



OKLAHOMA
Transportation

Digital Delivery Strategic Plan

Executive Summary

Overview

In the infrastructure industry, utilizing lifecycle data exchanges through technology and open data standards is becoming the new normal.

To adapt to this changing business environment, Oklahoma Department of Transportation (ODOT) is establishing a digital delivery program to modernize its information-sharing practices with project delivery.

ODOT is committed to adopting digital delivery throughout the agency and has made substantial investments to do so. The digital delivery program will facilitate the use of new workflows and processes for technology-based data exchanges. To execute this program, ODOT will implement a strategic plan focused on digital maturity through data-driven decision-making, as well as establish a longstanding workforce program.

The strategic plan establishes tactical and strategic goals that will be used to implement a sustainable and holistic digital delivery program. The program focuses on a lifecycle data management approach to reach a specific maturity level by 2027. Beginning this journey, the digital delivery team has defined an overall vision and mission to be the foundation on which decisions are made to implement digital delivery.



VISION

The vision describes the world that organizations seek to create through the work of the mission. The world that we want to create through our work is:

Digital delivery standards and optimized workflows adopted and implemented, increasing value throughout the transportation infrastructure lifecycle.



MISSION

The mission of an organization articulates the purpose of the organization and defines the work that it will do to fulfill this purpose. The mission of this group is:

Leading efforts to advance and connect digital resources that facilitate data-driven decision making and maximize the values of the transportation infrastructure lifecycle.

To achieve the vision and mission, the four goals and four objectives were defined to advance data-driven decision-making through digital delivery standards and workflows that meet the digital maturity goals of ODOT over the next four years.

Program Goals

The goals for achieving the program vision include:



Develop standardized and accessible digital delivery processes, guidance documents, training, and tools to support project development functions by all stakeholders.



Implement digital technologies throughout the project lifecycle to create high-quality, data-rich models and capture historical, present, and future data through our project deliverables.



Establish and implement new **information-management processes** that capture construction inspection data and use asset information from all projects to improve existing asset management systems.



Establish practices to **manage the pace of change** with the current and future workforce through technology training and workforce development.

Program Objectives



Develop standardized processes and utilize technology that supports the digital delivery project lifecycle.



Develop foundational plans such as strategic, implementation, communication, engagement, and change-management plans that clearly articulate future objectives and are available for stakeholder reference.



Reduce paper throughout project lifecycles by conducting pilot projects to evaluate digital workflows.



Leverage new and current technologies that align with ODOT's overall IT stack and lead to proficiency with data-rich models and asset information stored and managed throughout the asset lifecycle.

Tactical and strategic goals that align with the program's overall goals and objectives, maturity focus areas, program components, and desired outcomes have been established.

The tactical and strategic goals require varied levels of effort, resource needs, and funding. The desired outcomes of the goals are outlined by high-level tasks conducted through a four-year roadmap.



Focus Areas

The six focus areas are defined by the Federal Highway Administration’s readiness assessment tool: strategy, digital delivery use cases, process, data, technology, and people.



STRATEGY

Refers to the enterprise strategy of the organization as a success factor.



DIGITAL DELIVERY USE CASES

Refers to the complexity of use cases ODOT may want to implement.



PROCESSES

Refers to the amount of preparation to define processes to support the digital delivery use cases ODOT wants to implement.



DATA

Refers to the data requirements to support use cases previously defined.



TECHNOLOGY

Refers to the technologies available to ODOT to support the milestone deliverables and data requirements necessary throughout project development.



PEOPLE

Refers to the change management, training, competencies, and staff needed to successfully implement digital delivery throughout the agency.

Program Components

Implementation of digital delivery is a complex process that requires the deployment of new technology, implementation of new methods and processes, and a robust change management plan.

The digital delivery program was developed in conjunction with the Advanced Digital Construction Management Systems (ADCMS) grant and included eight key components that implement certain foundational changes within the agency to be able to adapt to technological industry advancements. Each component establishes a strong foundation, ensuring the right guidance provided and gaining the trust of all stakeholders. The components include:

Program Management	Pilot Project Program
Strategic and Implementation Development	Implementation – Construction
Foundational Project Support	Implementation – Asset Management
Implementation – Design	Industry Outreach and Workforce Development

Tactical and Strategic Goals

Tactical goals can be achieved within one to three years, depending on the level of resources available. These are activities with low barriers to entry and that can be done in conjunction with current project development.

TACTICAL GOALS



Tactical Goal 1: Establish Change Management, Communication, and Engagement Plans

This goal focuses on the development of multiple foundational plans necessary for the implementation of digital delivery throughout the agency.

