vendors “chasing" the NTEs, or entering prices on FIs that are at or close to the NTE amounts. This type of vendor abuse could drive up the State's food package costs and severely undermine public support for the WIC Program.

During another FFY 2014 STAR and ME assessment, auditors confirmed the observations from the FFY2012 STAR and ME, and the suggestion remained the same. USDA, FNS, feels that the “best practice” is not to publish the NTE values. Therefore, it is no longer in the Arizona WIC Program’s best interest to continue publishing the NTE by FI type for all authorized vendors. It is our goal to take action immediate action to prevent vendors from artificially inflating food prices and reducing the program’s ability to provide services to additional participants.

2.2. Coding and Architecture Security

The Vendor Web application is a two-tier architecture model. With this design, there is a potential for malicious users to employ methods allowing unauthorized access to the system, or otherwise compromise, corrupt, or harm data. If adequate controls are not in place within the application, the Arizona WIC Program will continue to be vulnerable. This threat represents a risk to user data stored by the system, such as logins, personal identification data, etc.

The Vendor Web Application does not align with current development practices. Consequently, as long as the application remains as-is, any maintenance or enhancements to this system will result in a significant cost investment. In addition, the current design limits maintainability and is not scalable.

2.3. Data Quality

The WIC Vendor Management team relies on several reports from the Vendor Web application. Reports and data outputs from the system assist the team with vendor authorization and compliance. The system also allows the vendor team to conduct an annual price survey.

The survey collects pricing data and calculates average pricing by vendor category and region. The survey also identifies the weighted cost of highly issued WIC foods. Currently there is an issue with this data due to communication problems between Vendor Web and AIM.

In addition, there are no safeguards within the application to prevent vendors from submitting multiple price surveys. When a vendor submits multiple price surveys, the system maintains multiple records.

These issues result in a steady increase in incomplete and duplicate entries that requires frequent cleanup by the WIC maintenance contractor, causes delays in workflow, and workarounds. This excess workload causes an undue burden for the Vendor Management team.

B. Proposed Business Solution*

The Arizona WIC Program will conduct a system wide overhaul of WIC Vendor Web application, which will include the user interface (UI), security enhancements, and adoption of industry standard application architecture. The system will also receive the programmatic modifications identified by the USDA STAR and ME reviews.

1. Changes to Display of NTE Values

The Arizona WIC Program will modify the vendor web system to discontinue its current practice of making NTE values available to all authorized vendors. Instead, this development effort will add the ability to publish average redemption rates for all FI types. These values will provide the A-50 vendors the information they need in the absence of clear marketplace pricing signals.

By adopting this strategy, Arizona will safeguard the confidentiality of its NTE values to ensure vendor and program integrity. This will greatly reduce the threat to cost containment posed by offering NTE values to all vendors and constitutes fair treatment.

2. Modernization and Improvements

The Vendor Web v2 project team will analyze the current application and evaluate improvement opportunities in process flow. Joint Application Development (JAD) sessions and personnel interviews will capture work-around and application flow bottlenecks.

It is the goal of the Arizona WIC Program to ensure that the UI is understandable, navigable, and useful. The Vendor Management team will survey the vendor community to gather information on how best the system can meet their needs and incorporate this data into the project's JAD sessions. In addition to improvements in usability, the system will be built using a multi-tier architecture model. The system's Interface, logic, and data will reside on separate tiers allowing for more options when implementing security and separates these critical parts of the application so that any breach has minimal impact or reduced capability of harm

3. Reporting and Data Quality

The system will implement new features that will add data validation and protocols to impede vendors from entering multiple price surveys or making other duplicate entries. These changes will improve the quality of reporting outputs from the system, and ensure that the Program possesses the tools necessary to make quality and timely decisions without the need for external validation.

C. Quantified Benefits*

- [x] Service enhancement
- [ ] Increased revenue
- [x] Cost reduction
- [x] Problem avoidance
- [x] Risk avoidance

1. Service Enhancements

1.1. Vendor Quality of Service

Currently, the Vendor Web application does not show real-time information nor does it alert vendors to the status of their applications.

