Project Investment Justification

Capital Project Delivery System (CPDS-FAST)

DT24006

Department of Transportation

1. GENERAL INFORMATION

PIJ ID: DT24006
PIJ Name: Capital Project Delivery System (CPDS-FAST)
Account: Department of Transportation
Business Unit Requesting: Infrastructure Delivery and Operations (IDO)
Sponsor: Audra Merrick
Sponsor Title: IDO Director
Sponsor Email: amerrick@azdot.gov
Sponsor Phone: (602) 712-8274

2. MEETING PRE-WORK

2.1 What is the operational issue or business need that the Agency is trying to solve? (i.e....current process is manual, which increases resource time/costs to the State/Agency, and leads to errors…):

The Arizona Department of Transportation (ADOT) is the multi-modal state-level agency responsible for providing safe and efficient transportation of goods and people within Arizona. In this role, a key element of ADOT's mission is the letting and award of highway construction projects and the management and oversight of the work of construction contractors during the construction phase of this work.

The Field Office Automation System (FAST) is the management system currently utilized to support these activities. Originally developed in the mid-1990s, the FAST system has been managing the construction contracting process, along with monitoring and tracking the delivery of construction projects using three major modules: contract initiation, construction administration, and materials management.

FAST has adequately met ADOT's requirements for managing the letting and award process and monitoring and tracking the delivery of construction projects for many years. However, the FAST system is approaching the end of its technical life. It has become increasingly difficult to maintain and/or to enhance to meet changes in Federal Highway Administration (FHWA) requirements or ADOT-requested changes to improve the efficiency and effectiveness of managing the construction program.

ADOT faces significant business risks due to the aging platform on which FAST operates, including security risks: The software platform version for FAST is PowerBuilder®™. It is server based and is powered by a Microsoft Server called "SQL 2008 R2". Microsoft supports each of their servers for 5 years and an additional 5 years with an extended support subscription (up to 10 years total). The support includes security updates, non-security updates, and vendor support. Once Microsoft no longer supports the server, the machines will be at risk for cyber-attacks if the user continues to use it. On July 09, 2019, the extended support for SQL 2008 R2 ended and the entire 'engine' behind FAST was unable to receive security updates or support from the vendor. This created considerable risk for ADOT, in that the framework from almost 30-years ago has matured considerably to account for the current computing processing speeds and data- transfer improvements.

For the current FAST system to run safely, ADOT's only option was to upgrade both the server and PowerBuilder to a newer version. During 2020-2021, ADOT upgraded to "SQL Server 2019" and "PowerBuilder 2019". The upgrades' ONLY purpose was to enhance system security. The support for SQL Server 2019 ended on January 07, 2025, creating additional urgency for ADOT to identify and implement a replacement system.

Other challenges with the FAST system include:

- The system is outdated and does not easily allow for enhancements.: The ability to make modifications is limited to hiring contracted services that are also constrained due to the lack of knowledgeable vendors.

- The system is functionally obsolete and requires a new system that is built based on today's business processes, and positions ADOT for future growth. FAST was developed based on a 1980s Business Model. As business needs change, ADOT has not been able to implement changes to keep up to date. As Federal and State requirements change, modifications are difficult or impossible to implement within the existing FAST system, resulting in many work arounds and offline systems.

- There is a limited ADOT knowledge to maintain the system: The single point of failure and risk for the system is experience and knowledge. Coding in the PowerBuilder language is increasingly being phased out, rarely taught, and hiring individuals with this experience and coding knowledge is extremely challenging. ADOT currently has no employees who know the programming language and can maintain the system. ADOT currently contracts with one individual who maintains the system. It has taken up to eight (8) weeks to fill this position when contract staff needs to be replaced.

- There are significant reliability challenges with the current FAST system: The system has challenges with contracted programmer resources providing updates and ensuring uninterrupted service. At times ADOT has attempted to apply updates and/or fixes to the FAST system that have resulted in components that stop working or result in data errors. If certain components do malfunction and there is a substantial lag to get a contractor onboard, critical ADOT responsibilities such as delayed contractor payments or delayed federal reimbursements may occur.

Finally, the FAST system has several functional gaps which limited the efficiency and effectiveness with which ADOT can manage its construction program. These gaps include: No or limited mobile capability, No or limited GPS/locational data capture, Lack of contractor collaboration/self-service functionality, and Limited integration with other systems resulting in the need for duplicate data entry.

2.2 How will solving this issue or addressing this need benefit the State or the Agency?

Replacing the FAST system will significantly reduce the business risk to ADOT and the State of Arizona and position ADOT to further streamline and automate the delivery of its capital construction program utilizing a modern vendor-supported software solution. Anticipated benefits to ADOT and the State include:

- Provides for increased efficiency in the delivery of ADOT's transportation program by:
  - Fortifying and improving the reliability of ADOT core business processes.
  - Providing a modern framework for improving service delivery.
  - Aligning with the overall ADOT department-wide digital delivery initiative.
- Provides a modern, flexible technology platform to allow ADOT to more easily respond to changes in FHWA or State program requirements.
- Improves communication and supports electronic collaboration with contractors and other service delivery partners.
- Improves sharing of information across the enterprise leading to better consistency, quality, timeliness and accuracy of information.
- Provides potential for reductions in construction contract change orders, claims, project delays,

and overruns through more effective contract management and monitoring tools.

