

Arkansas Department of Transportation
Arkansas Legislative Council
Efficiency Study Recommendations
Rules for Implementation

Monthly Update

May 1, 2023



**ARKANSAS STATE
HIGHWAY COMMISSION**

10324 Interstate 30
Little Rock, AR 72209

INTRODUCTION

Reference is made to the Final Report to the Arkansas Legislative Council by the Highway Commission Review and Advisory Subcommittee's (HCRAS) Study of the Arkansas Department of Transportation dated November 20, 2020 (Report) (see Appendix). In accordance with Act 739 of the 93rd General Assembly, the Arkansas Highway Commission submits these rules to implement the recommendations in the Report.

For ease in reviewing, this document is organized to repeat the recommendation from the Report followed by the proposed rules for implementation. Once the rules are finalized, periodic reporting on the progress of implementation will be submitted to the HCRAS.

Implementation efforts will be underlined the first time they are reported.

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Organizational Structure

Recommendation #1

Finalize KPIs and implement performance management

The Subcommittee recommends ARDOT adopt leading performance management practices to formulate and track a variety of operational effectiveness key performance indicators within a larger performance management framework and finalize those key performance indicators currently in use.

a. Implementation:

- (1) Finalize existing key performance indicators for system condition and preservation and establish a preliminary dashboard;
- (2) Establish baseline performance targets and connect the performance targets to the ARDOT strategic plan; and
- (3) Create and implement a roadmap for a comprehensive performance management plan.

b. Considerations:

- (1) This is a long-term initiative and should be approached in phases;
- (2) This practice should be used to improve the Department and foster collaboration; and
- (3) Communication, training, and change management may be required to socialize a new performance-based approach.

Rules

ARDOT Primary Oversight: Assistant Chief Engineer – Planning

- Establish the ARDOT Key Performance Indicators (KPIs) Oversight Committee. This committee will be made up of senior administration officials. This committee will oversee implementation and long-term management of this recommendation.
 - ✓ This action is now complete.
- As stated in the Final Report, this is a long-term initiative and should be approached in phases. Therefore, the remaining actions for this recommendation will be accomplished in phases which align with the goals in the Strategic Plan, which are:
 - ✓ Provide Safe and Efficient Transportation Solutions;
 - ✓ Accomplish Our Mission with a Focus on Stewardship;
 - ✓ Champion Transportation Solutions that Promote Quality of Life and Economic Development;
 - ✓ Continually Improve Transportation Services and Solutions Through Employee Engagement; and
 - ✓ Maximize External and Internal Customer Satisfaction.

- Hold internal meetings with key ARDOT staff members to finalize development of operational effectiveness KPIs and recommend performance targets for each one that will support and evaluate ARDOT's accomplishment of its Strategic Plan.
 - ✓ The KPI Oversight Committee is developing a survey regarding available Department data including format, update frequency and ownership that will be distributed to Department leadership.
 - ✓ A literature review is also underway regarding best practices in the development and implementation of KPIs.
 - ✓ The committee is reviewing best practices as identified by the Federal Highway Administration (FHWA) and other State Departments of Transportation (DOTs).
 - ✓ Currently, this item is 40 percent complete.
 - ✓ A subcommittee has been created to assist with the implementation of this recommendation.
- Solicit stakeholder comments regarding operational KPIs and performance targets.
 - ✓ The subcommittee completed a review of peer DOTs KPI dashboards.
 - ✓ The subcommittee has recommended a specific dataset for the initial KPI dashboard.
 - ✓ The draft initial KPIs and performance targets have been reviewed by the committee chair.
- Make final adjustments to the operational effectiveness KPIs and performance targets based on the comments received.
- Develop a dashboard to monitor and evaluate how ARDOT is meeting the performance measure for each KPI.
 - ✓ The subcommittee met with an existing vendor regarding software that ARDOT currently uses to determine whether or not that software could be used to develop an effective dashboard for this effort. The subcommittee will investigate further. This investigation will include discussions with peer DOTs regarding their experience.
 - ✓ The subcommittee has recommended the use of Microsoft Power BI as the reporting tool for the KPI dashboard. Since the Department currently uses this software for other applications, we are evaluating the need for upgrades in order to accomplish this recommendation.
 - ✓ Development of the KPI webpage has begun.
- Develop annual review to identify successes and address areas of needed improvement.

Recommendation #2

Strengthen knowledge management in anticipation of increased retirement

The Subcommittee recommends adopting leading practices regarding knowledge management and preservation in anticipation of increased personnel retirement to allow ARDOT to mitigate knowledge loss due to turnover, identify operational efficiencies, and improve succession planning and training

a. Implementation:

- (1) Identify near-term “At Risk” business practices;
- (2) Initiate near-term succession planning activities;
- (3) Lay groundwork for more formal knowledge management system; and
- (4) Implement systems to sustain the desired change.

b. Considerations:

- (1) New IT systems and software may be required to support standard operating procedure creation and centralize content;
- (2) Updating and creating new standard operating procedures can be a significant undertaking, however using a comprehensive inventory will help ARDOT prioritize; and
- (3) Leadership support and change management may be needed for lasting change.

Rules

Primary Oversight: Assistant Chief – Administration

- The ARDOT Human Resources Division has been assigned the responsibility to oversee the implementation and long-term management of ARDOT’s Knowledge Management Program.
 - ✓ This action is now complete.
- Continue reviewing all ARDOT positions to identify which ones are at risk of knowledge loss and identify responsibilities and associated processes, workflows, and critical areas of expertise.
 - ✓ This action is now complete.
 - ✓ Criteria and procedures have been developed which identify positions and key staff members at risk for potential knowledge loss using a Knowledge Risk Matrix.
 - ✓ Criteria used to determine knowledge loss risk include the position’s headcount and grade, and the employee’s years of service and years in the position. Using this multi-point methodology, each employee is rated as high, moderate, low, or no risk.

