

# ARTIFICIAL INTELLIGENCE STRATEGIC PLAN

January 2026 Update

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# EXECUTIVE SUMMARY

## OVERVIEW

Since the Texas Department of Transportation (TxDOT) published [TxDOT's Artificial Intelligence \(AI\) Strategic Plan](#), significant changes have occurred in the capabilities and use of AI throughout industry and within TxDOT. This past year saw a rise in agentic AI along with broad use of AI coding capabilities. Additionally, Gov. Greg Abbott signed the Texas Responsible Artificial Intelligence Governance Act (TRAIGA) into law on June 22, 2025, outlining important statutory requirements for TxDOT's AI use. Within TxDOT, successful pilots and deployment of AI tools are continually shifting the use of AI from an experimental tool to an embedded foundational technology.

This year is a pivotal year for TxDOT's AI adoption. Success will require:

- Strategic technical deployments
- Broad workforce engagement
- Operational readiness

Today, AI is leveraged for strategic decision-making, faster data processing, and efficient workflow execution.

This 2026 update establishes a comprehensive and strategic approach designed to position AI as a force multiplier, supporting TxDOT's core objective of providing a safe and reliable transportation system for Texas. By integrating rigorous governance, advanced data architectures, and strategic operational models, TxDOT is aligning with top industry standards in AI-enabled infrastructure management.

## GOVERNANCE PHILOSOPHY: HUMAN-LED, AI-SUPPORTED

TxDOT adheres to a strategic governance framework that balances deployment and innovation with ethical integrity.

- **Professional Standards:** All AI initiatives at TxDOT are governed by the core principle of "Human-Led, AI-Supported." This standard ensures that while AI is utilized to accelerate data synthesis, development, and analysis, the ultimate responsibility for any output—whether technical, financial, or administrative—remains with the human professional. AI-assisted workflows must include a mandatory validation of outputs. A "Human-in-the-Loop" (HITL) requirement ensures that professional judgment, ethical considerations, and institutional context always anchor AI-driven outcomes before they are finalized or implemented.
- **Collaborative Oversight:** Governance is managed through cross-functional bodies, including the CIO Advisory Board and the Traffic Steering Committee, ensuring alignment with agency-wide strategic goals.

## FOUNDATIONAL DATA & TECH ARCHITECTURE

The success of TxDOT's AI roadmap is anchored by the **Enterprise Data Platform (EDP)** and a resilient cloud infrastructure.

- **Data Maturity:** The EDP has successfully consolidated 97 data solutions from 51 distinct sources, providing the "high-fidelity fuel" required for accurate AI modeling.
- **Scalable Infrastructure:** Through the deployment of "Cloud Runways" and Scalable Machine Learning Platforms (MLOps), TxDOT has created a secure, dynamic environment for deploying enterprise-grade AI solutions.

- **Democratization of AI:** The implementation of desktop and low-code/no-code platforms make AI accessible and empowers individual units to solve localized problems, ensuring innovation is driven by those closest to the operational challenges.

## **OPERATIONAL IMPACTS & MILESTONES**

The 2026 update builds upon significant, measurable returns on investment that have been realized across the agency since the launch of TxDOT's AI Strategic Plan. Completed use cases have already yielded the following benefits:

- **Efficiency Gains:** Automated invoice processing in the PEPS Division has saved **22,000 staff hours annually** and reduced processing time by **75%**.
- **Safety & Traffic:** AI-driven incident detection in the Austin District has significantly reduced notification times for crashes and debris, serving as a blueprint for statewide expansion.
- **Productivity:** Over **940 M365 Copilot licenses** have been deployed, resulting in measurable time savings in document drafting and administrative synthesis.

The successful results of these and other deployments, with the rapidly expanding AI capabilities, provide a pathway for future opportunities that will drive the pipeline of future use cases. TxDOT will implement a standardized prioritization and assessment process through a **Readiness Scorecard** to manage a growing roster of over 200 candidate use cases. Projects will be assessed with criteria that include data availability, business sponsorship, technical feasibility, and risk/ethics along with impact and value considerations.

## THE PATH FORWARD

Leveraging AI and the Enterprise Data Platform to transition toward more efficient and proactive management of the state's transportation assets allows us to meet key milestones that include:

- **Intelligent Lifecycle Delivery:** Augmenting the planning-to-procurement pipeline to accelerate project timelines and administrative workflows while ensuring human-led technical accuracy.
- **Predictive Asset Management:** Transitioning resource, fleet, and infrastructure operations from reactive responses to proactive, data-informed models that optimize asset lifespan and taxpayer value.
- **Proactive Safety Analytics:** Utilizing real-time sensor fusion and computer vision to assess infrastructure conditions, anticipate roadway hazards and analyze traffic anomalies to minimize safety risks.

## CONCLUSION

The 2026 update to **TxDOT's Artificial Intelligence Strategic Plan** reflects a pivotal shift from experimental AI tools to AI serving as an integral component of the agency's operations. This transition underscores the necessity of recognizing AI as a strategic asset that will drive efficiency, enhance decision-making, and streamline workflows. As AI continues to advance, it is imperative for TxDOT to proactively plan and integrate these technologies responsibly. By doing so, the agency can mitigate potential risks and maximize the long-term benefits, positioning itself as a leader in AI-enabled infrastructure management. Ignoring this technological wave is not an option; strategic and ethical adoption will ensure that TxDOT remains at the forefront of innovation, delivering a safer and more reliable transportation system for Texas.

# INTRODUCTION

The 2026 update to **TxDOT's Artificial Intelligence Strategic Plan** is built upon **four core pillars** enabling TxDOT to transition from isolated pilots to an integrated enterprise capability.

1. **Governance Framework** for professional oversight and ensuring data privacy and security.
2. **Data Foundation** provided by a robust and scalable data platform.
3. **AI Project Intake and Readiness** evaluation and scorecard to prioritize and manage a growing portfolio of over 200 AI use cases.
4. **Foundational Capabilities**, including human and technical capacity to continue to expand AI technical capabilities.

## DEFINITIONS OF AI

A general definition for Artificial Intelligence is the application of computer systems able to perform and assist with tasks that normally require human intelligence, such as visual perception, speech recognition, reasoning and decision-making. The outputs of the AI would then be reviewed by the Human-in-the-Loop subject matter expert (SME) before any outcomes are implemented.

Under this umbrella AI exists in various types with core focus areas.

**Computer Vision** enables machines to interpret and analyze visual data, while **Generative AI** creates original content such as text, images, and media based on learned patterns. **Machine Learning** enables systems to learn from data and decisions without explicit programming to provide quicker answers for end users to review and validate. **Natural Language Processing** facilitates meaningful interaction between computers and human language. **Robotic AI** combines physical robotics with cognitive capabilities for autonomous, intelligent actions, and **Reasoning Models**

emphasize multi-step logical deduction and problem-solving through structured, rule-based thinking. These examples are outlined in the table on the next page.

**Table 1 – AI Types**

AI Type	Definition
<b>Computer Vision</b>	A field of AI focused on enabling computers to interpret, understand, and make or inform decisions based on visual data from the world. It involves developing algorithms and models that can process and analyze images and videos to extract meaningful information, recognize objects, track movements, and perform other tasks related to visual perception.
<b>Generative Artificial Intelligence (GenAI)</b>	A field of AI focused on systems that can generate new, original content based on the data they have been trained on. This content can include text, images, music, videos, and other forms of media.
<b>Machine Learning</b>	A field of AI that focuses on the development of algorithms and statistical models that enable computers to learn and make or inform decisions from data without being explicitly programmed for each specific task.