This can cause undue stress to the vendor, or encourage them to make frequent calls to the State and asking for the status of their submissions. The new vendor web application will improve the quality of services provided to WIC vendors by changing the system so that is shows the status of their requests in real-time.

1.2. Administrative Benefits

The Vendor Web V2 application will feature improved reporting by allowing users the ability to extract data and create ad-hoc reports. This will remove the need for developer for assistance when working with system data.

In addition, this project will resolve the issue that allows vendors to enter multiple submissions that skew systems reporting. Duplicate vendors and price surveys require manual intervention and additional validation before the data is usable. Elimination of manual side-along processes reduces burdensome validation work, by ensuring that data is accurate and accessible at entry. Additionally, the elimination of these processes will allow the Vendor Team to refocus their time more productively and result in improving quality of services and response times for vendors.

2. Cost Reduction

2.1. Maintenance Model

Vendor Web v2 will use the same system architecture, UI framework, and codebase as other major systems within ADHS. In moving to industry standard coding language, Microsoft ASP.NET, the department will have better success when recruiting development talent capable of maintaining or enhancing this system. This codebase is considerably more manageable and helps promote a sustainable maintenance methodology. Using an architecture model in use throughout the market will assist in the department receiving competitive pricing for future enhancements.

3. Problem Avoidance

3.1. Data Integrity

As part of the plan for Vendor Web v2, development will merge the current vendor web database tables/structure safely into HANDS database, maintaining security and safeguards, while greatly reducing the opportunity for data duplication, or errors in data synchronization.

3.2. Compliance

The project will ensure developers change the Vendor Web application to addresses the issues reported by USDA in the FFY 2014 and FFY 2012 STAR and ME assessments.

3.3. Cost Containment

The DDI will include changes that will greatly improve the Arizona WIC Program's cost containment policies so that the system will no longer publish the NTE/MAR rates for each FI by peer group. In addition, the system will begin limiting the publication of the statewide average redemption rates for each FI type. Safeguarding the confidentiality of Arizona WIC's NTE rate will also help strengthen Arizona WIC's polices regarding vendor program integrity. Vendors will not have the ability to inflate FI costs by using the NTE value rather than the actual price of the item.

4. Risk Avoidance

4.2 NTE Information Availability

The primary purpose of modifying the NTE information is to reduce various risks for the WIC Program. Discontinuing the practice of displaying NTE values for all authorized vendors will ensure compliance with federal regulations, strengthen program integrity, and assist with cost containment policies. As the same information will be available to all vendors, this action will still constitute fair treatment.

IV. Technology Approach

A. Proposed Technology Solution

1. Infrastructure and Development

1.1 Approach

The technical approach is to change the Vendor Website application's system design and architecture is to utilize the current codebase and technologies currently in use by other major systems within ADHS, specifically the HANDS MIS solution. This includes changes to the application's codebase, platforms, data model, and database.

This development effort will use the department's application lifecycle management (ALM) system for managing items such as source code, reporting, requirements, project management, builds, lab management, testing, and releases.

A Business Requirements Document (BRD) for Vendor Web v2 describes the business requirements, changes, and development approach for the updated system. (See Attachment D: Vendor Web v2 BRD) Project development activities will include:

- JAD sessions
- Analysis and Design
- ADHS UAT Support
- Q\A
- Documentation
- Training
- Screen Changes
- Database Changes

This project will use a modified agile, iterative development, methodology. This approach to software development will allow the project to progress cyclically, rather than trying to do everything at once. The development team will slice system functionality into processes or features and each increment and deliver each slice of functionality through cross-discipline work. Each iteration or "sprint" will last 1-weeks and allows the team to work through a full software development cycle that incudes planning, requirements analysis, design, coding, unit testing, and quality assurance testing.