- Provides an opportunity to redirect the time of some Construction, Finance, and Procurement staff through capturing more data at the source and using contractor self-service capabilities.

- Provides a modern software platform with the needed security and flexibility to support the agency's construction program. A Software as a Service (SaaS) solution will provide sustainable support by the vendor to maintain data in a secure and reliable manner allowing the agency to strategically leverage commercial software and its use for construction programs.

2.3 Describe the proposed solution to this business need.

ADOT anticipates replacing FAST and several related ancillary systems with a next-generation Capital Project Delivery System (CPDS) based on a commercial off the shelf software solution (COTS) which is vendor managed and supported and operates in the Cloud as a SaaS solution. CPDS will support ADOT's capital project delivery lifecycle from the preparation of specifications, through project letting and contract award, management of the construction phase of work and the construction contract(s), tracking of the testing of materials used on construction projects and management of the construction hand-over process. The next-generation CPDS will specifically support these functions:

- Support preparation of the independent cost estimate before project letting;
- Manage the project letting and award process, including:
  - Prepare the proposal package to be put out to bid,
  - Prepare any required addenda,
  - Receive bids (either directly or through integration with a third-party lockbox function),
  - Compare bids received against the independent cost estimate,
  - Evaluate bids received to determine the lowest responsible, responsive bidder, and
  - Award contract to the selected bidder;
- Manage the construction contract, including:
  - Record daily work reports documenting the work performed by the contractor,
  - Prepare contractor progress estimates during the project,
  - Manage contractor requests for information,
  - Manage/track change orders,
  - Manage project records and documentation,
  - Manage/track claims submitted by contractors,
  - Monitor compliance with various contract requirements (bond, insurance, prevailing wage rate compliance via certified payrolls, etc.),
  - Monitor compliance with disadvantaged business enterprise (DBE) goals and other goals, such as mentoring and staff training by the contractor,
  - Prepare final estimate at end of project, and

- Track/manage contract closeout.

- Manage and track required materials testing activities, including:
  - Maintain sampling guidelines,
  - Record test results by type of test, and
  - Perform materials certification for project, ensuring sufficient tests have been performed based on quantities of materials utilized/placed on a project.

The CPDS solution will have significant mobile capabilities, especially in the areas of construction contract management and materials testing, reducing the amount of paper documentation and subsequent re-entry into a computer system which will be required.

The solution is Aurigo Masterworks and the vendor is Deloitte Consulting.

2.4 Has the existing technology environment, into which the proposed solution will be implemented, been documented?

Yes

2.4a Please describe the existing technology environment into which the proposed solution will be implemented.

2.5 Have the business requirements been gathered, along with any technology requirements that have been identified?

Yes

2.5a Please explain below why the requirements are not available.

3. PRE-PIJ/ASSESSMENT

3.1 Are you submitting this as a Pre-PIJ in order to issue a Request for Proposal (RFP) to evaluate options and select a solution that meets the project requirements?

No

3.1a Is the final Statement of Work (SOW) for the RFP available for review?

No

3.2 Will you be completing an assessment/Pilot/RFP phase, i.e. an evaluation by a vendor, 3rd party or your agency, of the current state, needs, & desired future state, in order to determine the cost, effort, approach and/or feasibility of a project?

Yes

3.2a Describe the reason for completing the assessment/pilot/RFP and the expected deliverables.

During FY 2023, an RFI was issued to gather additional information from the vendor community to help development of a planning level cost estimate and timeline for implementing a new system. Vendors were asked to respond to questions about the functionality available in their system, the anticipated timeline

for implementing their proposed solution for an organization the size of ADOT and a planning level cost estimate for implementing their proposed solution.

A budget package for the new system was developed and submitted to the Arizona Legislature. Funding to prepare requirements, develop a Request for Proposal (RFP), conduct solution evaluation and selection and initiate implementation was approved for FY 2025. An additional budget package(s) has been submitted as part of the FY 26 budget process for future year funding to complete implementation.

3.2b Provide the estimated cost, if any, to conduct the assessment phase and/or Pilot and/or RFP/solicitation process.

300000

3.2e Based on research to date, provide a high-level cost estimate to implement the final solution.

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4. PROJECT

4.1 Does your agency have a formal project methodology in place?

Yes

4.2 Describe the high level makeup and roles/responsibilities of the Agency, Vendor(s) and other third parties (i.e. agency will do...vendor will do...third party will do).

ADOT Project Sponsor - Responsible for the budget, approval of the project deliverables and issue resolution.