AI Type	Definition
<b>Natural Language Processing</b>	A field of AI focused on the interaction between computers and human (natural) languages. The main goals of Natural Language Processing (NLP) are to enable computers to understand, interpret, and generate human languages in a way that is both meaningful and useful.
<b>Robotic Artificial Intelligence</b>	The integration of AI with robotics, enabling robots to perform tasks autonomously, intelligently, and interactively. This field combines the physical capabilities of robots with the cognitive capabilities of AI to create systems that can perceive their environment, make or inform decisions, learn from experiences, and perform complex actions.
<b>Reasoning Models (Reasoning AI)</b>	A field of AI focused on systems capable of multi-step logical deduction, deliberate problem-solving, and "thinking" through complex tasks. Unlike standard models that predict the next piece of data based on patterns, reasoning models use "chain-of-thought" processes to evaluate outcomes, apply rules, and reach logical conclusions before delivering a result.

## EVOLUTION OF AI

As AI evolves, new model types and applications continue to emerge. These changes are characterized by a shift from isolated applications to a more comprehensive integration of varying model types across organizational and

business functions. Existing AI applications are rapidly moving from simple augmentation of human tasks to transformation of entire workflows, leading toward more fully integrated and enabled AI operations. Future types of AI application and management that could impact TxDOT systems include:

- **Agentic and Multi-Agentic Systems:** AI that moves beyond responding to prompts to actively managing tasks and delegating actions within a set framework. These systems are expanding to include networks of AI agents that collaborate to manage complex workflows and decision-making processes.
- **IoT and Digital Twin Integrated AI:** A convergence of AI with the Internet of Things (IoT) and Digital Twins of infrastructure assets, where cameras and sensors in roads, bridges, and smart materials capture real-time data that can combine with virtual models of transportation networks through interoperable AI systems to allow for continuously optimized infrastructure management.
- **Composite AI:** Rather than relying on a single model, Composite (or Multimodal) AI integrates multiple AI types —such as combined Generative AI, Machine Learning, and Computer Vision—to understand and solve complex problems. This "system of systems" approach allows AI to move beyond operational silos to not just see and understand data patterns, but also reason through environmental conditions, physical laws, legal regulations, and broad enterprise contexts.

TxDOT's planning, governance and implementation of AI must continue to evolve to effectively and responsibly account for these and other emerging advancements in AI capabilities.

## **TxDOT'S GOVERNANCE FRAMEWORK**

AI governance at TxDOT is a multi-pronged approach designed to ensure the responsible, ethical, and effective deployment of AI solutions that align with evolving statutory and regulatory requirements. TxDOT has already established a comprehensive AI program, built on strong governance, clear acceptable use guidance, and a robust risk management framework; these processes work in tandem with existing technology governance processes for project approvals, resourcing, and prioritization.

### **STATUTORY ALIGNMENT**

During the 89th Session of the Texas Legislature, the Texas Responsible Artificial Intelligence Governance Act (TRAIGA) was passed and subsequently signed into law on June 22, 2025, by Gov. Greg Abbott. TRAIGA is a comprehensive regulatory framework designed to protect public safety, individual rights, and privacy while facilitating the responsible development of AI in Texas. All policies, governance and use of AI at TxDOT will align with the guidelines of TRAIGA. Additionally, as of November 2025, TxDOT Chief Information Officer Anh Selissen was appointed by Gov. Abbott to serve on the Public Sector Artificial Intelligence Systems Advisory Board created under the act.

### **GOVERNANCE PROCESS**

To maintain a clear framework for administration of AI and automation projects, TxDOT governance process balances innovation with institutional oversight. TxDOT's Information Technology Division (ITD) administers the governance process to ensure a framework that guarantees that every initiative aligns with TxDOT's organizational goals while maintaining technical integrity. By integrating a clear acceptable use policy with risk management,

TxDOT ensures that AI solutions are not only actionable but are deployed ethically and securely across the organization.

### ***AI Acceptable Use Policy***

TxDOT continues to evolve its Acceptable Use of Artificial Intelligence Policy to provide clear guidance on the ethical application of AI capabilities. This policy is grounded in **seven core principles** designed to foster trust and ensure that AI serves the public interest.

1. **Security** – AI systems should be designed, tested, and deployed to ensure security as part of the function and performance of the application. Staff should be aware of threats, risks, and security benefits, and trade-offs should be critically evaluated. The confidentiality, integrity, and availability of TxDOT data should be safeguarded with any tool implementation.
2. **Transparency** – AI applications must be transparent about how data is used and must provide users and key stakeholders explanatory insights into how decisions and outcomes are produced.
3. **Accuracy** – AI applications must produce verifiable results, and users must provide clear communication regarding uncertainties, implement rigorous validation process and take appropriate measures to ensure accurate results.
4. **Accountability** – TxDOT must establish governance, oversight, and monitoring of AI systems to ensure that they are operating as intended and not causing unintended harm.
5. **Trustworthy** – AI applications must include methods to ensure results are unbiased and that there is fair and equitable representation across TxDOT Districts & Divisions.
6. **Privacy** – AI applications must respect user privacy. Data must not be used outside of agreed upon terms and must be compliant with

TxDOT's privacy policies and applicable state or federal requirements to which TxDOT must adhere.

7. **Safety** – TxDOT prioritizes the well-being of the public, partners, and employees through dependable, trustworthy AI technologies that enhance infrastructure integrity and service quality.

Central to these principles is the commitment to Human-in-the-Loop oversight throughout the AI lifecycle. By prioritizing responsible use, TxDOT ensures that AI solutions augment—but never replace—the essential judgment and expertise of our workforce.

### ***AI Risk Management Workgroup***

TxDOT has established an AI Risk Management Workgroup to promote a culture of proactive risk management for AI systems and projects. This cross-functional team includes representatives from Information Technology Division (ITD), Strategic Initiatives and Innovation Division (STR), General Counsel Division (GCD), Human Resources Division (HRD), Internal Audit Division (AUD), and business owners, with additional members added as needed.