- ✓ More than 500 employees and approximately 280 job titles have been identified as being at moderate or high risk for knowledge loss. Of those, only about 30 employees were identified as the highest risk of critical knowledge loss.
 - ✓ Every three months, the knowledge loss risk report is regenerated to ensure the data is updated with ARDOT's current workforce.
- Continue with knowledge interviews and further develop methods for knowledge capture of high-risk work responsibilities, processes, and workflows.
 - ✓ This action is 55 percent complete.
 - ✓ Knowledge interviews are routinely conducted with individuals who have been identified as moderate or high risk of knowledge loss, using a three-page questionnaire to determine the primary and secondary duties, equipment used on the job, challenges and how they are overcome, knowledge and skills needed, supervisory duties, unfinished projects and upcoming deadlines, important resources and coworkers, cross-training that has taken place, and advice for others in the position. Priority is given to those individuals who are leaving ARDOT or changing jobs. The information is shared with their managers to ensure a smooth transition when the individual leaves ARDOT or changes jobs.
 - ✓ Since 2018, we have also been participating in the American Association of State Highway and Transportation Officials (AASHTO) Knowledge Management (KM) Subcommittee, where state Departments of Transportations (DOT) share best practices, resources and lessons learned as each develops its own KM program. The information gained from our involvement is used to further develop the program.
 - ✓ Efforts are currently underway to explore options for creating a comprehensive and centralized inventory of standard operating procedures and other information regarding job responsibilities, processes and workflows.
 - ✓ A series of monthly lunch-and-learn sessions with subject matter experts has been developed, as an additional method of sharing knowledge across the agency.
- Identify staff in each Division or District who will be responsible for management of the knowledge captured and transfer of the knowledge to appropriate parties.
 - ✓ This action is 10 percent complete.
 - ✓ For SFY 2024-2025, we submitted a plan to add two Workforce Development Specialists to our staff. Our budget proposal was approved by the full legislature and enacted, so these new staff members will be hired in the future. One of them will help facilitate and coordinate the Knowledge Management program.
- Develop annual review of ARDOT's KM Program to ensure alignment with current processes and workflows.

Portfolio Planning

Recommendation #3

Publish status of construction projects and maintenance activities

The Subcommittee recommends revising ARDOT's existing communication of construction project and maintenance activities to make communication less disjointed and difficult to navigate. Improving the communication and reporting structure can enhance public visibility into, and accountability for, project performance; enhance project delivery; and yield better data to inform planning and budget appropriations.

a. Implementation:

- (1) Inventory current reporting infrastructure;
- (2) Identify and implement short-term reporting enhancements; and
- (3) Lay the groundwork for long-term reporting improvements.

b. Considerations:

- (1) ARDOT does not need to build out an entire platform to rapidly enhance reporting of readily available project status data: leverage existing platforms and tools, such as IDriveArkansas and district office websites; and
- (2) An enterprise level approach will be required to provide true real-time access to project status.

Rules

ARDOT Primary Oversight: Assistant Chief – Administration

- Evaluate existing reporting platforms currently in use and document project information provided through them.
 - ✓ This action is now complete.
- Identify additional project information that could be provided through currently used reporting platforms for construction projects that are under development or have been let to contract and for maintenance projects.
 - ✓ This action is now complete for construction projects. The information for maintenance projects will be developed as the Maintenance Management System (MMS) is developed and implemented.
- Hold internal meetings with key ARDOT staff members to select project information that will be provided and how this information should be presented.
 - ✓ A committee was formed which contains a member of the Department's Administration as well as key staff members. This committee will continue to serve in order to accomplish this recommendation.

- ✓ The Arkansas Highway Commission adopted Minute Order 2022-047 which authorized the Director to issue a Request For Proposals to retain the services of a qualified consultant to accomplish this action.
 - ✓ Five proposals were submitted.
 - ✓ A committee was created to evaluate the proposals in order to select the most qualified consultant to provide this service.
 - ✓ The Arkansas Highway Commission passed a motion at their December 7, 2022 meeting to accept the staff recommendation to enter into negotiations with the selected firm, Garver LLC, to provide these services.
 - ✓ Negotiations are now complete for the contract with Garver LLC to provide these services.
 - ✓ We are compiling the required documents that will be used to obtain public comments regarding the proposed contract. We will also submit these documents to this subcommittee for your review before it is executed.
- Solicit stakeholder comment regarding project information that will be provided and how this information should be presented.
 - Finalize project information that will be provided and how this information should be presented.
 - Since the accomplishment of this recommendation involves information and data that will be provided by implementation of Recommendations 1, 7, and 10, the implementation for this recommendation will be phased to align with when the information and data is available.

Recommendation #4

Implement a platform that tracks all stakeholder inquiries to resolution

The Subcommittee recommends ARDOT implement a process to track all stakeholder inquiries from receipt to resolution. ARDOT primarily manages customer service by providing the public direct access to staff with no uniform process for documentation of the inquiry or response. Leading customer services practices suggest that ARDOT can improve its customer service, while simultaneously reducing the cost to the Department and finding new Department-wide operational efficiencies.

a. Implementation:

- (1) Understand customer, stakeholder, and public needs;
- (2) Define a new customer experience vision;
- (3) Lay the groundwork for a new service approach, including adoption of a customer relationship management tool; and
- (4) Create and execute on implementation plan; and measure and communicate customer service performance.

b. Considerations:

- (1) Clear vision, leadership buy-in;
- (2) Upfront investment for future return on investment;
- (3) Project Manager passionate about customer service;
- (4) Right technology application identified early in the process; and
- (5) In a phased approach, transition “services” not divisions.

Rules

ARDOT Primary Oversight: Assistant Chief – Administration

- Establish the ARDOT Customer Service Oversight (ACSO) Committee. This committee will include at least one senior administration official and oversee implementation and long-term management of this recommendation.
 - ✓ This action is now complete.
- Hold internal meetings with key ARDOT staff members and evaluate existing resources to identify the quantity, scope, and type of customer inquiries.
 - ✓ Internal meetings with all Division Heads and District Engineers have now been held.
 - ✓ Comments received from the Division Heads and District Engineers are now under evaluation to identify the quantity, scope, and type of customer inquiries.
 - ✓ Additional internal meetings were held with representatives from all Divisions and Districts.