ADOT Project Steering Committee – Responsible for providing guidance and oversight of the implementation effort and assisting with the resolution of cross-functional issues.

Project Manager - Responsible for day-to-day management of the project including planning and managing ADOT resources assigned to the project, maintaining the overall project work plan and overseeing the work of the selected system integrator.

System Integrator (Deloitte Consulting, LLP) – Firm responsible as prime contractor to provide, implement, and operate (for up to ten (10) years) a new Cloud-based SaaS CPDS solution that supports preconstruction management, construction management, and materials testing.

IV&V Consultant – Responsible for monitoring the project per State of Arizona Statutes and Policies.

4.3 PM Name

Robert Cooney

4.3 PM Email

rcooney.consultant@azdot.gov

4.4 Is the proposed procurement the result of an RFP solicitation process?

Yes

4.5 Is this project referenced in your agency's Strategic IT Plan?

Yes

5. SCHEDULE

5.1 Is a project plan available that reflects the estimated Start Date and End Date of the project, and the supporting Milestones of the project?

Yes

5.2 Provide an estimated start and finish date for implementing the proposed solution.

Est. Implementation Start Date	Est. Implementation End Date
6/20/2025 12:00:00 AM	3/6/2028 12:00:00 AM

5.3 How were the start and end dates determined?

Based on project plan

5.3a List the expected high level project tasks/milestones of the project, e.g., acquire new web server, develop software interfaces, deploy new application, production go live, and estimate start/finish dates for each, if known.

Milestone / Task	Estimated Start Date	Estimated Finish Date
Project Initiation	05/12/25	06/23/25
Release 1 (Preconstruction) - Initiation	06/20/25	07/28/25
Prepare Security Plan - Finalize & Submit System Security Plan to Homeland Security	06/23/25	08/04/25
Release 1 - Kickoff Meeting (Get Sprint Deliverables/Stories)	06/24/25	06/24/25
PAYMENT: Q4 FY 25 Initial SaaS Subscription - June 24, 2025 Release 1 Kick-off Meeting - June 26, 2025 Systems Integrator Work Plan - June 30, 2025	06/24/25	06/30/25
Release 1 - Design: - Confirm Requirements - BPM Sessions - Prepare Configuration Specifications - Prepare Technical Specs - Prepare Data Migration - Prepare Training Plan - Prepare Master Test Plan	07/07/25	11/10/25

PAYMENT: Q1 FY 26 Project Management Plan - 7/28/25 Quality Management Plan - 7/28/25 Knowledge Transfer Plan - 7/28/25 Stakeholder Engagement Plan - 7/28/25 Security Plan - 8/4/25 ... 6 more ... Stakeholder Engagement Plan - 11/30/25	07/28/25	09/30/25
Release 2 (Construction Mgmt) - Initiation	09/02/25	09/30/25
Release 1 - Configuration: Sprint 1	09/08/25	10/10/25
Release 1 - Configuration: - Sprints 1 through 8	09/08/25	03/16/26
Release 2 - Design: - Confirm Requirements - BPM Sessions - Prepare Configuration Specifications - Prepare Technical Specs - Prepare Data Migration - Prepare Training Plan - Prepare Master Test Plan	09/17/25	04/27/26
Release 2 - Kickoff Meeting	09/18/25	09/18/25
Release 1 - Configuration: Sprint 2	09/29/25	10/31/25
Release 1 - Configuration: Sprint 3	10/20/25	11/21/25
PAYMENT: Q2 FY 26 Interface Plan - October 27, 2025 Data Migration Plan - November 10, 2025	10/27/25	11/10/25
Release 1 - Configuration: Sprint 4	11/10/25	12/12/25
Release 1 - Configuration: Sprint 5	12/01/25	01/09/26
Release 1 - Configuration: Sprint 6	12/29/25	01/30/26
Release 2 - Configuration: - Sprints 1 through 8	01/12/26	07/13/26
Release 1 - Configuration: Sprint 7	01/19/26	02/20/26
Release 2 - Configuration: Sprint 1	01/26/26	02/13/26
PAYMENT: Q3 FY 26 Solution Configuration - 3/16/26 Unit Test Conversion Programs - 3/16/26 System Detail Design -1/30/26 Requirement Traceability Matrix (RTM) - 1/26/26 Release 2 Training Plan - 3/20/25 Updated Master Test Plan - 2/13/26	01/30/26	03/20/26
Release 2 - Configuration: Sprint 2	02/02/26	03/06/26
Release 1 - Configuration: Sprint 8	02/09/26	03/13/26
Release 1 - Solution Testing: - System Integration Test (SIT) - User Acceptance Testing (UAT) - Performance Test - Security Test	02/09/26	08/10/26
Release 2 - Configuration: Sprint 3	02/23/26	03/27/26
Release 2 - Configuration: Sprint 4	03/16/26	04/17/26