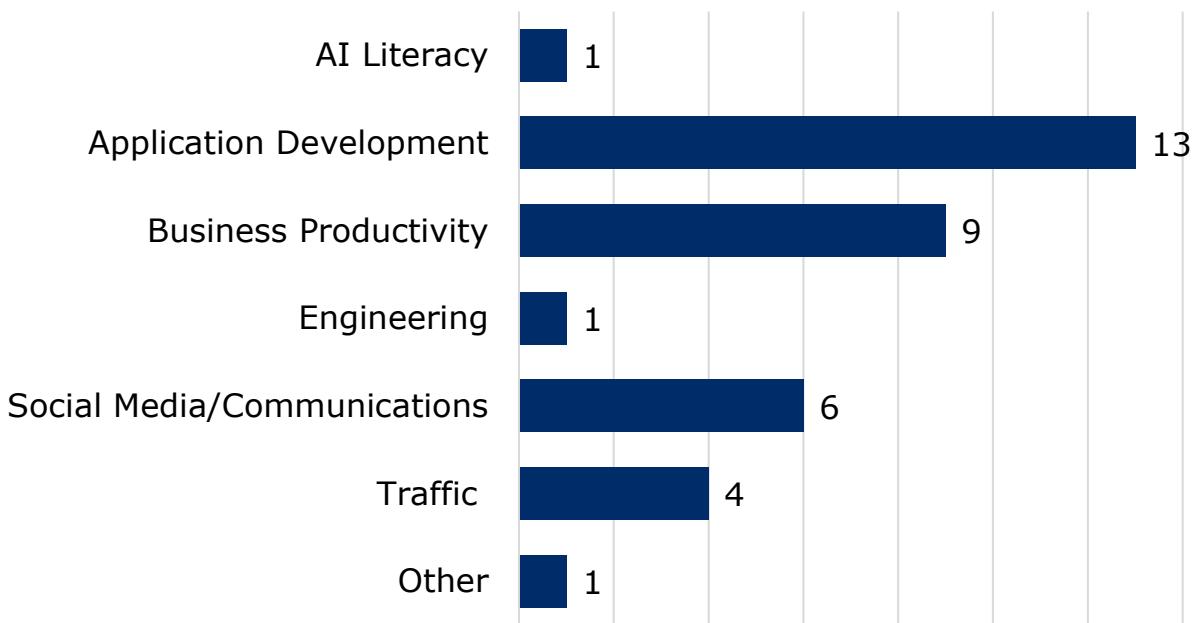
The work group has implemented an AI Risk Management Framework based on National Institute of Standards and Technology (NIST) guidelines to map, measure, and manage risks throughout the lifecycle of AI systems. The framework ensures continuous and timely risk assessment and supports TxDOT's commitment to enabling innovation while maintaining security and operational integrity.

- **Map:** Identify and document potential risks associated with each AI system or project. Risk categories include Hallucinations, Bias, Information Integrity, Data Privacy, Information Security, and more.

- **Measure:** Integrate risk assessment into ITD's intake and governance process; as AI technologies or technologies with an AI component are introduced, the workgroup assigns impact and likelihood scores using a risk matrix.
- **Manage:** Prioritize and mitigate risks, develop action plans, and escalate high-risk projects to review boards. Periodic reviews will ensure compliance with evolving laws and regulations.

All projects with AI components undergo evaluation to maintain security, compliance, and operational integrity. Between October 2024 and November 2025, the AI Risk Management Workgroup conducted over 30 comprehensive risk assessments on a diverse portfolio of AI-enabled tools and solutions spanning design, data governance, machine learning, traffic optimization, enterprise productivity, and specialized applications for media and document processing. Additional reviews included social media integrations, Robotic Process Automation (RPA) tools, and advanced analytics for transportation and operational efficiency.

**Figure 1 – Applications/Solutions Reviewed by Category**



All solutions were rated low risk, and risk mitigation strategies emphasized keeping humans in the loop to review and validate any AI outputs.

## DATA FOUNDATION

Data is the cornerstone of successful AI implementation. High-quality, unbiased, and well-governed data ensures that AI models produce accurate, reliable, and actionable insights. Without standardized formats, rigorous validation, and secure access protocols, AI systems risk generating misleading outcomes or perpetuating bias. A robust data foundation—supported by automated integration, metadata management, and compliance frameworks—enables scalability, transparency, and trust in AI-driven decision making across the enterprise. To further ensure accuracy and reliability, human oversight remains essential; end users review and validate AI-generated answers before final decisions are made, maintaining accountability and reinforcing confidence in the system.

## TxDOT'S ENTERPRISE DATA PLATFORM (EDP)

To achieve this, TxDOT has implemented an Enterprise Data Platform (EDP) to automate data collection from internal and external sources and consolidate standalone data into curated, accessible data marts. The EDP integrates data from business areas, digitized historical records, and external systems, applying standardized formats, metadata, and definitions to ensure consistency. Using an iterative approach, the platform continuously incorporates new datasets and maintains existing ones, positioning TxDOT to meet evolving data needs and leveraging advanced AI and analytics capabilities.

### ***Data Quality***

High-quality data is the cornerstone for successful and responsible use of AI and machine learning (ML) models. The EDP promotes accuracy, completeness, and consistency by working with business stakeholders to implement data validation and profiling, alongside establishing standardized

datasets and definitions. Ensuring clean and reliable data reduces inconsistencies and bias, which contributes to improved predictive performance and more credible analytical insights. In the absence of such rigorous data preparation, AI algorithms are prone to yielding misleading outcomes or lack generalizability. A final component in maintaining high-quality data is data provenance, which provides a verifiable "chain of custody" by documenting the clear and accurate sourcing of data utilized across all environments.

### ***Process Standardization***

Standardized processes for data intake, orchestration, and delivery within the EDP ensure that data from disparate sources is unified into consistent formats under a single governance framework. This approach automates the most labor-intensive aspects of feature engineering, the process of refining raw data into the specialized inputs AI needs to function.

By streamlining these workflows, TxDOT enables its data scientists to focus on high-value analysis rather than resolving technical inconsistencies. Furthermore, these standardized pathways enhance adaptability and reproducibility, allowing TxDOT to rapidly scale AI solutions across different divisions while maintaining strict compliance with state and organizational standards.

### ***Data Security and Governance***

AI and (ML) initiatives can involve access to sensitive operational and infrastructure data that requires the highest level of protection. The EDP provides a hardened security architecture, utilizing end-to-end encryption, role-based access control, and automated compliance monitoring to safeguard data throughout its entire lifecycle.

This secure environment creates a trusted data environment, allowing cross-functional teams to collaborate on datasets and deploy AI models without the risk of data leaks or regulatory violations. By automating these guardrails, the EDP ensures that security is an accelerator—not a barrier—to the enterprise-wide adoption of AI-driven solutions, maintaining the public's trust in TxDOT's data stewardship and alignment with legal and regulatory standards.

## **EDP HIGHLIGHTS & ACCOMPLISHMENTS**

The implementation of the Enterprise Data Platform (EDP) is yielding significant dividends, transforming TxDOT's vast data landscape into a streamlined engine for data-driven decision-making and AI innovation. The following milestones highlight the measurable impact the EDP has made on operational efficiency, data accessibility, and agency-wide trust.

- 1. Data Unification & Accessibility:** Successfully consolidated 97 data solutions from 51 distinct sources into curated data marts. By automating collection via APIs and connectors, TxDOT minimized manual intervention, introduced 6 new strategic datasets, and delivered 31 solution enhancements to improve agency-wide data availability.
- 2. Operational Efficiency Gains:** Scaled automation within HR and Fleet Operations, significantly reducing manual workflows for mileage tracking and vehicle utilization. The integration of TxDOTCONNECT (TxDOT's enterprise project management platform) and DocuSign streamlined critical document management and inter-agency communication.
- 3. Enterprise Adoption & Scalability:** Achieved a 9% average monthly growth in internal customers, signaling high organizational trust in EDP capabilities. The team further matured the platform by migrating

DevOps processes into the EDP environment, ensuring the scalability required for future AI workloads.

4. **Advanced Analytics Enablement:** Enhanced the user experience across data analytics tools, moving beyond simple reporting to intuitive data visualization that allows stakeholders to identify trends and operational bottlenecks immediately.
5. **Governance & Compliance Framework:** Launched a comprehensive data management framework that defines clear roles and responsibilities. This includes automated compliance monitoring to ensure all AI and data activities adhere to responsible-use standards.