- ✓ In total, 294 Department staff members attended one of these meetings.
- ✓ Comments from these meetings are being compiled to identify the quantity, scope, and type of customer inquiries.
- ✓ This action is now complete. Adjustments, if needed, will be made as we continue to refine the system.
- Conduct a targeted survey of ARDOT inquiries to assess customer's needs and create an analysis of their needs.
 - ✓ As we began to develop a survey, we realized that many of our staff were not aware of the GovQA's system capabilities. Therefore, the decision was made to hold meetings with Department staff to assess our customer's needs and create an analysis of their needs.
 - ✓ This action is now complete.
- Use the results of the internal meetings and the analysis of ARDOT customer's needs to establish goals for customer experience.
 - ✓ Comments from the meetings with Department staff, which included 294 employees, are being compiled to identify the quantity, scope, and type of customer inquiries.
 - ✓ On January 30, 2022, the GovQA system was made available to our staff for their use in a test environment.
 - ✓ On February 6, 2023, the GovQA was moved into production. Our staff will use the system for actual contacts made from the public and we will evaluate how well the system meets the customer's needs. Adjustments, if needed, will be made based on the comments received during this time.
 - ✓ Currently, we are 90 percent complete with this action.
- Solicit stakeholder comments regarding the establish goals for customer experience.
- Select a consultant to provide software which can be integrated into our website that will provide ARDOT the ability to input, track, and document the processing and response to customer inquiries.
 - ✓ We have completed an evaluation of customer service systems utilized by other agencies such as the City of Portland and the City of Philadelphia, which were identified as a leading practice by Guidehouse, and the Florida Department of Transportation (FDOT).
 - ✓ As part of this evaluation, we have attended on-line webinars held by the FDOT and by the consultant that developed the system FDOT has implemented, which is GovQA.
 - ✓ Therefore, the committee has recommended and the Department has executed a contract with GovQA to provided services to accomplish this recommendation.
 - ✓ The estimated cost for GovQA to provide the software and training is less than \$50,000.

- The consultant provided software will also be developed to provide a reporting structure that can be used to provide summarized information regarding customer inquiries to ARDOT administration and the public.
 - ✓ Efforts have just been initiated by GovQA to identify their team that will provide training and implement this software for the Department.
 - ✓ Development of a reporting structure is now underway. We are currently 20 percent complete with this action.
- Establish metrics and performance measurements to evaluate accomplishment of customer service goals.

Procurement

Recommendation #5

Implement efficiencies in procurement and purchasing

The Subcommittee recommends ARDOT optimize and standardize procurement and purchasing procedures. ARDOT may more effectively use resources and maximize costs savings Department-wide – including and beyond construction procurement with documented and standardized procurement procedures.

a. Implementation:

- (1) Use data-driven approaches like spend analysis and lifecycle costing to inform procurement and purchasing decisions;
- (2) Standardize usage of project acceleration techniques, procurement methods, and delivery methods; and
- (3) Push efficiencies to districts.

b. Considerations:

- (1) IT systems to track data;
- (2) Staff capacity and expertise to conduct data analysis;
- (3) Assignment of responsibility between districts and divisions; and
- (4) Change management to shift culture from low bid to best value.

Rules

ARDOT Primary Oversight: Deputy Director & Chief Engineer/Assistant Chief – Administration.

Procurement of Construction Projects

- Select focus areas to evaluate related to this portion of the recommendation. Consideration should be given to change orders, cost estimates, and project delivery methods.
 - ✓ This action is complete.
 - ✓ We established a focus group to identify areas to have improved efficiency for procurement of construction projects. The group focused on these areas:
 - Developing a guide for the selection of procurement and delivery methods;
 - Standardizing the use of project acceleration techniques; and
 - Conducting change order studies.
- Identify needed data to be able to evaluate the current processes and procedures used in the focus areas.
 - ✓ This action is complete.

- If any needed data is not currently tracked, identify and implement methods of capturing it.
- Perform evaluation of current processes and procedures used with respect to the focus areas and document the practices that yield the best benefits.
 - ✓ Procurement and Delivery Method Guide
 - Development of the guide is underway.
 - A survey regarding Project Delivery Selection tools (PDS) was developed and sent to DOTs, local agencies and transit authorities. Based on survey responses, ARDOT will select three to five agencies and request more information about their PDS tools.
 - Three agencies were selected to be interviewed. They are the Minnesota DOT, Washington DOT and North Carolina DOT.
 - Interviews have been held with the Minnesota DOT and Washington DOT.
 - Currently, we are 50 percent complete with this action.
 - ✓ Standardizing the Use of Project Acceleration Techniques
 - A survey regarding the use of project acceleration techniques in surrounding and peer Departments of Transportation has been conducted. The survey results indicate that ARDOT has embraced and is utilizing project acceleration techniques at a higher rate than the other states surveyed. ARDOT will continue to explore other tools or methods as they are identified.
 - A literature review is underway. National Cooperative Highway Research Program (NCHRP) publications are being reviewed for best practices.
 - The results of the survey and the NCHRP responses and findings have been summarized and are currently under review for insight into the use of standardized project acceleration techniques.
 - Currently, we are 75 percent complete with this action.
 - ✓ Change Order Studies
 - Construction related data from ARDOT's AASHTOWare system is being mined for information that could lead to project design or administrative changes in the future.
 - Currently, we are 30 percent complete with this action.
- If needed, implement new or improved processes and procedures that yield the best benefits.

Procurement of Equipment and Materials

- Select focus areas to evaluate related to this portion of the recommendation. Consideration should be given to supply and demand trends, term contracts, commodity price changes, ownership cost, procurement procedures, and purchasing methods.
 - ✓ While we have identified some focus areas, this action is currently 80 percent complete.
 - ✓ We have added new supply and term contracts for our Heavy Bridge Maintenance

Section to take advantage of supply and demand trends in a volatile market.