Release 1 Training: From Preparing Training Materials -> End User Training Support	03/30/26	08/31/26
Release 1 - Deployment: - Training - Enterprise Readiness Planning - System Cut Over Preparation - System Cut-over	03/30/26	09/09/26
PAYMENT: Q4 FY 26 Mock Data Con. 1 - 4/17/26 Unit Tested Interface Programs - 5/1/26 System Test Report - 5/15/26 Integration Test Report - 5/15/26 Mock Data Conversion 2 - 6/12/26 Release 2 Interface Plan - 4/24/26 Data Mig. Plan - 4/3/26	04/03/26	06/12/26
Release 2 - Configuration: Sprint 5	04/06/26	05/08/26
Release 2 - Configuration: Sprint 6	04/27/26	05/29/26
Release 2 - Solution Testing: - System Integration Test (SIT) - User Acceptance Testing (UAT) - Performance Test - Security Test	05/11/26	12/04/26
Release 2 - Configuration: Sprint 7	05/18/26	06/19/26
Release 2 - Configuration: Sprint 8	06/08/26	07/10/26
PAYMENT: Q1 FY 27 User Acceptance Report - July 10, 2026 through Stakeholder Engagement Plan - September 4, 2026 (18 items total)	07/10/26	11/04/26
Release 2 - Deployment: - Training - Enterprise Readiness Planning - System Cut Over Preparation - System Cut-over	07/20/26	01/11/27
Release 2 Training: From Preparing Training Materials -> End User Training Support	07/20/26	01/11/27
Release 3 (Materials Testing) - Initiation	08/10/26	09/07/26
Release 3 - Design - Confirm Requirements - BPM Sessions - Prepare Configuration Specifications - Prepare Technical Specs - Prepare Data Migration - Prepare Training Plan - Prepare Master Test Plan	08/10/26	02/08/27
Release 1 - Go-Live	09/08/26	09/08/26
Release 1 - Post Go-Live Support	09/09/26	12/02/26

PAYMENT: Q2 FY 27 Training Materials - November 6, 2026 through Unit Tested Conversion Programs - December 7, 2026 (12 items)	11/06/26	12/07/26
Release 3 - Configuration - Sprints 1 through 8	11/30/26	06/07/27
Release 3 - Configuration: Sprint 1	11/30/26	01/06/27
Release 3 - Configuration: Sprint 2	12/21/26	01/29/27
Release 2 - Go-Live	01/04/27	01/04/27
PAYMENT: Q3 FY 27 End User Training Support - 1/8/27 Go-Live with Release 2 Software - 1/4/27 Release 2 Acceptance - 3/30/27 R 3 Interface Plan - 1/15/27 R 3 Data Migration Plan - 2/5/27 R 3 Training Plan - 2/5/27 Updated M Test Plan - 1/26/27	01/04/27	03/30/27
Release 2 - Post Go-Live Support	01/05/27	03/30/27
Release 3 - Configuration: Sprint 3	01/18/27	02/19/27
Release 3 - Configuration: Sprint 5	03/01/27	04/02/27
Release 3 - Configuration: Sprint 4	03/08/27	04/09/27
Release 3 - Configuration: Sprint 6	03/22/27	04/23/27
Release 3 - Configuration: Sprint 7	04/12/27	05/14/27
Release 3 - Solution Testing: - System Integration Test (SIT) - User Acceptance Testing (UAT) - Performance Test - Security Test	05/03/27	10/04/27
Release 3 - Configuration: Sprint 8	05/03/27	06/04/27
PAYMENT: Q4 FY 27 Release 3 Mock Data Conversion 1 - June 25, 2027	06/25/27	06/25/27
Release 3 - Deployment: - Training - Enterprise Readiness Planning - System Cut Over Preparation - System Cut-over	07/05/27	11/02/27
Release 3 Training: From Preparing Training Materials -> End User Training Support	07/05/27	11/01/27
PAYMENT: Q1 FY 28 Unit Tested Interface Programs - July 9, 2027 through Performance Test Report - September 27, 2027 (9 items)	07/09/27	09/27/27
KPI #1: Decrease in Contractor Prequalification Approval Time	09/08/27	09/08/27

PAYMENT: Q2 FY 28 Training the Trainer Course Delivery - October 8, 2027 End User Training Support - October 29, 2027 Go-Live with Release 3 Software - November 1, 2027	10/08/27	11/01/27
Release 3 - Go-Live	11/01/27	11/01/27
Release 3 - Post Go-Live Support	11/02/27	01/25/28
KPI #2: Reduction in Escalated Contractor Disputes	01/04/28	01/04/28
KPI #3: Reduction in Asset Onboarding Time	01/04/28	01/04/28
Project Closeout	01/25/28	03/06/28
PAYMENT: Q3 FY 28 Release 3 Acceptance - January 25, 2028	01/25/28	01/25/28

5.4 Have steps needed to roll-out to all impacted parties been incorporated, e.g. communications, planned outages, deployment plan?

Yes

5.5 Will any physical infrastructure improvements be required prior to the implementation of the proposed solution. e.g., building reconstruction, cabling, etc.?