## EDP ROADMAP

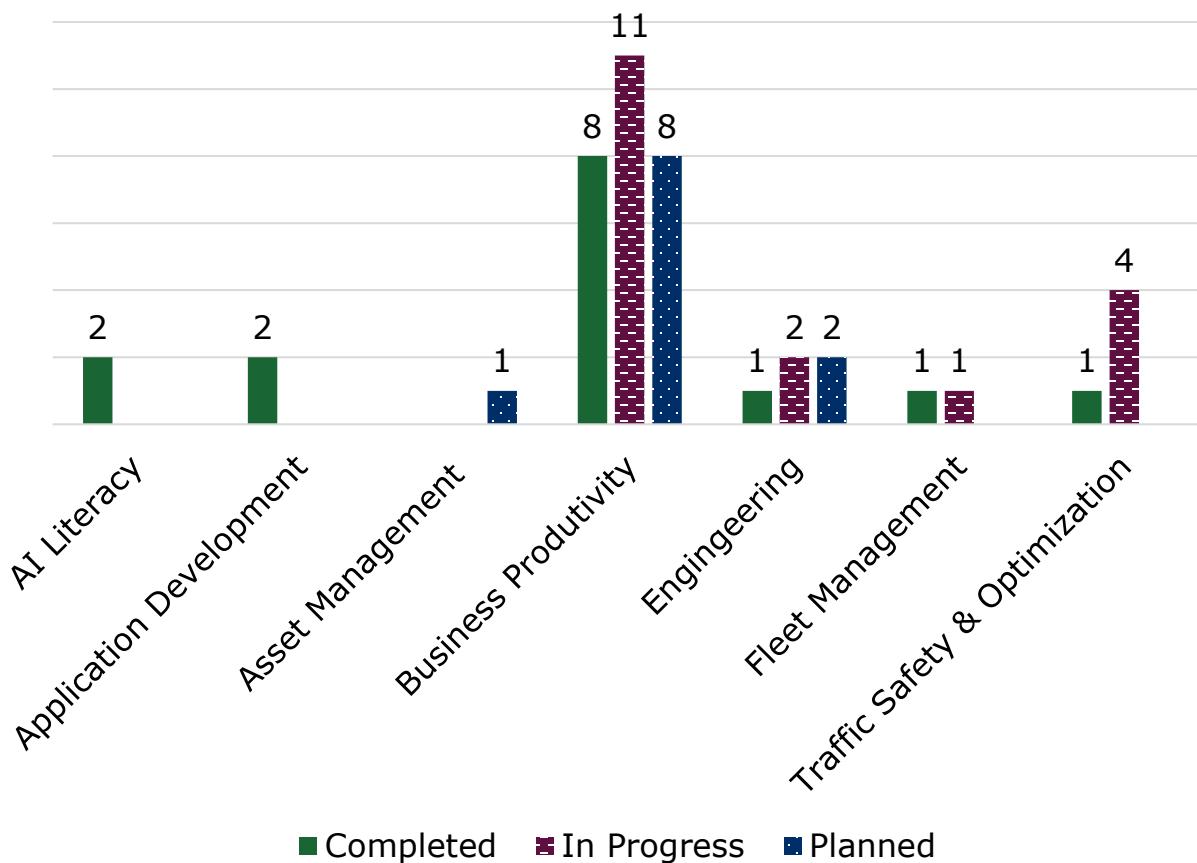
To ensure TxDOT's position as a leader in data-driven decision making and AI innovation, the agency has executed a multi-year roadmap focused on the delivery of high-quality, unbiased, and accessible data. This strategic foundation is built upon **three key principles:**

- **Accelerating Data Assembly:** Expanding automated collection and transitioning toward real-time integration from diverse internal and external sources to support time-sensitive AI applications.
- **Harmonizing Data for Interoperability:** Institutionalizing standardized data formats and metadata schemas to ensure seamless interoperability across all TxDOT divisions and partner platforms.
- **Automating Data Integrity:** Leveraging advanced, AI-driven cleansing and validation processes to continuously improve data quality, ensuring that the "source of truth" remains accurate and reliable.

## AI PROJECT PORTFOLIO

As TxDOT advances its AI program, the agency must systematically assess and prioritize use cases while it continues to establish a robust portfolio of completed, ongoing, and planned initiatives. For a comprehensive view of the agency's pipeline of use cases, **Appendix B: Identified AI Use Cases and Status** catalogs over 200 identified opportunities and their current stage of implementation. As is summarized in the following figure, TxDOT's AI project portfolio includes a strategic cross section of completed, underway and planned initiatives across multiple business lines.

**Figure 2 – AI Projects to Date (includes POCs/Pilots)**



## PRIORITIZATION OF AI INITIATIVES

To manage a growing portfolio of over 200 use cases, TxDOT began to utilize a standardized vetting and prioritization process. Each proposal is evaluated through a "Readiness Scorecard" based on four criteria:

- **Data Readiness:** Is high-quality, unbiased data available within the EDP?
- **Business Sponsorship:** Is the business area committed to the project and its outcome?
- **Resource Capacity:** Are the necessary experts available for successful delivery?
- **Risk & Ethics:** Does the project comply with TxDOT's Acceptable Use Policy, and are risks mitigated?

Additionally, "Value and Impact" of proposed AI use cases are assessed based on:

- **Anticipated ROI:** Will it save staff hours, reduce costs, or improve safety response times?
- **Success Metrics (KPIs):** How will we measure success after six months? (e.g., "90% accuracy in photo categorization").
- **Workflow Integration:** Where will the AI "live"? Will it integrate with TxDOTCONNECT, a mobile app, or a standalone dashboard?

Use cases are documented and prioritized using the "Readiness & Impact" evaluation in Appendix A. The goal is to focus on scalable solutions that deliver measurable benefits for TxDOT.

Project prioritization is a partnership between ITD and business units, ensuring AI development is driven by operational necessity. ITD provides the technical architecture, while business areas identify and champion AI initiatives.

To prevent "innovation silos," governance forums like the CIO Advisory Board and the Traffic Steering Committee act as strategic filters. They evaluate use cases against the agency mission to ensure resources are directed toward high-value opportunities. The success of TxDOT's AI roadmap depends on proactive business advocacy, transforming challenges into actionable use cases.

## **COMPLETED AI PROJECTS**

While TxDOT is early in the implementation of its AI roadmap and business strategy, early successes have highlighted the benefits that can be achieved through strategic and responsible implementation.

High-impact success from completed projects by the numbers:

- **22,000+** Annual staff hours saved in PEPS Division.
- **940+** AI productivity licenses (M365 Copilot) across the agency.
- **75%** Reduction in invoice processing time.
- **Real-Time** roadway incident detection now active in the Austin District.

The following sections summarize and provide additional detail on AI projects that have been completed to date.

### ***High-Impact Successes***

#### **Professional Engineering Procurement Services Division (PEPS)**

**Automated Invoice Processing** – Automated invoice processing has transformed PEPS Division's engineering procurement invoice workflow.

- **Impact:** Cut processing time by 75% and saved an estimated 22,000 staff hours annually.
- **Value:** Minimized errors, accelerated approvals and eliminated late fees through intelligent workflow acceleration.

By leveraging automation and intelligent tools, the system has delivered major efficiency gains and stronger compliance.

