

Strategic Plan for Digital Delivery

Executive Summary

OCTOBER 2022

The Iowa Department of Transportation (DOT) uses a wide range of data to support business functions and decisions. While data is not always available, accessible or reliable, it is critical to meeting the needs of the Department's customers and supporting DOT business operations. It is now more important than ever to be responsible stewards of limited resources, innovate, and use technology to facilitate positive change. This means Iowa will do more than deliver projects – we will also deliver value.



What is Digital Delivery?

DIGITAL DELIVERY is a modern process in which 3D models and other files are created and delivered to facilitate construction and incorporate digital information to support maintenance and operations activities and lifecycle asset management.

THE DEPARTMENT'S VISION for digital delivery is to enhance our abilities to share information seamlessly across the enterprise, significantly improve asset management, and provide greater value to all users, including construction contractors and suppliers.

OUR MISSION is to enable streamlined data sharing and active collaboration between different Divisions, Bureaus, as well as the public and other external stakeholders.

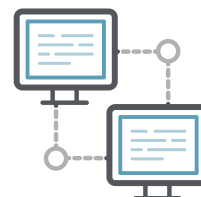
Digital Transformation

The urgency to transform the Department's analog way of exchanging information between Divisions, Bureaus and Business Groups is being driven by more robust, sustainable methods that leverage digital workflows. While most of the Department's workflows are considered electronic—they are not all digital.



ELECTRONIC WORKFLOWS

are based on paperless, document-type exchanges, in which information must be manually extracted and entered into other systems.



DIGITAL WORKFLOWS are based on data-based exchanges, in which information can be easily transferred to a computer system with little to no manual entry.

Benefits of Digital Delivery

Digital Delivery will help the Department streamline information sharing, enhance collaboration and create a framework for long-term use of data to drive decisions for managing the Iowa Transportation System. This strategic plan provides the framework and foundation to facilitate a digital transformation.



Improved design quality



Early identification of potential issues that reduce change orders



Data visualization allows project teams to optimize construction means, methods, and schedules



Streamlined data collection that reduces duplication of work



Ability to access the right information at the right time

Focus Areas

Six focus areas were defined as a direct result of consultation with bureaus and divisions, and the review of current initiatives underway to manage and govern data and advance the use of digital workflows.



Data Requirements, Standards and Guidelines

Data Collection and Storage



Workflow Efficiency

Technology Implementation



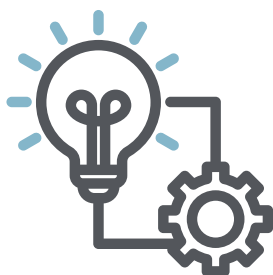
Workforce Development Outcomes

Digital Delivery Lead and Communications



OUR GOAL is to advance the use of digital data for project development, construction activities, and maintenance and operations activities, specifically:

- 1 Use 2D and 3D modeling technology to develop project models that can be used as legal documents.
- 2 Leverage existing technology and explore new tools to support specific uses.
- 3 Expand data collection to manage assets by developing digital models that represent as-built conditions.
- 4 Develop and implement data management processes aligned with data management goals.



Implementation

Adopting digital delivery is a large undertaking that requires careful planning, deliberate communication and engagement, and dedicated resources. A phased approach is recommended to establish and manage assessment and acquisition of new technology. Pilot projects are one way to manage and scale adoption of digital delivery. This helps manage the pace of change, which is needed for stakeholder buy-in. The detailed implementation plan will also include a risk management strategy for documenting, assessing, and mitigating impacts of risks. Just like transportation improvement projects, a digital transformation is a complex program with milestone deliverables. Developing a critical path method (CPM) schedule will manage, monitor and report activities keeping the program on track.



Measuring Success

Transparency serves as a powerful foundation for accountability. The Department will define metrics to assess progress and the effectiveness of the Digital Delivery Initiative. Metrics will be realistic and the data needed for reporting results should be easy to acquire. Metrics will be evaluated every year and adjusted as digital maturity increases.