Iowa Department of Transportation

Strategic Plan for Digital Delivery

SPR 3224
DEVELOPING A ROADMAP FOR DIGITAL DELIVERY IN IOWA

September 2022
Agenda

• Digital Delivery Vision
• Strategic Plan
• Plan Implementation and Evaluation
• Q&A
Digital Delivery Vision
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

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

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

- 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
Strategic Plan
Groups involved in development of the plan

GOVERNOR
- DIRECTOR
- CHIEF OPERATING OFFICER

ADMINISTRATIVE SERVICES DIVISION
- Modal Transportation Bureau
- Program Management
- Systems Planning Bureau
- Research & Analytics Bureau

TRANSPORTATION DEVELOPMENT DIVISION
- Project Development
  - Location & Environment Bureau
  - Right of Way Bureau
  - Design Bureau
  - Bridges & Structures Bureau
  - Contracts & Specifications Bureau
  - Local Systems Bureau
  - Project Management Bureau

MOTOR VEHICLE DIVISION

INFORMATION TECHNOLOGY DIVISION

SYSTEMS OPERATIONS DIVISION
- Traffic & Safety Bureau
- Traffic Operations Bureau
- Motor Vehicle Enforcement
- Construction & Materials Bureau
- Maintenance Bureau
- TraCS

FIELD OPERATIONS DIVISION (Chief Engineer)
- District 1
  - Ames
- District 2
  - Mason City
- District 3
  - Sioux City
- District 4
  - Atlantic
- District 5
  - Fairfield
- District 6
  - Cedar Rapids

ADDITIONAL GROUPS
- Asset Management
- GIS
Focus Areas

- Data Requirements, Standards and Guidelines
- Data Collection and Storage
- Workflow Efficiency
- Technology Implementation
- Workforce Development Outcomes
- Digital Delivery Lead and Communications
Achieving the Vision

**TACTICAL GOALS** set expectations for accomplishing foundational activities that have a lower barrier to entry and accelerates work already in progress.

**STRATEGIC GOALS** set expectations for accomplishing activities that are more complex and require longer a higher level of coordination and longer time to complete.
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<tr>
<th>Tactical and Strategic Goals for Digital Delivery</th>
<th>Anticipated Duration of Minimal Level of Effort</th>
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<tr>
<td>TG1. Develop Stakeholder Communication and Engagement Plan (6 months)</td>
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<td>TG2. Define Organizational Information Requirements (6-12 months)</td>
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<td>TG3. Select Three Priority Assets and Develop a Prototype (2 years)</td>
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<td>TG4. Update Project and Exchange Requirements to Advance Digital Maturity</td>
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<td>TG5. Expand the Use of E-Ticketing to Include Additional Materials and Assets</td>
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<td>SG1. Develop Standards to incorporate or Connect Data Harvested from Digital Design through Digital As-Builds into Authoritative Systems</td>
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<td>SG2. Review Current Plan for Replacing ERMS and Make Updates to Improve Data Searching and Reporting</td>
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<td>SG3. Improve Transfer of Data Between Various Department Systems</td>
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Plan Implementation and Evaluation
Key Success Factors

• Project champion and executive support
• Effective coordination with stakeholders and customers
• Identification of practical business process improvements
• Innovation through empowerment
Considerations for Implementation

**CHANGE MANAGEMENT**
Large and complex undertaking that require:

- Dedicated team to oversee the implementation plan
- Careful planning and communication
- **Continuous engagement with stakeholders and customers**

**TECHNOLOGY ASSESSMENT**
Implementation approach that sets approach for:

- Assessment and acquisition of new technology
- Collaboration between IT staff and technology users for piloting new tools
Considerations for Implementation

PILOT PROJECT INITIATIVES
- Manage and scale adoption
- Develop tools, procedures and training
- Test new digital approach on specific use cases
- Increase complexity as the initiative progresses

RISK MANAGEMENT
- Manage risk through this digital transformation
- Create and maintain risk registry

SCHEDULE AND FUNDING
- Applied for FHWA AID Grant to fund completion of tactical goals over the next 3 years
- Schedule is dependent on the resources available to complete activities
• STIC Incentive Program
  • $100,000/year to support costs of standardizing innovative practices

• Advanced Construction Management Systems under IIJA
  • Applications likely via NOFO
  • $20M/yr. for a 5-yr period
  • Criteria for funding undetermined

• Every Day Counts
  • Funding support for peer exchanges

• Technology Transfer (T2) Funds
  • Transition and commercialize research products
Thank you for your attention

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