This approach will allow developers to present features or functionality to the product owners as they are completed. This project will employ a checkpoint demonstration process that CMA will conduct with the WIC Program to review the application features implemented at that given time. The checkpoint demonstration will provide a glimpse of the application functionality, the UI, and system flow so that the Vendor Management team can review the design completeness and translate the information from the BRD to actual screens. Furthermore, this type of development approach takes advantage of a shoulder-to-shoulder partnership model.

The WIC MIS QA team will oversee the project's configuration management responsibilities by using Microsoft's Team Foundation Server (TFS) in association with clarification and change management procedures.

Project requirements for development, Quality Assurance (QA), and UAT will reside within the TFS system and come from various sources including the BRD, design documents, and the subject matter experts. BRDs, system specification docs, data dictionaries, training plans, and user guides from the previous WIC Vendor Web application will provide additional information as needed. The project's clarification and change request processes will help with managing scope and requirements while providing a method for documenting additional system information.

This collected information will build the foundations for the new application's training plan, user guide, and technical documentation.

The ALM and all other technologies, toolset, and architectures listed below are currently in place for WIC development, QA, UAT, training, and production environments.

1.2 Platform and Network Architecture

CMA will code Vendor Web v2 as a three-tier application consisting of presentation, application, and data tiers. The presentation tier will display information and provide the direct UI with which WIC program staff and WIC vendors will interact. The application tier will control the application's functionality by performing detailed processing. The data tier will provide data persistence, storage, and the access layer that exposes data to the other services. This model is widely accepted for its flexibility to recode or modify individual layers, such as a UI refresh, with minimal impact to the other tiers. This model is also widely regarded for its implications on improved safety of data. The separation of the tiers allows for more options when implementing security and separates these critical parts of the application so that any breach has minimal impact or reduced capability of harm.

HOST ENVIRONMENT:

- Application Host OS: Microsoft Windows Server 2012
- Server Hardware: IBM i86
- Computing platform: Hardware Virtualization
- Hypervisor: VMware vSphere 4
- User & Groups Management: Microsoft Active Directory
- Internet Information Services (IIS): Microsoft IIS 7.5
- System Storage: IBM Storage Area Network (SAN)
- URL: https://www.vendor.azwic.gov
- DNS: DynDNS

Figure 1. Multitier Logic Flow *Figure 2. Infrastructure Design*

For more detail on infrastructure environment and application flow, see Attachments B and C.

1.3 Application Architecture

The current WIC Vendor Web system is a Microsoft VB.NET application. The new system will code use Microsoft ASP.NET in MVC 4 methodology using Razor as the view Engine, C# for core development, LINQ and DevArt for business data management, and Oracle for database management. The application architecture follows the four widely recognized tenets of service-oriented architecture (SOA): 1) boundaries are explicit 2) services are autonomous 3) services share schema and contract, not class and 4) service compatibility is policy driven. The system will have a modern look and feel by using style sheets and jQuery widgets. The development team will employ

standard visual representation such as icons, images, hover messages, descriptive messages, and navigation.

Below is the current standard for the development and application architecture.

WEB APPLICATION CODE BASE:

• Application Framework:	Microsoft MVC ASP.NET 5.1.2
• Software Framework:	Microsoft .NET 4.5.1
• Source Language:	C# 5.0
• View Engine:	Razor
• Client Side Scripting Language:	JavaScript
• Object-relational mapping (ORM) framework:	Entity Framework 6 (Efv6)
• Database Management System:	Oracle 11g
• Procedural language extension for SQL:	PL/SQL
• Browser Plug-in	Microsoft Silverlight 5.1
• Data Query	Microsoft LINQ

Figure 3. WIC Web Application Code Standards

2. Training

Upon completion of initial development, CMA will conduct a system wide training the WIC MIS QA, Vendor Management, Training, and Clinic Support Services teams. The training will provide enough information on the new system so that ADHS can begin User Acceptance Testing (UAT). Upon completion of UAT, the WIC training team will create training materials for the WIC vendor community and distribute these training documents digitally via email or URL. In addition to providing a training document to vendors, the WIC Vendor Management team will conduct an on-site instructor led training at ADHS.