- ✓ We have increased our use of the Request for Proposals process for vendor selection and procurement. Specifically, in the professional services arena. This allows us to incorporate the total cost of ownership into the evaluation criteria.
- ✓ Through the Oracle fusion procurement cloud service audit process, we are now able to track purchasing by procurement codes and by vendor.
- Identify needed data to be able to evaluate the current processes and procedures used in the focus areas.
 - ✓ The implementation of the Oracle Fusion Procurement Cloud Service will identify and provide additional data that is needed to accomplish this action.
 - ✓ We have implemented an Oracle Fusion Procurement Cloud Service audit process that allows for daily reviews of purchasing requisitions. This process is being used to assist in accomplishing this action, which is now a standard procedure for us.
- If any needed data is not currently tracked, identify and implement methods of capturing it. This will include the implementation of a software to move ARDOT to electronic bidding for equipment and materials.
 - ✓ We have initiated implementation of on-line bidding software for our equipment and materials. As part of this implementation, we have attended on-line webinars for training held by the InfoTech, Inc., which is the same consultant that provides on-line bidding services for our construction projects. We have completed the training and have now moved to testing the software.
 - ✓ We are now using on-line bidding for 100 percent of our bids and contracts. We will continue to incorporate lessons learned to ensure success once we are fully on-line bidding.
 - ✓ We are tracking and documenting our Heavy Bridge Maintenance bids and contracts.
 - ✓ Through our online bidding process, we are now able to reach more bidders and we can track who has viewed our bid advertisements, which is now a standard procedure for us.
 - ✓ We are tracking and documenting our equipment contracts for percent over or under cost estimates, which is now a standard procedure for us.
- Perform evaluation of current processes and procedures used with respect to the focus areas and document the practices that yield the best benefits.
 - ✓ This action is now underway.
 - ✓ We are tracking and documenting our most volatile commodity price changes to identify practices that yield the best benefits, which is now a standard procedure for us.
 - ✓ We are tracking and documenting our mowing contracts for percent of increase or decrease from the previous contract period, which will become a standard procedure for us.

- If needed, implement new or improved processes and procedures that yield the best benefits.
 - ✓ We are updating our *Purchasing and Disposal Process and Procedures* manual which will formalize and enhance statewide oversight by our Equipment and Procurement Division. Currently, we are 80 percent complete with this update.

Recommendation #6

Implement construction contractor performance measurement

The Subcommittee recommends a construction contractor performance score. ARDOT rigorously monitors contractor quality through inspections, but lacks a tool to screen for contractor quality during procurement. By implementing performance-based scoring, ARDOT may improve work quality, safety, and timeliness; reward high-performing contractors; and encourage low-performers to improve.

a. Implementation:

- (1) Identify quality indicators (i.e., repeated disincentives, claims, change orders, delays);
- (2) Develop scoring system to quantify performance; and
- (3) Track and monitor performance, using indicators and costs. In monitoring contractor performance, the recommendation of the Subcommittee is that the Department coordinate with county judges, mayors, and other municipal leaders to receive feedback regarding contractors performing work for the Department in the municipal leader's jurisdiction.

b. Considerations:

- (1) Consider impact for both small and large contractors;
- (2) Emphasize quantitative approach to minimize any appearance of subjectivity in scoring;
- (3) Consider an appeals process for contractors to counter scores; and
- (4) Ensure contractors have a clear path to raise their scores

Rules - Rule change based on public comment.

ARDOT Primary Oversight: Deputy Director & Chief Engineer

- Establish the Contractor Performance Evaluation Committee (CPEC) to include ARDOT staff and two representatives from the highway contracting industry. Members should have work experience needed to oversee the development, implementation and long-term management of this recommendation.
 - ✓ The Arkansas Asphalt Paving Association has selected Brad Marotti, from Delta Asphalt, to serve on the Committee.
 - ✓ The Arkansas Association of General Contractors has selected Paul Drury, from Capital Midsouth, to serve on the Committee.
 - ✓ This action is now complete.

- Identify metrics that define quality and desired performance of the prime contractor for construction projects.
 - ✓ The CPEC Committee has completed its review of best practices from other State DOTs. As part of this, the Committee participated in a Federal Highway Administration Virtual Peer exchange on May 12, 2022. The following State DOT's also participated in this peer exchange: New Mexico, Arizona, California, and Virginia.
 - ✓ This action is now complete.
- Establish how each metric will be used to evaluate the prime contractor.
 - ✓ Currently, we are 65 percent complete with this action.
- Develop a form which will be used by the ARDOT Resident Engineer and appropriate stakeholders to document their evaluation of the prime contractor.
 - ✓ The committee reviewed specific Contractor evaluation forms from other State DOT's and has agreed to utilize Washington State DOT's guidelines and form as a baseline for ARDOT's form. The committee will continue evaluation of this form and guidelines to customize for ARDOT use.
 - ✓ Currently, we are 65 percent complete with this action.
- Establish the process of compiling the completed evaluations into the project's final evaluation of the prime contractor.
 - ✓ Currently, we are 25 percent complete with this action.
- Establish a review and appeal process of the project's final evaluation of the prime contractor that is accomplished and completed prior to the results of the evaluation being published.
 - ✓ This action is now complete.
- Develop guidance for the type or size of projects where this evaluation will not be used.
 - ✓ Currently, we are 20 percent complete with this action.
- Solicit stakeholder comments regarding the identified process for this recommendation.
 - ✓ This effort is continually ongoing through comments and feedback from Industry, by including one committee member representing Arkansas Asphalt Paving Association, and one committee member representing The Arkansas Association of General Contractors.
- Finalize the process for this recommendation.