**Employee Onboarding and Offboarding Automation** – Robotic Process Automation (RPA) has streamlined TxDOT's employee onboarding and offboarding process by automating user-access management tasks such as account provisioning, security group management, drive mapping, and account removal across multiple systems.

- **Impact:** Reduced processing time from hours to seconds, improving overall efficiency.

**Austin District AI Incident Detection** – TxDOT's Austin District and ITD have deployed an AI system aimed at improving TxDOT's awareness and response to traffic incidents in the Austin area. By ingesting multiple real-time data streams, the AI system identifies locations likely to have roadway incidents, allowing operators in the Traffic Management Center (TMC) to more quickly prevent and clear roadway incidents.

- **Impact:** Significantly reduced notification times for Traffic Management Center (TMC) operators about crashes, stalled vehicles, and debris on the road and expanded coverage areas.
- **Future:** Success in Austin has established a blueprint for statewide district expansion.

The solution supports existing workflows and efficient collaboration on incident management operations to enhance safety, transparency, reduced congestion, and travel-time reliability.

**Pre-Letting & Bidding Automation** – This automation streamlines the steps needed to prepare construction projects for bidding. The automation sets up projects, organizes and publishes all necessary details, and enables

test vendors to simulate and validate the bidding process, ensuring projects are ready for vendors to bid efficiently.

### ***Business Productivity and Generative AI***

**M365 Copilot Pilot & Expansion** – TxDOT introduced an AI-powered business productivity solution to enhance efficiency and collaboration across the agency.

- **Outcome:** Significant time savings in document drafting, meeting synthesis, and information retrieval. Governance measures are in place to ensure secure data handling.

Building on these outcomes, TxDOT has expanded the program to additional users across the agency and has implemented governance measures and training to ensure successful adoption. To date, TxDOT has issued 648 licenses across the agency with an additional 300 requested. Utilization of Copilot licenses is actively monitored and remains high.

**PeopleSoft ELM External Learner Enrollment** – Automated the intake of enrollment PDFs into PeopleSoft ELM, increasing accuracy and reducing manual intervention for external participants. As enrollment PDF forms are submitted, automation checks a shared email inbox, gathers the necessary information from the form, and quickly signs up the external participant for their chosen course in the PeopleSoft platform, making the process faster and easier for everyone involved. This solution reduces manual intervention, increases efficiency, and ensures accurate, timely enrollment processing.

**Automated Fleet Procurement** – This initiative standardizes the lifecycle of fleet-related purchase orders by automating fund reservation and financial data aggregation. The system routes digital approval requests to the appropriate personnel and, upon authorization, automatically generates and records purchase requests within the enterprise system. This ensures

rigorous financial accuracy, accelerates procurement timelines, and provides a clear audit trail with minimal manual intervention.

### ***AI Literacy***

**AI 101 Training** – To support organizational AI literacy, TxDOT has developed an AI 101 training for employees, available in PeopleSoft Enterprise Learning Management (ELM), providing foundational knowledge to ensure a baseline of AI literacy and ethical usage across the agency.

**AI & Automation Community of Practice (CoP)** – The agency launched an AI & Automation CoP, fostering ongoing collaboration, knowledge sharing, and peer support as employees explore and implement AI-driven solutions.

### ***Other IT Applications and Proofs of Concept (POC)***

**Automated FTP Archiving:** An intelligent automation monitors the FTP server for outdated files, preparing them for archival based on specific aging criteria. The process includes a built-in "Human-in-the-Loop" verification step, where an Excel report is generated for user review on SharePoint. After validating user comments, the system completes the file migration to the archive folder, reducing manual server maintenance and ensuring data integrity.

**Mobile Devices Automation** – An automated process developed to gather mobility reports for phones and tablets, streamlining the update of employee contact information across internal platforms. This integration maintains a "single source of truth" for agency mobile assets while significantly reducing the time required for manual record updates.

**POC: Fuel Card Compliance** – Using ML to review fuel card use to detect anomalies and potential misuse of fuel cards. Proof of concept results were

successful, and the system quickly identified indicators of misuse upon reviewing the provided dataset.

**POC: AI for Software Development Lifecycle (SDLC)** – Modernizes the SDLC process for application development by providing a developer-first experience through AI, focusing on enhancing developer productivity, satisfaction, and efficiency.

**POC: AI for Operations** – Leverages artificial intelligence to interpret log errors, provide resolution lookups, and integrate these capabilities into TxDOT's log management platform, resulting in faster issue resolution and improved productivity.

**POC: AI Chatbot** – Discovery and evaluation of chatbot technologies to provide chatbot capabilities within the enterprise to handle common inquiries, answer frequently asked questions, and improve employee's customer experience.

## IN PROGRESS AI PROJECTS

TxDOT's active AI development pipeline includes a range of projects in pilot, research, or implementation phases. These initiatives represent the agency's commitment to scaling AI capabilities across all divisions to optimize resource allocation, improve public safety, and streamline internal administrative functions.

### *Engineering*

**AI Cost Estimation Tool** – TxDOT is developing an AI-powered tool to improve the accuracy of transportation project cost estimates. By combining historical bid data with real-time commodity prices, the tool will forecast project costs to enable better planning and reduce uncertainty, and will automate recommendations for bid item pricing, streamlining workflows and

supporting informed decision making. The goal is to provide reliable, data-driven insights for better planning and resource allocation, increasing confidence in project budgets and outcomes.

**AI-Assisted Design and Digital Delivery** - TxDOT is undertaking a transformational effort to work with industry partners to integrate AI to automate resource-intensive administrative and design tasks. This initiative focuses on accelerating the "Digital Delivery" process with an initial focus on AI-assisted workflows to generate project documentation for final engineering review and validation.

TxDOT is automating the compilation of:

- **Documentation & Schedules:** General notes, construction time determination, and final PS&E processing.
- **Technical Review & Annotation:** AI-augmented plan review and automated sheet annotation.
- **Existing Automation Synergies:** These new capabilities integrate with existing tools for quantity calculation, cross-section generation, and 3D-model creation.

These are initial steps along a broader roadmap to transition manual workflows to an AI-enabled environment. System integration will enable full synchronization with TxDOTCONNECT and enterprise content systems. Capabilities will be anchored in a framework of transparency, security, and mandatory human oversight. Plans include developing AI-assisted design optimization, predictive cost estimation for bid items, and advanced safety modeling.

By leveraging AI to handle routine data synthesis and design processes, TxDOT empowers its engineers to focus on high-level decision making, improving project quality, reducing delivery timelines, and maintaining the highest standards of safety.

## ***Traffic Optimization & Safety***

**Crash Record Data Field Supplementation** – Research initiative aimed at using AI and machine learning to supplement data into empty data fields in the Crash Record Information System (CRIS) and eventually, interpret crash report fields, which are currently processed by a third-party vendor. The goal is to improve efficiency and accuracy, and reduce costs associated with crash report analysis.

**POC: Video Analytics (Multiple Districts)** - Using computer vision on existing traffic monitoring cameras to provide real-time data and insights for traffic management, including detection of vehicles, monitoring traffic flow and speed, and identification of incidents.

**POC: Traffic Signal Timing Optimization (Lubbock District)** - Analyzing real-time data from sensors and cameras to adjust signal timings, improving traffic flow, reducing delays, and lowering emissions. Instead of fixed schedules, these systems adapt to current conditions, which can also prioritize emergency vehicles, improve safety for pedestrians, and optimize operations to manage traffic incidents more effectively.