3. Testing

The MIS QA team will validate that the new system meets the UAT entrance criteria before beginning UAT. The team will utilize the current UAT processes and procedures as documented in the WIC UAT Plan. The MIS QA team will develop scenario-based tests, identified as "Test Cases," in TFS. Test cases will represent real-life activities that would occur. These test cases will then be grouped together to create a complete real-life scenario organized in a Test Suite. These test cases and suites will test a series of functions within the system. UAT scripts will be comprehensive and address all requirements.

Before the system is ready, open defects must be within the following thresholds:

FOR ALL FUNCTIONS CONSIDERED "CORE":	FOR ALL FUNCTIONS SYSTEM-WIDE:
= 0% Severity 1 Critical Issues	= 0% Severity 1 Critical Issues
<= 2% Severity 2 Major Issues	<= 10% Severity 2 Major Issues
<= 15% Severity 3 Minor Issues	<= 20% Severity 3 Minor Issues
<= 25% Severity 4 Cosmetic Issues	<= 30% Severity 4 Cosmetic Issues
<= 25% Severity 5 Documentation Issues	<= 30% Severity 5 Documentation Issues

CMA will provide a written UAT Readiness memorandum to ADHS that identifies outstanding defects. The certification will include detailed information on all defects identified during system testing and

resolutions for these defects or status if still open. Using the data in TFS, the MIS-QA team will create reports that will assess the exit criteria status.

B. Technology Environment

This project will restructure the system so that it integrates into the current ADHS WIC Management Information System hosting model. Currently, the Vendor Web application is a standalone system with two (2)-standalone Dell x86 application servers running Windows 2003 Enterprise Server and one (1) SUN sparc Oracle 10g database server. Being that the hardware is eight years old; the manufacturers no longer support these products.

1. Blade Server Migration

The infrastructure team will replace the standalone x86 servers with a blade server. The new blade server will contain the new VMs for hosting the Vendor Web application and connect to the production SAN environment and

This approach allows for Tier segmentation (Middle Tier, Web service, Database Layer) by assigning VMs to specified VLANs with configurations allowing and preventing specified communication ports to travel between hosts.

The team is conducting blade product evaluations with state authorized vendors for HP, Dell, and Cisco to determine the best solution for the environment.

Each vendor will meet with the technical team and present their offerings. The team will base the decision on the following:

PRICING • initial costs • recurring costs • licensing costs • maintenance costs	PERFORMANCE • hardware redundancy • reliability • speed
VENDOR & PRODUCT • product market presence • product support options • vendor support offerings • maintenance service record • product lifespan	OPERATIONS • maintainability • ease of operations as it relates to team skillsets and IT market • compatibility with current production and maintenance environments • proprietary components vs open source and interoperability offerings • upgrade\expansion capabilities

The infrastructure team will identify a hardware vendor prior to project startup so that the project manager can submit product selection information to ASET with the required Project Startup memorandum.

2. SUN Sparc Database Server Migration

The current database server is a SUN v245 with Sparc processors and locally attached storage. The infrastructure team will migrate and merge the current Vendor Web database into the production HANDS database. The HANDS database resides on a SUN Sparc m4000 server with fiber SAN connections that uses oracle zone technology. The infrastructure team utilizes Zones technology at a UNIX OS level to create isolated independent server instances.

There are no costs associated with this server migration since it is already in production use and will not require hardware or software upgrades. The database administrator will deactivate the Oracle Enterprise database license used for Vendor Web once data is merging with the HANDS database, which has an active database server license.

3. Storage & Datacenter

Both application and database servers will connect to the current production SAN. The current SAN is an IBM DS5000. This system will reside in two datacenters: Phoenix Datacenter, Arizona DOA, 1510 W. Adams Phoenix, AZ 85007 and Tucson Datacenter, Arizona DOA: 400 W Congress St Tucson, AZ 85701.

4. Operations & Maintenance

All services, resources, and procedures required for supporting the Vendor Web application are currently in place. End users needing technical support will continue using the service desk number.