Expenditures

Recommendation #7

Implement project and portfolio management frameworks

Subcommittee recommends adopting a project and portfolio management framework. ARDOT's pre-construction, construction and maintenance Project Portfolio Management systems vary in maturity. Enhancing these systems with leading Project Portfolio Management practices and a Project Management Office may allow ARDOT to more effectively budget, plan, execute, and communicate on its portfolio of construction projects and maintenance activities.

a. Implementation:

- (1) Catalog existing Project Portfolio Management capabilities and identify baseline and target;
- (2) Identify gaps in Project Portfolio Management (e.g. pre-construction resource planning);
- (3) Establish a Project Management Office and Governance, and build on existing strengths and capabilities; and
- (4) Phase deployment, develop tools, and train staff members.

b. Considerations:

- (1) Will require Department-wide effort to unify disparate initiatives and assets and build out Project Portfolio Management framework; a qualified vendor can expedite this process;
- (2) Implementation of Project Portfolio Management/project management office will be perceived as overhead, but will yield long-term benefits; and
- (3) Change management and new IT applications may be required.

Rules

ARDOT Primary Oversight: Deputy Director & Chief Engineer

Construction Projects

- Evaluate the need for a Construction Project Management Office.
 - ✓ The Program Management Division currently serves as the Project Management Office (PMO) for pre-construction projects while Construction Division currently serves as the PMO for construction projects. The noted Divisions will continue in their assigned roles as this recommendation is implemented.
 - ✓ This action is complete.

- Review existing planning and project management protocols currently in use by ARDOT to determine the software used and their capabilities for construction projects.
 - ✓ A new software system has been implemented to assist with the planning of projects. This system allows for suggested projects to be entered into a database which streamlines the project submission process. This software will be enhanced as part of this recommendation.
 - ✓ Additionally, the software used to track pre-construction project development activities has recently been enhanced to provide additional data, which will also be incorporated into this recommendation.
 - ✓ This action is complete.
- Prepare a comparison of the planning and project management protocols currently in use by ARDOT for construction projects against systems and processes used by other state DOTs to identify potential benefits from the implementation of the identified systems.
 - ✓ This action is complete.
- Select identified systems and processes for implementation.
 - ✓ Efforts are underway to enhance our current construction project documentation software, AASHTOWARE Project. This software has been developed in collaboration with other state Departments of Transportation. The new web-based system will provide additional reporting tools for project monitoring. Currently, we are working with our consultant, InfoTech, Inc., to complete customization of the software, identification, and implementation of needed changes to our current procedures while we work toward completing this upgrade.
 - ✓ Enhancement of the AASHTOWARE Project software identified the need to develop on-line forms to be used by our staff to document construction project activities.
 - ✓ Currently, we are 67 percent complete with this action.
- Coordinate implementation of the selected systems and processes with implementation of recommendation three to enhance publication of the status of construction projects.
- Provide needed training to implement the selected systems and processes.

Maintenance Projects

- Evaluate the need for a Maintenance Project Management Office.
 - ✓ The Maintenance Division currently serves as the PMO for maintenance projects. They will continue in their assigned role as this recommendation is implemented.
 - ✓ This action is complete.
- Finalize the review of existing planning and project management protocols currently in use by ARDOT to determine the software used and their capabilities for maintenance projects.
 - ✓ Efforts are underway to develop and implement our Maintenance Management System (MMS). As part of this effort, we participated in a Domestic Scan Peer Exchange with other State Departments of Transportation (DOT) to learn how they

utilize software to manage their maintenance efforts based on asset condition. We have met with the following DOTs: North Carolina, Mississippi, and Louisiana, and visited onsite with the Texas to evaluate how each state uses MMS to accomplish maintenance projects. We have also evaluated National Cooperative Highway Research Program (NCHRP) reports to assist in our development of how we will use our MMS to manage our maintenance projects.

- ✓ In November 2021, the Commission selected Data Transfer Solutions, LLC to provide this system.
- ✓ Negotiations with Data Transfer Solutions, LLC have been completed.
- ✓ The contract was submitted to this Subcommittee on August 25, 2022. The Subcommittee considers this contract to be reviewed.
- ✓ The Department has now executed our contract with Data Transfer Solutions, LLC to implement this software.
- ✓ This action is now complete.
- Prepare a comparison of the planning and project management protocols currently in use by ARDOT and those that will be provided by the MMS for maintenance projects against systems and processes used by other state DOTs to identify potential benefits from the implementation of the identified systems.
 - ✓ This action is now complete.
- Select identified systems and processes for implementation.
 - ✓ This action is underway and will continue as we implement the MMS.
 - ✓ Currently, we are 24 percent complete with this action.
- Coordinate implementation of the selected systems and processes with implementation of Recommendation 3 to enhance publication of the status of maintenance projects.
- Provide needed training to implement the selected systems and processes.

Recommendation #8

Implement best practices in construction project design

The Subcommittee recommends adopting, implementing, and documenting best practices in construction project design. ARDOT lacks formal frameworks to ensure the consistent use of best practices in construction design, limiting their ability to demonstrate cost savings and strengthen institutional knowledge. By adopting and documenting such procedures, ARDOT may reduce project costs and improve achievement of system targets.

a. Implementation:

- (1) Develop formal framework around use of performance-based practical design;
- (2) Conduct value engineering earlier in design (i.e., at 30 percent complete) and more often; and
- (3) Evaluate gap between original bid and final payment amounts to inform best practices in design.

b. Considerations:

- (1) Not all projects are well suited to or would benefit from such approaches; frameworks should identify when to use them; and
- (2) ARDOT is already employing many of these practices, so implementing recommendation will not require creation of new technical practices; rather, formalizing and documenting existing practices.