No

5.5a Does the PIJ include the facilities costs associated with construction?

5.5b Does the project plan reflect the timeline associated with completing the construction?

6. IMPACT

6.1 Are there any known resource availability conflicts that could impact the project?

No

6.1a Have the identified conflicts been taken into account in the project plan?

6.2 Does your schedule have dependencies on any other projects or procurements?

No

6.2a Please identify the projects or procurements.

6.3 Will the implementation involve major end user view or functionality changes?

Yes

6.4 Will the proposed solution result in a change to a public-facing application or system?

Yes

7. BUDGET

7.1 Is a detailed project budget reflecting all of the up-front/startup costs to implement the project available, e.g, hardware, initial software licenses, training, taxes, P&OS, etc.?

Yes

7.2 Have the ongoing support costs for sustaining the proposed solution over a 5-year lifecycle, once the project is complete, been determined, e.g., ongoing vendor hosting costs, annual maintenance and support not acquired upfront, etc.?

Yes

7.3 Have all required funding sources for the project and ongoing support costs been identified?

Yes

7.4 Will the funding for this project expire on a specific date, regardless of project timelines?

Yes

7.5 Will the funding allocated for this project include any contingency, in the event of cost over-runs or potential changes in scope?

No

8. TECHNOLOGY

8.1 Please indicate whether a statewide enterprise solution will be used or select the primary reason for not choosing an enterprise solution.

There is not a statewide enterprise solution available

8.2 Will the technology and all required services be acquired off existing State contract(s)?

No

8.3 Will any software be acquired through the current State value-added reseller contract?

No

8.3a Describe how the software was selected below:

8.4 Does the project involve technology that is new and/or unfamiliar to your agency, e.g., software tool never used before, virtualized server environment?

Yes

8.5 Does your agency have experience with the vendor (if known)?

No

8.6 Does the vendor (if known) have professional experience with similar projects?

Yes

8.7 Does the project involve any coordination across multiple vendors?

Yes

8.8 Does this project require multiple system interfaces, e.g., APIs, data exchange with other external application systems/agencies or other internal systems/divisions?

Yes

8.9 Have any compatibility issues been identified between the proposed solution and the existing environment, e.g., upgrade to server needed before new COTS solution can be installed?

No

8.9a Describe below the issues that were identified and how they have been/will be resolved, or whether an ADOA-ASET representative should contact you.

8.10 Will a migration/conversion step be required, i.e., data extract, transformation and load?

Yes

8.11 Is this replacing an existing solution?

Yes

8.11a Indicate below when the solution being replaced was originally acquired.

"FAST" is a legacy system developed in-house by the agency in 1993 and released into production in approximately 1996.

8.11b Describe the planned disposition of the existing technology below, e.g., surplused, retired, used as backup, used for another purpose:

Retired

8.12 Describe how the agency determined the quantities reflected in the PIJ, e.g., number of hours of P&OS, disk capacity required, number of licenses, etc. for the proposed solution?

This information was determined through a review of the current systems and discussion with system end-users.

8.13 Does the proposed solution and associated costs reflect any assumptions regarding projected growth, e.g., more users over time, increases in the amount of data to be stored over 5 years?

Yes

8.14 Does the proposed solution and associated costs include failover and disaster recovery contingencies?

Yes

8.14a Please select why failover and disaster recovery is not included in the proposed solution.

8.15 Will the vendor need to configure the proposed solution for use by your agency?
Yes

8.15a Are the costs associated with that configuration included in the PIJ financials?
Yes

8.16 Will any app dev or customization of the proposed solution be required for the agency to use the project in the current/planned tech environment, e.g. a COTS app that will req custom programming, an agency app that will be entirely custom developed?
No

8.16a Will the customizations inhibit the ability to implement regular product updates, or to move to future versions?

8.16b Describe who will be customizing the solution below:

8.16c Do the resources that will be customizing the application have experience with the technology platform being used, e.g., .NET, Java, Drupal?

8.16d Please select the application development methodology that will be used:

8.16e Provide an estimate of the amount of customized development required, e.g., 25% for a COTS application, 100% for pure custom development, and describe how that estimate was determined below:

8.16f Are any/all Professional & Outside Services costs associated with the customized development included in the PIJ financials?

8.17 Have you determined that this project is in compliance with all applicable statutes, regulations, policies, standards & procedures, incl. those for network, security, platform, software/application &/or data/info found at aset.az.gov/resources/psp?
Yes

8.17a Describe below the compliance issues that were identified and how they have been/will be resolved, or whether an ADOA-ASET representative should contact you:

8.18 Are there other high risk project issues that have not been identified as part of this PIJ?
No

8.18a Please explain all unidentified high risk project issues below:

9. SECURITY

9.1 Will the proposed solution be hosted in a vendor managed environment?

Yes

9.1a Please select from the following vendor-hosted options:

Other - Describe Environment below

9.1b Describe the rationale for selecting the vendor-hosted option below: Ex. following cloud smart goal, lower cost?.....