4.1 Business Continuity and Disaster Recovery

The WIC Infrastructure team will add the Vendor Web application to the current data backup process. The team will also add this application to the application monitoring system. Data and user account information will replicate between the Tucson and Phoenix datacenters.

C. Selection Process

The selection process for the technology this application will use was thorough. The technology selected is industry standard and matches the current development, QA, and production system environments. Lessons learned for the HANDS project provided excellent content for comparison

V. Project Approach

A. Project Schedule*

Project Start Date: 6/22/2014 **Project End Date**: 12/31/2014

B. Project Milestones

Major Milestones	Start Date	Finish Date
PIJ Approval	8/15/2014	8/15/2014
Finalize Requirements –BRD	6/8/2014	7/30/2014
Purchase Infrastructure Hardware\Software	9/1/2014	9/26/2014
Install/Configure Infrastructure Hardware\Software	10/1/2014	10/24/2104
Test Infrastructure Hardware\Software	10/27/2014	10/31/2014
Sprint 2: Development - Market Baskets Sprint 2: QA - Market Baskets Sprint 2: Development - Not-To-Exceed Sprint 2: QA - Not-To-Exceed	9/15/2015	9/26/2014
Sprint 3: Development - Food Item Declarations Sprint 3: QA - Food Item Declarations Sprint 3: Development - Food Item Declaration Base Table Sprint 3: QA - Food Item Declaration Base Table	9/29/2014	10/10/2014
Sprint 4: Development - Administration Sprint 4: QA - Administration	10/13/2014	10/24/2014

End-to-End Test	10/27/2014	10/31/2014
UAT	11/3/2014	11/14/2014
Training	11/17/2014	11/28/2014
Deployment	12/1/2014	12/14/2014

VI. Roles and Responsibilities

A. Project Roles and Responsibilities

B. Project *Manager Certification*

- [X] Project Management Professional (PMP) Certified
- [X] State of Arizona Certified
- [ ] Project Management Certification not required

C. *Full-Time Employee (FTE) Project Hours*

Total Full-Time Employee Hours	2,250
Total Full-Time Employee Cost	$101,250

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

Please note:

(1) Billable rates are based on contract #: HP050111. In addition, please see attached BRD for the DD&I's detailed proposal.

(2) There are no operational costs listed in the price sheet due to the structure of the current WIC MIS development and maintenance services contract HP050111. This contract bundles the maintenance costs for multiple WIC systems, applications, and services into a flat monthly rate, which includes the Vendor Web System. The updated vendor system will not require modification to the maintenance contract and is budget neutral.

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 http://aset.azdoa.gov/security/policies-standards-and-procedures, and applicable to this project? If **NO**, 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 **YES,** 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

Description	Section	Number or Cost
Assessment Cost (if applicable for Pre-PIJ)	II. PIJ Type - Pre-PIJ Assessment Cost	$
Total Development Cost	VII. PIJ Financials tab	$470,000
Total Project Cost	VII. PIJ Financials tab	$470,000
FTE Hours	VI. Roles and Responsibilities	2,250

C. Agency Approvals

Contact	Name	Signature	Email and Phone
Project Manager:	Ryan Sadler		
Information Security Officer:	John Stark		
Agency CIO:	Paula Mattingly		
Project Sponsor:	Karen Sell		
Assistant Director of Public Health Prevention	Sheila Sjolander		
Deputy Director of Public Health	Cara Christ		
Chief Financial Officer	Jim Humble		
Deputy Director of Planning & Operations	Janet Mullen		
Agency Director:	Will Humble		

IX. Optional Attachments

A. Infrastructure Details

B. Vendor Web V2 Business Requirements Document.

C. Application Traffic Flow

X. Glossary

Above 50% Vendors (A-50s) – WIC Approved vendors whose total WIC sales are greater than half of their total sales.

Arizona in Motion (AIM) – The primary benefits distribution system for the Arizona WIC Program. Allows the certification of participants and printing of Food Instruments. Allows for the authorization and management of WIC Vendors.