Rules

ARDOT Primary Oversight: Assistant Chief Engineer – Design

- Establish formal procedures for practical design, value engineering, and a comparison of engineer's estimates against final cost.
 - ✓ Practical Design – The formalization of this process is underway. Currently, we are 85 percent complete.
 - ✓ Value Engineering – While Value Engineering of projects was being accomplished according to FHWA guidelines, the Design Staff revisited the process and has made the following updates and additions:
 - The Value Engineering Guidelines and Procedures Manual was updated and distributed October 2021 encouraging additional projects that have the highest potential for value improvements be considered for the Value Engineering process. The additional screening criteria included, but was not limited to, the following:
 - More than one alternative solution
 - Relative complexity in design
 - Accelerated time schedule in planning and design phases

- Opportunity for implementation of state-of-the-art practices
 - Complicated maintenance of traffic requirements
- A Value Engineering Flow Chart was developed to aid Engineers in determining when a project meets the criteria for Value Engineering.
- An additional entry has been added to the Design Decision Document stating the results of the Flow Chart determination.
- Additional entries will be made in the ARDOT Staff Minutes alerting staff of the Value Engineering requirements for each project.
- ✓ Comparison of the Engineer's Estimate Against Final Cost
 - Design Staff will continue to review the overruns and underruns of contract pay items when the project is completed and finalized. Any revisions to current design practices, deemed necessary by the Roadway Design Engineer, will be submitted in writing to the Assistant Chief Engineer - Design for review.
- Establish the analysis which will identify benefits, cost savings, and return of investment from the use of practical design, value engineering, and a comparison of engineer's estimates against final cost.
 - ✓ Design Staff have begun to record cost savings from the implementation of practical design elements during the design process. This is accomplished through the use of a Microsoft Access database which will enhance our ability to perform analysis of the data. The staff will expand the recording of cost savings to the Value Engineering process if those savings ever present themselves.
 - ✓ Cost Savings realized in 2021 was \$116 million.
 - ✓ Cost Savings realized in 2022 was \$59 million.
 - ✓ Cost Savings realized to date in 2023 is \$15 million.
- Establish processes which will identify needed changes to design approach for projects most likely to have change orders that exceed estimated completion dates, and are likely to benefit from practical design solutions.
 - ✓ We are currently developing a Constructability Review Procedures Manual that will establish uniform policies and procedures for Constructability reviews within the Arkansas Department of Transportation.

Information Technology

Recommendation #9

Build an IT Governance Structure to guide to the Department's IT investments

The Subcommittee recommends building an information technology governance structure to determine ARDOT's IT investments. ARDOT's IT investments have grown 155 percent since FY 2016 to

\$23M in FY 2020 under unclear enterprise level guidance. Leading practices suggest that establishing a formal governance structure will enable the IT Division of ARDOT to support business objectives, help optimize ARDOT operations, manage enterprise risk, and meet internal and external stakeholder needs.

a. Implementation:

- (1) Lay the groundwork to establish a robust governance structure;
- (2) Establish a governance structure that identifies a cross-section of business and IT personnel to create a charter and decision making framework; and
- (3) Create and execute on a governance roadmap; measure and communicate progress

b. Considerations:

- (1) This is an ongoing process;
- (2) Leadership support is needed;
- (3) Emphasize how IT enables business performance and reduces risk; and
- (4) Cascading of enterprise level goals through the IT Division to actual underlying processes.

Rules

ARDOT Primary Oversight: Assistant Chief – Administration

- Establish an Information Technical (IT) Governance Committee made up of ARDOT leadership including the appropriate Assistant Chiefs and Division Head that reports through the Deputy Director and Chief Operating Officer to the Director.
 - ✓ This action is now complete. The committee has held meetings to begin the implementation of this recommendation. We have also meet with all District Engineers and Division Heads to discuss and inform them of the goals of this committee.
- Establish a framework and charter for the committee.
 - ✓ Meetings were held during in June 2022 to develop a draft framework and charter for the committee.
 - ✓ The Committee adopted the final version of the framework and charter at their meeting in October 2022.

- Establish governance focus areas and priorities.
 - ✓ Meetings were held during the week of June 6, 2022 to begin identification of focus areas and priorities for the committee.
 - ✓ The Committee adopted focus areas and priorities at their meeting in October 2022.
- Establish needed subcommittees to address each focus area.
 - ✓ The IT Governance Committee determined that subcommittees are not needed at this time. Therefore, this action is complete.
- Establish a framework and charter for each subcommittee.
 - ✓ Since no subcommittees are needed at this time, this action is completed.
- Establish frequency for committee and subcommittee meetings.
 - ✓ The Committee established the frequency of their meetings at their meeting in October 2022.
- Identify KPIs to evaluate performance.

Recommendation #10

Implement mid-term IT initiatives that can optimize business operations

The Subcommittee recommends the adoption of information technology initiatives that optimize business operations. ARDOT spends ~\$5.3M on software applications and has 300+ databases. Implementing leading data management and software application rationalization practices can deliver cost savings and unlock data value.

a. Implementation:

- (1) Build a software application and database inventory;
- (2) Assess and score each software application and database;
- (3) Identify target state for each application and database; and
- (4) Build phased roadmap for migration processes.

b. Considerations:

- (1) Requires upfront investment to yield mid-to long-term savings;
- (2) Requires leadership buy-in and change management to overcome resistance and assist staff in shifting to a new model;
- (3) Requires software application such as the planned information technology service management tool; and
- (4) Requires implementation plan for continuity of operations.

Rules

ARDOT Primary Oversight: Assistant Chief – Administration

- Determine preliminary ARDOT data governance and application development standards.
 - ✓ This action is now complete.
- Complete the existing application and database inventory including known policies, procedures, training and database schema categorized by business function.
 - ✓ This action is now complete.
- Establish application and database scoring system based on business function relevancy, risks, and cost of ownership.
 - ✓ This action is now complete.
- Review and validate scoring assessment with internal subject matter experts.
 - ✓ This action is now complete.

- Create an overall assessment for all applications and databases in the inventory, which will, in part, evaluate the security and configuration of each one.
 - ✓ This action is in underway.
 - ✓ Currently, we are 40 percent complete.
- Establish a phased approach for implementation based on the needed actions as identified in the assessment as follows:
 - ✓ Phase 1 – Retain as is or eliminate
 - ✓ Phase 2 – Re-engineer
 - ✓ Phase 3 – Migrate

Recommendation #11

Develop critical pillars necessary to establish IT as an effective business partner

The Subcommittee recommends developing the critical pillars within ARDOT to establish the IT Division as an effective business partner. Currently, ARDOT's IT Division is not able to definitively articulate what services it will deliver, when it will deliver them, and its standards for effective delivery. Implementing an information technology service management framework may yield enhanced IT service delivery, improved internal customer satisfaction, and reduced IT costs.

a. Implementation:

- (1) Establish baseline policies and procedures, and preliminary service catalog;
- (2) Select appropriate software tools; and
- (3) Establish a long-term IT Service Management Plan that includes appropriate communications and training to staff, and mature service catalog.

b. Considerations:

- (1) Yield quick wins by establishing a basic service catalog and standards, capturing IT demand, and tracking requests;
- (2) Include recommended project management infrastructure in the long-term information technology service management plan; and
- (3) Communication and training will be critical to mitigate resistance to change.