**POC: TxCamWatch** – This solution is a web-based dashboard tool developed to help Traffic Safety Division quickly check the status of more than 3,500 cameras across Texas, ensuring they are working properly and supporting real-time traffic management statewide. Implementing computer vision as well as image analysis using AI, the system is also being tested to detect road conditions, weather, and traffic anomalies.

## ***Fleet Management***

**Fleet Predictive Analytics** – Enabling predictive analytics for fleet maintenance, allowing Fleet Operations Division to plan for vehicle maintenance by predicting vehicle failure ahead of time and reducing the

amount of time vehicles may be out of service. Outcomes include optimizing fleet management processes, improving customer service to districts and divisions, and reducing operational costs.

## ***Business Productivity***

**Chatbot Development** – TxDOT is developing a range of AI-powered chatbots for the agency, as well as dedicated solutions for specific business areas, with the goal of enhancing productivity and improving user experience.

- **Enterprise Chatbot** – Aims to improve the accuracy, consistency, and efficiency of delivering answers and guidance for the whole agency on enterprise-wide general information (Crossroads, Online Manuals, Texas Administrative Code).
- **Metropolitan Planning Organization (MPO) Chatbot** – Aims to improve the accuracy, consistency, and efficiency of delivering answers and guidance for the new MPO handbook.
- **Human Resources Chatbot** – Aims to improve the accuracy, consistency, and efficiency of delivering answers and guidance for HR-related topics including policies, employee conduct, and frequently asked questions.
- **Spec App Chatbot** - AI-powered chatbot for Spec App (TxDOT Specification Management System).

**Intelligent Digital Assistant for Project Planning** – TxDOT has made significant investments in collecting and managing electronic data from past projects related to scope, cost, time, and quality but has yet to fully leverage this data for project delivery. Emerging AI technologies offer opportunities for accurate cost estimating, contract time determination, resource allocation optimization, and enhanced risk assessment, presenting a promising solution

for improving project efficiency. This is a research project led by the Research and Technology Implementation Division (RTI).

**TRACK AI Salesforce Agentforce Pilot** – This pilot will integrate Salesforce Agentforce with the TRACK application, TxDOT's complaint management system, to explore opportunities to optimize case agent workload allocation and issue resolution, providing faster and improved complaint-resolution experience for citizens.

**ITD Automated Invoice Processing** – This effort will automate key steps in contract, invoicing, and financial workflows to improve speed and accuracy. The first phase focuses on validating contractor invoices against project data, ensuring consistency, and reducing manual checks. The second phase will automate monthly receipt creation in PeopleSoft for contractors.

**Refund and Transfer Automation** – Currently, processing a single refund or transfer in PeopleSoft takes about an hour and involves multiple manual steps. This project will automate the refund and transfer process in PeopleSoft to eliminate repetitive tasks, minimize errors, and reduce processing time.

**Advance Funding Agreement (AFA) Process** – Verifying AFA budgets today requires navigating multiple systems and manual reconciliations, an error-prone process that consumes significant time and increases risk of audit findings. This initiative will use automation to extract required project budget details directly from executed agreements stored in OnBase and then read the contracts, capture relevant budget data, and store it in a database accessible to TxDOTCONNECT. TxDOT's Finance Division (FIN) could then access a consolidated report with all necessary budget and agreement information for verification in one location.

**Automated Invoice Validation** – TxDOT is automating invoice verification in the OnBase e-Invoicing system to speed up processing and reduce errors.

The solution will match invoices to purchase orders, receipts, vendor details, and account codes in PeopleSoft. Perfect matches will be processed automatically, while exceptions will be routed for manual review. This shift to exception-based processing will improve efficiency, accuracy, and free staff to focus on resolving discrepancies.

## **PLANNED AI PROJECTS**

TxDOT's planned AI projects include an evolving set of initiatives aimed at enhancing TxDOT's operational efficiency and decision-making through advanced AI and machine-learning technologies. These projects span multiple domains, including engineering, asset management, and business productivity, each designed to streamline processes, reduce manual effort, and improve overall outcomes. By leveraging AI, TxDOT aims to drive innovation and achieve significant improvements in project forecasting, materials properties predictions, and automated workflows.

### ***Engineering***

**Project Forecasting** – Managing a portfolio of construction projects ready for public bidding is complex and resource intensive. This project for the Odessa District will use machine learning to streamline this process and improve decision making. By analyzing historical and real-time data, machine learning will help predict project outcomes, identify risks, and optimize resource allocation, and can also improve project timeline management, reducing costly delays and improving overall efficiency. If successful, there is potential to expand this project to additional districts.

**Materials Properties Predictions** – The Materials Testing Division (MTD) has developed advanced machine learning models to forecast key properties of construction materials. These models have been successfully trained and are ready for deployment across the organization. MTD is seeking an

enterprise-wide platform that will allow all staff and district offices to efficiently access and utilize these predictive analytics for improved decision-making and operational excellence.

**Driveway Permitting Intake Automation** - Building upon TxDOT's focus on process and performance improvements involving driveway permitting, AI tools to help automate the intake of permits that includes an initial review of completeness and conformance with TxDOT's permit standards will be explored. These tools could improve the current cycle of submission, review, refinement, and resubmission that slows the process and consumes time and resources for the public and TxDOT staff. As permit applications successfully advance through the tool, human review can be expedited, including assessments for exceptions to standards requested by the applicant. While this initial effort focuses on front-end automation, consideration can be given to future buildout of AI tools throughout the entire workflow.

### ***Asset Management***

**Sign Asset Detection (San Antonio District)** – The San Antonio District has developed an advanced computer vision model capable of detecting roadway sign assets and is requesting a platform to continue development of the model and explore the potential for statewide application. This solution streamlines asset management by enabling automated identification and tracking of signage across the network.

### ***Business Productivity***

**Travel & Expense Automation Initiative** – This effort aims to streamline and modernize employee travel and expense reporting at TxDOT by leveraging automation solutions. This combined effort will simplify the submission and approval process, reduce manual data entry, and minimize errors and rejection rates. Key features include automated transcription of

travel expense summaries and contractor receipts from invoices directly into Excel spreadsheets, which supports faster and more accurate reconciliation of receipts and invoiced amounts. By integrating these capabilities, the initiative will improve operational efficiency, enhance data integrity, and enable more effective analysis and management of travel and expense data across the organization.

**PRO Statement of Work Assistance (SOW)** – An intelligent solution designed to support Procurement Division staff in drafting comprehensive and accurate statements of work by providing templates, suggesting standardized language, flagging incomplete or ambiguous sections, and recommending best practices based on prior successful contracts. By reducing manual effort and human error, this solution streamlines SOW development, ensures consistency across documents, and has the potential to streamline procurement timelines.

**Automated Voucher Creation** – Automating payment vouchers creation in OnBase from DocuSign. When an invoice is finalized in DocuSign, all relevant details and supporting documents will be automatically transferred to OnBase, eliminating manual steps and reducing the chance for errors.