Cost Containment – Efforts, activities, and methodologies via policy or systems that enable the Arizona WIC Program to control the costs of food instrument issuance and redemption. Primarily, focused on reducing potential for fraud and ensuring vendor competitiveness.

Business Requirements Document (BRD) – Detailed design documents of the automation system required by ADHS. This document will define the exact requirements needed by the AIM system.

Database Cleanup – An effort to clean the database by consolidating duplicate records, or purging data entered otherwise by accident.

Detailed Functional Design Document (DFDD) – Provides system documentation for development purposes required by USDA

Detailed Technical Specifications Document (DTSD) – A data dictionary that processes system descriptions in Structured English required by USDA

Electronic Balance Transfer (EBT) Ready – Capability for an automated WIC system to pull together information to issue benefits to an Electronic Benefit Account (EBA) for one or more individuals

End of Day (EOD) Processing – A process in the AIM system that synchronizes daily database user activity with the State Agency database. There are dozens of activities updated relative to participants, financial, vendor, and bank interface.

End of Life (EOL) – A product that is no longer supported with security fixes or patches by the vendor. Once deemed EOL a product becomes more difficult to support and becomes a risk to the organization.

Food Instrument (FI) – The Arizona WIC Program issues paper food instruments to certified WIC participants. These are printed checks that can be redeemed for the WIC foods listed on the food instrument at an authorized WIC Vendor.

Health and Nutrition Delivery System (HANDS) – The name for the .NET web application refresh of the Arizona in Motion (AIM) system. This system features significant improvements upon the AIM system, including for vendor management.

Joint Application Development (JAD) – Succession of collaborative workshops that involve the developers and end-users in the design and development of the AIM application to create business requirements

Local Agency – A Local Agency may be a local non-profit organization, County health department, or tribal entity under contract with ADHS to implement and enforce policies and procedures for a particular nutrition program

Malicious Unauthorized Presence – An unauthorized user that gains access to the system, presumably with intent to cause harm or otherwise compromise data security.

Maximum Allowable Reimbursement (MAR) – Effectively the same as the Not-To-Exceed value for a Food Instrument. They represent the highest dollar value that the vendor can claim for redemption for the given Food Instrument.

Market Basket – A Market Basket is a tool used for calculating cost competitiveness. The Market Basket consists of high volume, or most frequently issued WIC food items, such as milk, eggs, cheese, juice, beans, and tuna. These items are then weighted, and cost information collected from Price Surveys allows the Arizona WIC Program to calculate a cost value of the current Market Basket for a given vendor. These values can be compared against values of vendors in the same peer group to evaluate cost competitiveness.

Management Evaluation (ME) – A review of management policies, procedures, tools, and interactions with vendors and participants as part of the State Technical Assistance Review (STAR).

Model View Controller (MVC) Coding Methodology – An architectural pattern for implementing user interfaces, dividing the User Interface (UI) into three interconnected parts. The application separates the application data, business rules, logics and functions from the information displayed, and the controls that are available for the user to manipulate data.

Not-To-Exceed (NTE) Value – Effectively the same as the Maximum Allowable Reimbursement rates for a Food Instrument. They represent the highest dollar value that the vendor can claim for redemption for the given Food Instrument.

Peer Group – Approved vendors are broken into peer groups with other vendors with similar sales and demographics. These grouping allow the Arizona WIC Program to make more effective comparisons for competitiveness.

Price Survey – A mandatory activity that vendors must conduct annually to provide The Arizona WIC Program with needed data to conduct calculations for average pricing by vendor category and region Vendors are required to submit pricing information on WIC foods to the Arizona WIC Program.

SQL Injection Attack – An attack whereby malicious SQL statements are inserted into an entry field in the application. If controls are not in place within the application to reject SQL code statements, there is a potential for malicious scripts to be run on the server, allowing attackers to potentially gain access to the system, or otherwise compromise, corrupt, or harm data.