The software selected meets the ITG/State standard for software being a SaaS/cloud based solution.

9.1c Has the agency been able to confirm the long-term viability of the vendor hosted environment? Ex. is the
environment setup in an efficient and effective way-/-Has a cloud specialist reviewed the environment (Agency is mainly focused on cost of operation)

Yes

9.1d Has the agency addressed contract termination contingencies, e.g., solution ownership, data ownership, application portability, migration plans upon contract/support termination?

Yes

9.1e Has a Network Architecture Diagram and/or System Security Plan (draft or finalized version) being provided and reviewed by AZDOHS?

No

9.1f Has the spreadsheet located at https://azdohs.gov/sites/default/files/azramp-level-1-prerequisite-control-sheet_0.xlsx already been completed by the vendor and approved by AZDOHS?

No

9.2 Will the proposed solution be hosted in a state managed environment?

No

9.2a Where will the on-premise solution be located:

9.2b Were vendor-hosted options available and reviewed?

9.2c Describe the rationale for selecting an on-premise option below:

9.2d Will any data be transmitted into or out of the agency's on-premise environment or the State Data Center?

9.3 Will any Confidential state data as defined in the 8110 Statewide Data Classification Policy be

transmitted, stored, or processed within this system?
Yes

9.3a Describe below what security infrastructure/controls are/will be put in place to safeguard this data:
The solution is vendor-hosted and has FedRAMP Authorization, ensuring that state data will be protected/safeguarded.

10. AREAS OF IMPACT

Application Systems
Other

Configuration of a SaaS based construction project management and materials testing solution, with integrations developed with ADOT systems, AZ360 and other ADOT partner systems. SaaS solution has a mobile application for use by ADOT construction staff.

Database Systems
MS SQL Server

Software
COTS Application Acquisition

Hardware
Other

N/A

Hosted Solution (Cloud Implementation)
Amazon (AWS) GovCloud

Security
Firewall

Telecommunications

Enterprise Solutions
Other

Contract Services/Procurements

11. FINANCIALS

Description	PIJ Category	Cost Type	Fiscal Year Spend	Quantity	Unit Cost	Extended Cost	Tax Rate	Tax	Total Cost
Subscriptions/Licensing	Software	Development	1	1	$497,238	$497,238	860.00%	$42,762	$540,000
Professional Services: Release 1 Milestones	Professional & Outside Services	Development	1	1	$80,425	$80,425	0.00%	$0	$80,425
Independent Verification & Validation (IV&V)	Professional & Outside Services	Development	2	4	$53,750	$215,000	0.00%	$0	$215,000
Professional Services: Release 2 Milestones	Professional & Outside Services	Development	2	1	$485,858	$485,858	0.00%	$0	$485,858
Subscriptions/Licensing	Software	Development	2	1	$828,729	$828,729	860.00%	$71,271	$900,000
Professional Services: Release 1 Milestones	Professional & Outside Services	Development	2	1	$3,881,936	$3,881,936	0.00%	$0	$3,881,936
Professional Services: Release 3 Milestones	Professional & Outside Services	Development	3	1	$269,226	$269,226	0.00%	$0	$269,226
Subscriptions/Licensing	Software	Development	3	1	$866,575	$866,575	860.00%	$74,525	$941,100
Professional Services: Release 1 Milestones	Professional & Outside Services	Development	3	1	$241,274	$241,274	0.00%	$0	$241,274
Professional Services: Release 2 Milestones	Professional & Outside Services	Development	3	1	$2,554,530	$2,554,530	0.00%	$0	$2,554,530
Independent Verification & Validation (IV&V)	Professional & Outside Services	Development	3	4	$55,000	$220,000	0.00%	$0	$220,000
Independent Verification & Validation (IV&V)	Professional & Outside Services	Development	4	3	$55,000	$165,000	0.00%	$0	$165,000
Professional Services: Release 3 Milestones	Professional & Outside Services	Development	4	1	$1,836,215	$1,836,215	0.00%	$0	$1,836,215
Subscriptions/Licensing	Software	Development	4	1	$866,575	$866,575	860.00%	$74,525	$941,100
Subscriptions/Licensing	License & Maintenance Fees	Operational	5	1	$892,541	$892,541	860.00%	$76,759	$969,300

Base Budget (Available)	Base Budget (To Be Req)	Base Budget % of Project
$14,165,963	$0	100%
APF (Available)	**APF (To Be Req)**	**APF % of Project**
$0	$0	0%
Other Appropriated (Available)	**Other Appropriated (To Be Req)**	**Other Appropriated % of Project**
$0	$0	0%

Federal (Available)	Federal (To Be Req)	Federal % of Project
$0	$0	0%
Other Non-Appropriated (Available)	**Other Non-Appropriated (To Be Req)**	**Other Non-Appropriated % of Project**
$0	$0	0%