**STIP Project Review** – This project aims to streamline and improve the review process for Texas' Statewide Transportation Improvement Program (STIP) projects. Currently, manual review of thousands of highway and transit projects leads to frequent errors, inconsistencies among planning documents, and vague project descriptions, resulting in a 12% non-approval rate and potential delays for statewide initiatives. By introducing an AI-powered solution, the project will automatically identify missing or incorrect data, inconsistencies between planning documents, and unclear project descriptions. This will accelerate review cycles, reduce errors presented to

federal partners, and help prevent costly project delays, supporting more efficient and reliable transportation planning across Texas.

### **Workforce Development (WFD) Invoice Processing Automation –**

HRD's Workforce Development section manages many training-related invoices, which currently require manual review and validation against policies and contract terms. This process is slow and prone to errors, leading to payment delays and miscommunication. To improve efficiency, the team would like to automate key tasks, including invoice intake, validation, document storage, and routing for approval. Automation will speed up processing, reduce mistakes, and free staff to focus on higher-value work.

# FOUNDATIONAL CAPABILITIES FOR FUTURE INNOVATION

To provide for a future of scalable AI innovation across the department, TxDOT must focus on building foundational capabilities that focus on expanding human and technical capacity throughout the organization.

## BUILDING AN AI TALENT PIPELINE

To accelerate the delivery of TxDOT's AI roadmap, the Information Technology Division (ITD), working alongside other organizational units in TxDOT, must cultivate and grow specialized technical delivery teams. This pipeline serves to develop and secure the highly competitive talent required to build, deploy, and govern enterprise AI solutions. TxDOT will achieve this by building our talent resources, enhancing AI literacy across the organization and building multidiscipline communities of practice for collaborative professional growth.

### *AI Talent Resources*

To build a resilient and future-ready AI workforce, TxDOT is implementing a multi-faceted talent strategy that combines internal development, strategic sourcing, and advanced assessment methods to ensure the right expertise is in place for evolving AI initiatives.

- **Internal Talent Mobility:** Identifying existing TxDOT staff with high data-fluency and AI aptitude and providing them with upskilling opportunities to move into more strategic AI or data science roles.
- **Strategic Sourcing & Partnerships:** Proactively identifying top-tier talent through specialized technical communities, academic partnerships, and internal referral networks. We utilize flexible

contract-to-hire vehicles to rapidly scale capacity based on project demand.

- **Augmented Talent Assessment:** Leveraging AI-driven assessment platforms to objectively analyze technical competencies and evaluate candidate fit, significantly reducing time-to-hire while ensuring a merit-based selection process.
- **Technical Validation:** Conducting deep-dive interviews with preferred candidates that focus on machine learning operations, algorithmic logic, and the ability to translate complex data into TxDOT business applications.
- **Accelerated Onboarding:** Integrating new technical talent into their specialized teams and work environment with appropriate access to tools, data and projects.
- **Continuous Engagement:** Maintaining a "ready-state" talent pool of candidates, ensuring TxDOT remains a top-of-mind employer for future AI roles and specialized research projects.

### ***AI Literacy and Workforce Development***

AI literacy and understanding is critical to successful enterprise-wide adoption and use of AI. Ideally, training efforts will follow a "Hearing, Seeing, Doing" model, combining conceptual learning with hands-on application. These efforts can be achieved through a dual-track training strategy for building AI literacy:

- **Foundational Learning:** Utilizing tools such as PeopleSoft ELM and LinkedIn Learning, employees access on-demand courses in data science, ethics, and AI fundamentals to build a baseline of competency.

- **Applied Training:** Targeted, product-specific sessions (e.g., Microsoft Copilot, Box) ensure staff can immediately leverage AI features within existing platforms to apply and reinforce foundational learning.

To ensure a strategic level of understanding, executive-level knowledge-building is essential and will focus on strategic workshops for senior leadership, balancing vision-setting with practical demonstrations to yield actionable outcomes.

As new AI-enabled projects move toward implementation, project-specific training is delivered to facilitate seamless adoption. Looking ahead, and in alignment with forthcoming state requirements, TxDOT will transition to a mandatory annual AI training cycle. This proactive approach ensures the workforce maintains the high standard of competency and ethical compliance required to manage this rapidly evolving technology.

### ***AI & Automation Community of Practice (CoP)***

TxDOT established the AI and Automation Community of Practice (CoP) in September 2024 to serve as the agency's primary hub for AI awareness and collaboration. Following a successful launch focused on productivity tools, the CoP evolved into a bimonthly forum covering foundational AI types, data integrity, and machine learning. Practical demonstrations—such as automated invoice processing and predictive fleet maintenance—have grounded these sessions in real-world TxDOT operations.

In 2025, the CoP expanded into thought leadership, addressing legislative impacts, security protocols, and advanced machine-learning platforms. By providing a collaborative space for all employees, the CoP ensures that expertise and best practices are shared across Districts and Divisions, preventing silos and accelerating agency-wide innovation.

Individuals with aptitude and interest can be connected to the AI Community of Practice for deeper engagement, fostering collaboration and accelerating innovation across divisions.

## **FOUNDATIONAL TECHNOLOGIES**

TxDOT's commitment to operational excellence is anchored in a strategic "System of Systems" approach—deploying foundational technologies that empower scalable, secure, and effective AI solutions. As part of a multi-year transformation, TxDOT has prioritized robust infrastructure that supports the entire AI lifecycle, ensuring the agency remains at the forefront of innovation while maintaining rigorous standards for data integrity and compliance.

### ***Scalable Machine Learning Platforms***

Central to this strategy is the deployment of scalable machine learning platforms designed to facilitate model design, training, and deployment. These platforms provide a unified environment for managing diverse AI capabilities, from predictive analytics to large language models. By institutionalizing these platforms, TxDOT enables teams to rapidly experiment and operationalize models for priority or high-impact use cases such as predictive maintenance, operational forecasting, and real-time infrastructure monitoring.

### ***Low-Code/No-Code Enablement: Copilot Studio Implementation***

Recognizing that innovation happens at every level of the agency, TxDOT has implemented Copilot Studio – a low-code/no-code platform that empowers non-technical stakeholders to design, build, and manage AI agents tailored to their specific workflows. This accelerates solution delivery and fosters

cross-functional collaboration, enabling TxDOT to leverage a wider pool of expertise and drive continuous improvement in its AI landscape.

### ***Cloud Infrastructure: Secure "Runways" for Deployment***

Supporting these platforms is a resilient cloud infrastructure designed for secure, sustainable solution delivery. These "Cloud Runways" ensure that AI applications are deployed in environments that meet rigorous security standards while providing the flexibility to handle fluctuating workloads. This foundation allows for seamless integration between internal TxDOT systems and external data sources, safeguarding agency data while maintaining operational integrity.

### ***Emerging Applications***

TxDOT will continue to deepen its investment in the technical foundations required to transition from AI experimentation to AI applications that are more broadly scaled and applied across multiple enterprise systems.

Examples of emerging, near-term applications include:

- **Automated Systems Maintenance:** The deployment of monitoring tools that detect when real-world conditions diverge from original data patterns. This automated capability can proactively trigger the need for critical application updates, ensuring AI-driven insights remain consistent and dependable as conditions evolve.
- **AI-Augmented Development:** Utilizing advanced platforms that assist our technical teams in generating secure, high-quality code and agentic applications, effectively reducing technical limitations while accelerating project delivery.
- **Distributed Intelligence:** Applying Edge AI architecture to move processing power closer to the physical infrastructure, ensuring "Smart

Infrastructure" with sensors capable of providing real-time intelligence and responses.