State Technical Assistance Review (STAR) – Western Regional Office conducts an on-site review of the State Agency in a specific functional area, including interviews with staff, review of documentation and records, on site clinic visits, and observations. Recommendations are then made for best practices, or mandates.

State Agency – A State agency may be a State, US Territory, or Indian Tribal Organization (ITO) under contact with the United States Department of Agriculture Food and Nutrition Service to implement and enforce policies and procedures for a particular nutrition program.

Three Tier Architecture – A client-server architecture in which the user interface, functional process logic ("business rules"), computer data storage and data access are developed and maintained as independent modules, most often on separate platforms.

Women, Infants, and Children (WIC) – The Arizona Special Supplemental Nutrition Program for Women, Infant, and Children (WIC) Program. WIC is a public health nutrition program administered by the United States Department of Agriculture (USDA) Food and Nutrition Service (FNS). Arizona WIC's mission is to safeguard the health of low-income women, infants, and children up to age 5 who are at nutrition risk by providing nutritious foods to supplement diets, information on healthy eating, and referrals to health care.

WIC Approved Vendor – Grocers and Food Purveyors within the State of Arizona who meet the authorization criteria and maintain the minimum requirements to accept WIC Food Instruments.

XI. Detailed Roles and Responsibilities

Project Sponsor: Karen Sell, ADHS BNPA Bureau Chief

- Oversees entire project and contracts
- Monitors project progress
- Oversees and approve project plans
- Provides direction for project
- Maintains fiscal controls
- Ensures all deliverables meet deliverable expectation standards

Product Owner: Mary Bookman, Vendor Manager

- Serves as Subject Matter Expert on the Vendor Web Application, and Vendor Management
- Communicates and facilitates information gathering from WIC Vendors
- Plans, develops, and implements training for WIC Vendors on the Vendor Web V2 Application
- Responsible for communicating requirements and desired application enhancements during JAD sessions.

IT Oversight: Ryan Sadler, WIC IT Project Control Manager

- WIC IT Project Control Manager will provide guidance and oversight of the project
- Will monitor progress and assist with ensuring resources are available to the project

Program Oversight: Taffery Lowry, HANDS Program Project Manager

- HANDS Program Project Manager will provide guidance and oversight of the Program Project Manager for Vendor Web V2.
- Will monitor progress and assist with ensuring resources are available to the project

Vendor Web IT Project Manager: Joseph Dick, WIC IT Project Coordinator

- Plans, executes, and finalizes the project according to strict deadlines and within budget.
- Controls the project's objectives
- Plans, organizes, and integrates project and contractor teams to deliver specific measured results
- Assists the Vendor Web V2 Contractor in adhering to State technical standards
- Assists in the oversight of contractor deliverables and activities
- Generates Project Status reports

Vendor Web Program Project Manager: Jung Thai, HANDS Coordinator

- Facilitates project management within WIC operations
- Conducts JAD sessions with operations staff and facilitates requirements gathering and clarification and communication with Vendor Manager
- Reports project status to USDA
- Serves as Subject Matter Expert for Electronic Benefits Transfer (EBT)
- Facilitates communication from program team members to IT WIC staff and contractors
- Manages changes to Vendor Web V2 to ensure EBT compatibility

Vendor Web MIS QA Lead: Matt Nunez, QA Analyst

- Coordinates with Vendor Manager to plan, develop, and implement a testing strategy for Vendor Web V2
- Coordinates with MIS QA Manager to ensure that Vendor Web V2 to develop acceptance thresholds for acceptance to User Acceptance Testing (UAT) and for release to production

Supporting Technical Staff: William Erickson WIC IT Operations Manager

- Oversees WIC Service Desk (WSD), and provides front line support of Vendor Web.
- Coordinate to provide training to WSD Staff to support Vendor Web Application

Supporting Technical Staff: Charles Fala, WIC IT Infrastructure Manager

- Oversees Infrastructure Team, and provides guidance of application technical requirements.
- Work with Vendor Web V2 contactor to ensure application works with WIC Virtual / Physical Server Environment

XII. PII Data and Security Measures

General Owner Information