Total Budget Available	Total Development Cost
$14,165,963	$13,271,663
Total Budget To Be Req	**Total Operational Cost**
$0	$969,300
Total Budget	**Total Cost**
$14,165,963	$14,240,963

12. PROJECT SUCCESS

Please specify what performance indicator(s) will be referenced in determining the success of the proposed project (e.g. increased productivity, improved customer service, etc.)? (A minimum of one performance indicator must be specified)

Please provide the performance objective as a quantifiable metric for each performance indicator specified.
Note: The performance objective should provide the current performance level, the performance goal, and the time period within which that performance goal is intended to be achieved. You should have an auditable means to measure and take corrective action to address any deviations.
Example: Within 6 months of project completion, the agency would hope to increase "Neighborhood Beautification" program registration by 20% (3,986 registrants) from the current registration count of 19,930 active participants.

Performance Indicators

KPI #1

Decrease in approval time for contractor prequalification applications because of enhanced tools in CPDS for managing the prequalification process. This will result in improved service to ADOT's construction contract partners and allow more contractors the potential opportunity to submit bids on projects, resulting in greater industry competition. With implementation of CPDS Release 1, the number of days for application approvals will decrease of 30% from an average of 86 days to 60 days. Achievement of this KPI is expected within one-year of CPDS Release 1 Go-Live.

KPI #2

Reduction, because of improved collaboration tools within the new CPDS system, in the number of disputes between ADOT and construction contractors which are escalated from the project level to the district and/or ADOT HQ level for further analysis and resolution due to improved collaboration tools within the new CPDS system. This

improvement in collaboration between ADOT and construction contractors should result in improved adherence to project schedules and as a result timely completion of construction projects to the benefit of the traveling public. ADOT expects a 33% reduction in the number of contracts being escalated from the project level to district and/or ADOT HQ level from an average of 12 per year to a maximum of 8 per year following implementation. This KPI is expected to be achieved within one year of implementation of Release 2 of CPDS.

KPI #3

Reduction in the time required to record and verify the assets built or refurbished during a construction project and store this information in the asset registry for use during maintenance of the transportation asset through the capture of asset and related information via daily recordkeeping during the construction process. Based on new capabilities in CPDS, we would expect the average number of hours required to onboard the assets from a completed construction project into the asset registry to be reduced on average by 75% from 80 hours currently to 20 hours after CPDS Release 2 is implemented. KPI will be achieved within one-year of CPDS Release 2 implementation (in conjunction with implementation of new MMS as part of the future Phase 2).

Responsible Owner for KPI
Jim Windsor

Email Address
jwindsor@azdot.gov

13. CONDITIONS

Conditions for Approval
Should development costs exceed the approved estimates by 10% or more, or should there be significant changes to the proposed technology scope of work or implementation schedule, the Agency must amend the PIJ to reflect the changes and submit it to ADOA-ASET, and ITAC if required, for review and approval prior to further expenditure of funds.

Monthly reporting on the project status is due to ADOA-ASET no later than the 15th of the month following the start of the project. Failure to comply with timely project status reporting will affect the

overall project health. The first status report for this project is due on July 15, 2025.

Prior to system production environment launch or go live, the Agency must work with the Department of Administration (ADOA) and Department of Homeland Security (AZDOHS) Cyber Command, to assure the System Security Plan document is completed and approved by Cyber Command in order to ensure that the selected solution will provide an appropriate level of protection for State data.

14. OVERSIGHT SUMMARY

Project Background
What is the role of the agency? What does the agency do?
Creating a transportation system for Arizona that improves the quality of life. To provide a safe, efficient, cost-effective transportation system.
The Arizona Department of Transportation (ADOT) has jurisdiction over state roads, state airports, and the registration of motor vehicles and aircraft.

What problem is the agency resolving with this PIJ?
Replacement of ADOT's outdated Field Office Automation System (FAST) with the solution Aurigo Masterworks, a Capital Project Delivery System (CPDS).

ADOA evaluation:
Replacing the outdated FAST system with the new CPDS aligns with ADOT's role in providing a safe, efficient, and cost-effective transportation system for Arizona by modernizing critical infrastructure management.

Business Justification
Describe the proposed solution to this business needs.
ADOT will replace the FAST system and related systems with a next-generation Capital Project Delivery System (CPDS) that is Aurigo Masterworks.
CPDS will be a commercial off-the-shelf (COTS) software solution.
The solution will be vendor-managed and supported (Deloitte Consulting/Aurigo Masterworks).
CPDS will operate in the cloud as a Software as a Service (SaaS) solution.
CPDS will support the entire capital project delivery lifecycle.
Key functions supported include cost estimation, project letting and award, construction contract management, and materials testing.
The solution will have significant mobile capabilities for construction contract management and materials testing.