Rules

ARDOT Primary Oversight: Assistant Chief – Administration

- Evaluate industry standards and protocols for Information Technology Project Management (ITPM).
 - ✓ This action is complete.
- Select a preliminary set of ITPM tools, templates, and success metrics.
 - ✓ We have selected SmartSheet Enterprise as our project management software which provides us with tools and templates we need to measure our success metrics.
- Establish and provide training to staff members to implement the ITPM tools, templates, and success metrics.
 - ✓ This action is complete.

- Complete implementation of the Information Technology Service Management (ITSM) already selected and installed at ARDOT including:
 - ✓ Service desk capabilities;
 - This action is now complete.
 - ✓ Service catalog management;
 - This action is now complete.
 - ✓ Risk management;
 - This action is underway. Currently, we are 82 percent complete.
 - ✓ Asset catalog;
 - This action is underway. Currently, we are 82 percent complete.
 - ✓ Project Management capabilities including tracking and reporting.
 - This action is now complete.
- Establish a multi-year long-range plan for management and use of the ITSM.
 - ✓ This action is now complete.

People Capabilities

The Rules for Recommendations 12 and 13 should be combined into one set of actions since they are so closely connected.

Recommendation #12

Ensure staff can develop in their careers at the Department

The Subcommittee recommends developing a career development plan for ARDOT employees. Nearly half of ARDOT staff do not believe they can advance their careers there, and its turnover is rising. By developing career ladders and lattices, ARDOT may increase retention, reduce turnover-related costs, strengthen its talent pipeline, and improve morale.

In addition, the Subcommittee recommends the State Highway Commission establish a merit pay system for employees of the Department that incorporates performance evaluation standards, including an employee's attendance, completion of projects and assignments, and increased competence in the employee's job duties.

a. Implementation:

- (1) Verify roles at high risk of turnover and important to succession planning;
- (2) Conduct compensation study;
- (3) Develop and publicize career, skill, and salary progression;
- (4) Promote buy-in among staff for the performance-based pay and evaluation practice; and
- (5) Implement a merit pay system that incorporates employee performance evaluation standards.

b. Considerations:

- (1) Ability to promote may be limited by low turnover in desirable positions – consider career lattices when traditional career ladders are inaccessible; and
- (2) Career development activities are closely aligned with training and knowledge management.

Recommendation #13

Improve staff capabilities to align with current/future organizational needs

The Subcommittee recommends ARDOT improve staff capabilities to align with the current and future needs of ARDOT. Staff and supervisors report that training resources are limited. By strengthening training, ARDOT may improve job satisfaction and retention, increase productivity, and instill confidence in staff who then become more willing and able to take on greater responsibility within the ARDOT.

a. Implementation:

- (1) Align trainings to job descriptions and career planning activities;
- (2) Identify and fill training gaps;
- (3) Assign trainings as part of performance evaluation process;
- (4) Reinstitute manager training;
- (5) Consider cross-training in high turnover districts and positions; and
- (6) Consider formalizing on-the-job, practical training.

b. Considerations:

- (1) Training will likely need to be updated over time, for example as new equipment is used or new programs are developed;
- (2) Training need not be restricted to entry-level roles, senior level employees can benefit as well; and
- (3) Priorities must be identified to focus rollout on training where it will have the most impact.

Rules

ARDOT Primary Oversight: Assistant Chief – Administration

- Continue to monitor turnover and identify high turnover positions that are important to ARDOT's continuity of operations for accomplishment of the Strategic Plan.
 - ✓ This action is complete.
 - ✓ The most common reasons for turnover and the groups of employees which appear to be the least engaged are identified biannually as part of the Employee Engagement Survey. The survey results are used to refine our Workforce Strategic Plan which supports the overall ARDOT Strategic Plan and enhances our ability to provide continuity of operations.
 - ✓ We calculate turnover rates by job category quarterly to identify trends and high turnover groups. This information is used to identify actions that can be taken to increase retention and enhance our ability to provide continuity of operations.

- Continue implementing the existing Workforce Strategic Plan, and adjust as needed, in order to mitigate the impact of turnover and increase employee engagement.
 - ✓ This action is complete.
 - ✓ The Workforce Strategic Plan is adjusted every two years upon receipt of the Employee Engagement Survey results, and is also adjusted as needed when the ARDOT Strategic Plan is revised.
- Continue to establish how pooled positions can be used to properly align our employee's compensation with their competencies and responsibilities.
 - ✓ This action is complete.
 - ✓ During the State Fiscal Year (SFY) 2022-2023 appropriation cycle, we incorporated the use of pooled positions for the first time. Approximately 64 percent of our appropriated positions were pooled, giving us flexibility to create career ladders and lattices for our employees.
 - ✓ For SFY 2024-2025, we submitted a plan to expand existing pools and add additional pools. Our budget proposal was approved by the full legislature and enacted, which means approximately 97 percent of our appropriated positions will be pooled, giving us even greater flexibility to provide opportunities for employees to advance their careers, within budget constraints.
- Identify and publicize the steps required for advancement within career paths with respect to competencies, experience, training, and certifications.
 - ✓ This action is 65 percent complete.
 - ✓ We placed Human Resources Specialists in every District to improve communications with field employees and give employees direct access to someone who can help with career development and coaching.
 - ✓ We implemented a Career Path Promotion Program that allows employees to promote along established career paths by meeting certain measurable objectives. Eligibility criteria has been published so that employees are aware of the objectives they must meet in order to be eligible for consideration.
 - ✓ Efforts to complete this action will continue upon enactment of the SFY 2024-2025 appropriations act.
- Consider the benefit of a compensation study.
 - ✓ This action is complete.
 - ✓ We have hired an experienced Classification and Compensation Specialist to analyze compensation trends, develop a compensation strategy, monitor market conditions, and conduct ongoing job analysis for key positions and also upon request to ensure pay and job duties are in line. We believe this continual process is preferable to a one-time compensation study.