Desired Outcomes: Program Implementation Plan; Change Management Plan; Communication Plan; Engagement Plan; Risk Registry



Tactical Goal 2: Establish Process Standardization Aligning to Industry Standards for Data Exchanges

This goal focuses on the development of processes and guidance to implement digital delivery following industry standards.

Desired Outcomes: Information Management Improvement Plan; Development and implementation of common data environment and guidance for future expansion; ISO 19650 certification and education; Digital Delivery guidelines; Modeling Standards manual; Quality Management guidance for digital delivery; Pilot project identification criteria



Tactical Goal 3: Establish Workforce Development Education and Training Programs

This goal focuses on the development of training and education plans and materials that will be implemented in the strategic goals.

Desired Outcomes: Software training materials; Evaluation processes and criteria for new technologies; Digital Delivery Construction and Inspection guidelines; Training and Education Plan

STRATEGIC GOALS

Strategic goals can be achieved within three to seven years, depending on the level of resources available. These are high-value activities that have prerequisites covered in the tactical goals above. Actual timeframes to complete the goals will vary depending on availability of resources. These activities are the core of the digital delivery program and will require a higher level of coordination and potentially additional funding.



Strategic Goal 1: Implementation of Outreach and Training Programs

This goal focuses on training programs for inspectors and contractors, along with industry outreach and education with multiple stakeholder areas.

Desired Outcomes: DBE contractor gap assessment; Inspection Training Program; Contractor Training Program; Mock lettings; Procurement of inspection equipment; STEM K-12 Initiative; College and Career Tech Program development; Local agency outreach; Industry wide collaboration and education



Strategic Goal 2: Strategy and Risk Calibration

This goal focuses on the continual monitoring and alignment of strategy and risk management throughout the program.

Desired Outcomes: Strategic Plan updates; Risk management workshops



Strategic Goal 3: Championing Change through Leadership Empowerment

This goal focuses on implementing the change management and communication plans through empowering champions.

Desired Outcomes: Identification of champions, early adopters, and business leaders; Implementation of change management and communication plans



Strategic Goal 4: Lifecycle Data Exchanges

This goal focuses on a phased approach to implementing data exchanges for the entire asset lifecycle through a pilot project program.

Desired Outcomes: Industry peer exchanges for construction use cases; pilot project program; After action review memorandums

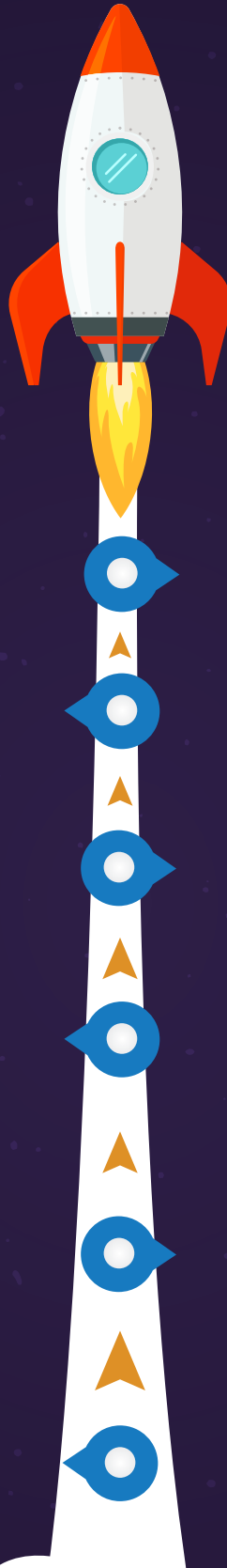


Strategic Goal 5: Lifecycle Data Processes for Operations and Maintenance

This goal focuses on developing lifecycle data processes for data collection and exchanges for operations and maintenance. Special attention will be given to e-ticketing and data exchanges with AASHTOWare Project.

Desired Outcomes: Asset Management assessment; Digital as-builts with ancillary asset memorandum

MISSION PLAN



FULL LIFECYCLE DATA PROCESSES

Asset management initiatives
Data integration

LAUNCH EDUCATION AND WORKFORCE INITIATIVES

STEM K-12
College and Career Tech program
Workforce development and training
Industry education and outreach

STRATEGIC PLANNING

Foundational planning and documents
Championing change through leadership empowerment

ATTAINING DIGITAL MATURITY

Explore further industry adoption
Peer exchanges

PILOT PROJECT PROGRAM – DESIGN THROUGH CONSTRUCTION

Phased approach through BIM use cases
Contractor and inspector training
Technology procurement
Mock lettings

ESTABLISHING PROCESSES AND STANDARDS

Developing standards and materials for all parts of the project lifecycle