How will the proposed solution improve operations? Use quantifiable metrics, if possible.
Increased efficiency in transportation program delivery through fortified core business processes and a modern service delivery framework.
Improved reliability of core business processes.
Enhanced responsiveness to changes in FHWA or State program requirements due to a modern, flexible technology platform.
Improved communication and electronic collaboration with contractors and service delivery partners.
Enhanced information sharing across the enterprise, leading to better consistency, quality, timeliness, and accuracy of information.
Potential reductions in construction contract change orders, claims, project delays, and overruns through more effective contract management and monitoring tools.
Opportunity to redirect staff time in Construction, Finance, and Procurement by capturing more data at the source and utilizing contractor self-service capabilities.

Modern software platform with improved security and flexibility for the construction program.
Sustainable vendor support (SaaS) for data security and reliability.
Reduction in paper documentation and re-entry of data due to mobile capabilities.

How does implementing this solution benefit the State?
Significant reduction in business risk to ADOT and the State of Arizona by replacing the FAST system.
Positions ADOT to further streamline and automate the delivery of its capital construction program.
Aligns with the overall ADOT department-wide digital delivery initiative.
Potential for cost savings through reductions in change orders, claims, delays, and overruns.
More efficient use of state resources by redirecting staff time.
Ensures a secure and reliable platform for managing critical construction program data.

ADOA evaluation:
The proposed CPDS solution offers a modern, cloud-based platform to streamline ADOT's capital project delivery, enhance efficiency, and reduce risks associated with the current FAST system.

Implementation Plan
Fedramp, No AZRAMP required. SSP required. Milestone added.
Project Manager: Robert Cooney
Responsible Owner for KPI: Jim Windsor

Agency Responsibilities:
ADOT Project Sponsor - Responsible for the budget, approval of the project deliverables and issue resolution.
ADOT Project Steering Committee – Responsible for providing guidance and oversight of the implementation effort and assisting with the resolution of cross-functional issues.
Project Manager - Responsible for day-to-day management of the project including planning and managing ADOT resources assigned to the project, maintaining the overall project work plan and overseeing the work of the selected system integrator.

Project Management Methodology - An Agile/Scrum hybrid methodology will be utilized. Each of the three releases will start with confirmation of requirements and development of configuration specifications which outline the configuration required to the CPDS software to implement the requirements. Configuration will then be performed in three-week sprints, with sprint demos and sprint testing occurring at the end of the configuration cycle. After all configuration is completed, system integration test (SIT) will be performed to test out the system with integration points and then user acceptance test (UAT) will be conducted. At least two mock conversions will be performed, with the mock conversion occurring at the start of SIT and UAT respectively.

Cutover Plan:
The approach and timing of data migration will vary by release. For Release 1 (Preconstruction), all required migration will take place at Go-Live. Data migration for Release 1 will include static data such as contract specifications, contract items, historical bid prices, prequalified contractor information, etc. It will also include project specific information for all projects that are open and being prepared for advertisement in FAST at the time of Go-Live.
For Release 2 (Construction Management), we are planning at Go-Live to start with new projects that would have been recently awarded through CPDS Release 1 functionality (since Release 1 will be going live approximately 4 months ahead of Release 2). Then, beginning approximately 30 days after Go-Live, we will start migrating the project and contract data associated with open projects from FAST to ADOT, if those projects are not expected to close-out in FAST within a reasonable timeframe (to be confirmed during migration planning but probably all projects still expected to be open by the time Release 3 goes

live at 28 months from NTP).
For Release 3 (Materials Testing), we will be migrating test results for all open projects at Go-Live.
This data migration approach should allow for the sunsetting of FAST as a transactional system following the Release 3 go-live.

Vendor Responsibilities:
System Integrator (Deloitte Consulting, LLP) – Firm responsible as prime contractor to provide, implement, and operate (for up to ten (10) years) a new Cloud-based SaaS CPDS solution that supports preconstruction management, construction management, and materials testing.
IV&V Consultant – Responsible for monitoring the project per State of Arizona Statutes and Policies.
Vendor Performance Tracking - Vendor performance will be milestone based, being tracked with weekly Vendor and Team meetings, along with payments made based on deliverables in milestones.

ADOA evaluation:
The agency is responsible for budget, deliverable approval, and issue resolution, while the vendor is responsible for system implementation and operation, with an independent consultant monitoring the project.

Vendor Selection
Considered Vendors: RFP sent & response received from: American Assn of State Highway & Transport, ATSER Systems, Keenology Corporation, Deloitte Consulting LLP, eCIFM Solutions Inc
Selected Vendor: Deloitte Consulting
3 Quotes Obtained: N/A
Exception Reason: ADOT Procurement completed an RFP to determine the solution.

Budget or Funding Considerations
100% Base Budget
Start Date: 7/1/2024
End Date: 6/30/2028

15. PIJ REVIEW CHECKLIST

Agency Project Sponsor
Audra Merrick

Agency CIO (or Designee)
Steve West

Agency ISO (or designee)
Thomas Branham

OSPB Representative

ASET Engagement Manager

ASET SPR Representative
Chris Reynolds

Agency SPO Representative

Agency CFO
Kristine Ward