- Evaluate the ACE employee performance evaluation process to ensure that the accomplishment of training, attendance, completion of projects and assignments, and increased competencies are taken into consideration.
 - ✓ This action is complete.
 - ✓ While this action is ongoing, we have taken actions to ensure that the performance evaluation process includes competencies related to self-development/training, dependability/attendance, completion of assignments and technical competence.
 - ✓ Our Administration also emphasizes manager accountability for accurate ratings.
- Continue to identify and fill training gaps, and prioritize training where it will have the most impact.
 - ✓ This action is complete.
 - ✓ In 2019, we conducted a Training Needs Assessment which helped us identify gaps regarding how best to deliver training to different groups and barriers to participation. Many employees requested more hands-on equipment training, as well as more leadership development opportunities. This reinforced our belief that our top priorities should be the development of a Maintenance Training Academy and a Leadership Development Program.
 - ✓ Since the implementation of our Learning Management System, we have continually expanded online learning opportunities. This is important due to the number of employees and supervisors citing a lack of time to attend classroom training.
 - ✓ We have increased our Workforce Development staff, to create a team of professionals who are dedicated to expanding and enhancing our training programs, publishing learning paths, developing curriculum for online and classroom training, and coordinating the Leadership Development Program and Maintenance Training Academy.
 - ✓ We have Health & Safety Officers in every District, to achieve greater focus on work zone safety training and expansion of the Maintenance Training Academy.
 - ✓ The Health & Safety Officers also deliver the newly mandated Entry-Level Driver Training (ELDT) program to all employees whose positions require a commercial driver's license (about 75 percent of our workforce). This program includes classroom and behind-the-wheel training.
 - ✓ All employees have received a refresher course of Anti-Fraud and Ethics Code training. Additionally, all new employees complete this course as part of their orientation within the first 90 days of employment.
 - ✓ Work Zone Safety training is offered to all maintenance employees, and all new maintenance employees receive it as part of their orientation.
 - ✓ Training Needs Assessments will be conducted at least every three to five years, and the results will be used to make adjustments to our training program.

- Encourage supervisors to utilize employee development plans, including training and other activities, as part of the performance evaluation process.
 - ✓ This action is complete.
 - ✓ The Achieving Career Excellence (ACE) system provides the tools supervisors need to quickly and easily assign performance tasks, goals, learning, and development plans. These can be created and assigned anytime throughout the year, or as part of the annual performance evaluation process.
 - ✓ Supervisors have been advised of the availability of these tools and encouraged to utilize them.
- Continue providing manager training both in-house and by utilizing our existing external partners.
 - ✓ This action is complete.
 - ✓ Most of our existing supervisors have completed a Dale Carnegie leadership training program and many have also completed UALR's Leadership Academy.
 - ✓ All new supervisors attend Supervisor Onboarding training to help them make the transition to leadership, provide Day 1 need-to-know information, and give them team-building skills from the start. Follow-up training will also be provided on the hiring process and performance management within the first 90 days of placement for a new supervisor.
 - ✓ Each year, all District and construction managers attend a two- or three-day conference with an agenda heavily focused on leadership and communication strategies.
 - ✓ Each year, approximately 20 ARDOT leaders attend the American Association of State Highway and Transportation Officials Management Institute. This is a four-day intensive course which is specifically designed to develop leadership skills of upper level management staff in the transportation industry.
- Implement a Leadership Development Program to further develop existing leaders at all levels, as well as to prepare future leaders.
 - ✓ This action is 25 percent complete.
 - ✓ Phase 1 of the Leadership Development Program has begun, which prioritizes first-time and first-line managers. Seventy-six managers have completed the program and more are anticipated to complete the program.
 - ✓ Future phases of the program will include basic leadership development opportunities for employees who consider themselves future leaders, as well as more advanced leadership training for middle managers and executive leaders.

- ✓ Twelve administrative officials participated in a 360-degree feedback program. Using this feedback pilot program, which included three professional coaching sessions. We have evaluated the benefit of this type of feedback program. It will be incorporated into future phases of the Leadership Development program.
- ✓ For SFY 2024-2025, we submitted a plan to add two Workforce Development Specialists to our staff. Our budget proposal was approved by the full legislature and enacted, so these additional staff members will be hired in the near future. One of them will help facilitate and coordinate the Leadership Development program.
- Continue cross training in high turnover areas and for high turnover positions.
 - ✓ This action is 10 percent complete.
 - ✓ This action is currently completed through an informal process across the Department.
 - ✓ Efforts are now underway to formalize a process to track on-the-job training and provide employees the opportunity to request cross training.
- Complete implementation of the Maintenance Training Academy, which offers formalized practical training, including but not limited to equipment operation.
 - ✓ This action is 25 percent complete.
 - ✓ Health & Safety Officers in each District are implementing Phase 1 of the Maintenance Training Academy (MTA) during New Hire Orientation twice a month, covering the Safety Manual, drug and alcohol testing, and basic safety procedures.
 - ✓ The MTA team has been reactivated and expanded to include members from the Human Resources, Equipment & Procurement, and Maintenance Divisions. The team selected Phase 2 topics for all four quarters of the 2023 training year. Those topics with the highest priority for development and delivery are: Preventive Maintenance, Tractor/Mower Safety, Situational Awareness, Snow Plow & Defensive Driving, and Chainsaw Safety.
 - ✓ Preventive Maintenance Tractor/Mower Safety and Work Zone Safety courses are being delivered on a regular basis. The other three priority topics are in development.