## LOOKING AHEAD

As TxDOT looks toward 2026 and beyond, the agency is transitioning from isolated AI pilots to a comprehensive, AI-native enterprise that is prepared to assess and integrate AI-solutions throughout its business lines. Our future vision is anchored in digital infrastructure and operational intelligence, where predictive analytics and automated workflows move the agency from a reactive posture to a proactive state of stewardship.

This evolution is driven by **three strategic priorities**:

- **Intelligent Delivery:** Augmenting the entire project pipeline—through planning, design, procurement and construction—to accelerate schedules and administrative workflows while maintaining rigorous technical accuracy and optimize efficiency.
- **Predictive Asset Management:** Transforming fleet, facility, and infrastructure operations through data-informed models that anticipate maintenance needs, optimizing asset lifespan and maximizing taxpayer value.
- **Proactive Safety & Mobility:** Utilizing real-time sensor fusion and computer vision to identify roadway anomalies and safety risks before they impact the traveling public.

Central to this vision is a commitment to professional accountability. Guided by the principle of “Human-Led, AI-Supported,” TxDOT ensures that while AI handles the complexity of data synthesis and design efforts, every outcome is validated by the review and judgment of a human professional. By anchoring innovation in this framework of expert oversight, TxDOT will systematically address the 200+ identified use cases outlined in Appendix B. These ongoing efforts will provide for broader organizational transformation through intelligent automation and serve to redefine infrastructure delivery,

ensuring a safer, more efficient, and more resilient transportation network for all Texans.

## Appendices

Appendix A – AI Project Intake, Readiness and Assessment

Appendix B – Active AI Use Cases and Status

Appendix C – Identified AI Use Cases

## Appendix A – AI Project Intake, Readiness and Assessment

To ensure TxDOT invests in AI responsibly, proposed use cases will be prioritized using a standardized "Readiness & Impact" evaluation. As use cases are submitted, they are evaluated against four readiness criteria along with impact and value considerations. The goal is to move beyond "experimental" AI and focus on scalable solutions that deliver measurable benefits for TxDOT.

The AI Use Case Intake Form acts as the first filter in TxDOT's "Readiness Scorecard." It seeks to transform a vague idea into a measurable business proposal, ensuring that viable and impactful projects reach the governance board. This will allow a growing list of over 200 AI use cases to be strategically assessed, prioritized and tracked through implementation.

Below is an initial template that integrates TxDOT's four essential readiness criteria with additional strategic consideration capturing workflow impact and value realization.

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### AI Project Intake & Readiness Form

#### *Section 1: General Information*

- **Project Name:** (A concise, descriptive title)
- **Requesting Division/District:** (e.g., Maintenance, Bridge, Houston District)
- **Executive Sponsor:** (Must be a director-level or higher "champion")
- **Business Lead/SME:** (The primary point of contact who understands the problem)

#### *Section 2: The Business "Why" (Strategic Alignment)*

- **Problem Statement:** What specific operational challenge or bottleneck are you trying to solve?
- **Proposed AI Solution:** Briefly describe how you envision AI helping (e.g., "An AI agent to categorize bridge inspection photos").
- **Strategic Goal Alignment:** Which TxDOT goal does this support? (e.g., Safety, System Preservation, Optimized Expenditures).

### ***Section 3: The Readiness Scorecard (Core Criteria)***

***Table 2 – The Readiness Scorecard***

<b>Criteria</b>	<b>Questionnaire</b>
Data Readiness	Do we have a centralized dataset for this? Is it in the EDP? Are there known quality or "bias" issues with this data?
Business Sponsorship	Is the business unit prepared to fund potential licensing/development? Who will be the "Human-in-the-Loop" to verify AI outputs?
Resource Capacity	Does the business unit have the staff to assist ITD during the development cycle? Are existing tools and technical resources available or does the project require a custom model or development?
Risk & Ethics	Does this involve PII (personally Identifiable Information)? Could the AI's decision impact public safety or present other risks? Do we maintain Human-in-the-Loop accountability?

## **Section 4: Impact & Value Criteria**

- **Anticipated ROI:** Will this save man-hours, reduce material costs, or improve safety response times? (Please provide a rough estimate).
- **Success Metrics (KPIs):** How will we measure if the AI is successful after six months? (e.g., "90% accuracy in photo categorization").
- **Workflow Integration:** Where will the AI "live"? Will it plug into TxDOTCONNECT, a mobile app, or a standalone dashboard?

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## **AI Use Case Prioritization**

### ***Sample Scoring Rubric***

Using a scoring rubric, the qualitative responses to questions from the intake form can be converted into a quantitative priority score. This allows the governance board to objectively rank the 200+ use cases in the AI Strategic Plan and assess opportunities for "quick wins" versus "long-term strategic investments."

Each use case can be scored from **1 to 5** across the four core Readiness Scorecard pillars and a fifth "Strategic Impact and ROI" pillar.

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#### ***1. Data Readiness***

*Is the fuel for the AI engine ready?*

- **1 point:** Data is non-existent, unstructured (paper-based), or inaccessible.
- **3 points:** Data exists but is siloed in a standalone system and requires significant cleansing.
- **5 points:** High-quality, biased-checked data is already curated and accessible within the **Enterprise Data Platform (EDP)**.

## **2. Business Sponsorship & Ownership**

*Is there a pilot in the cockpit?*

- **1 point:** No clear business lead; "IT-driven" request with little business unit engagement.
- **3 points:** Subject Matter Expert (SME) identified, but no dedicated budget or time allocated.
- **5 points:** Executive Sponsor and dedicated SME committed to "Human-in-the-Loop" validation and project championing.

## **3. Technical & Resource Feasibility**

*Do we have the tools and people to build it?*

- **1 point:** Requires highly custom, experimental AI; no internal expertise available.
- **3 points:** Requires custom ML development but fits within existing ITD technical pipelines.
- **5 points:** Can be solved with existing **Low-Code/No-Code** tools (e.g., Copilot Studio) or "off-the-shelf" enterprise solutions.

## **4. Risk, Ethics & Compliance**

*Is it safe and defensible?*

- **1 point:** High risk; involves PII, safety-critical autonomous decisions, or potential for high bias.
- **3 points:** Moderate risk; involves internal operational data with established privacy guardrails.
- **5 points:** Low risk; purely administrative or information-retrieval task with no impact on public privacy or safety.

## 5. Strategic Impact & ROI

What is the "so what?"

- **1 point:** Minimal efficiency gain; affects a very small user group.
- **3 points:** Moderate gain; saves significant man-hours or improves a single department's workflow.
- **5 points:** High Impact; directly improves public safety, saves millions in infrastructure costs, or scales across numerous TxDOT Divisions and/or Districts.

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## The Decision Matrix

Once scored, use case projects can be placed into one of four quadrants:

**Table 3 – The Decision Matrix Categories**

Total Score	Category	Action
<b>20–25</b>	<b>Quick Wins</b>	High priority opportunity with immediate implementation. High impact and easy to build.
<b>15–19</b>	<b>Strategic Bets</b>	Planned high-impact opportunity but requires more data or resource preparation.
<b>10–14</b>	<b>Low-Hanging Fruit</b>	Secondary priority that is easy to do but offers lower overall agency value.
<b>Below 10</b>	<b>De-Prioritize</b>	Archive opportunity to be re-evaluated once data or business readiness improves.