

Iowa Department of Transportation

Strategic Plan for Digital Delivery

SPR 3224
DEVELOPING A ROADMAP FOR
DIGITAL DELIVERY IN IOWA

September 2022



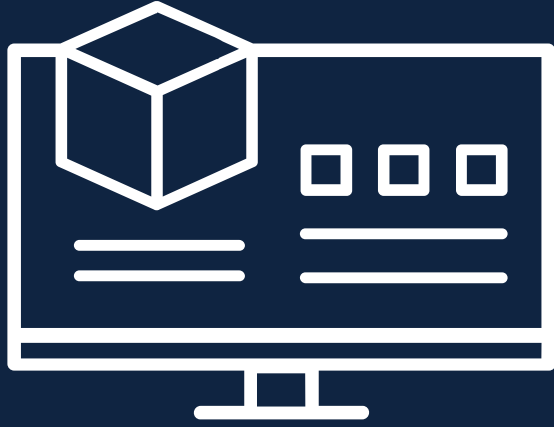
Digital Delivery Strategic Plan

Agenda

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



Digital Delivery Vision



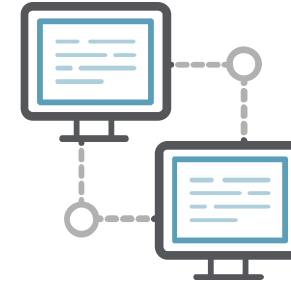
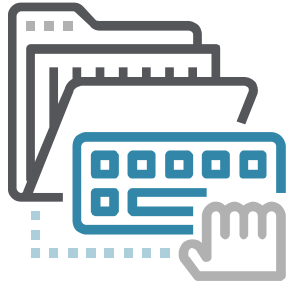
What is Digital Delivery

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



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



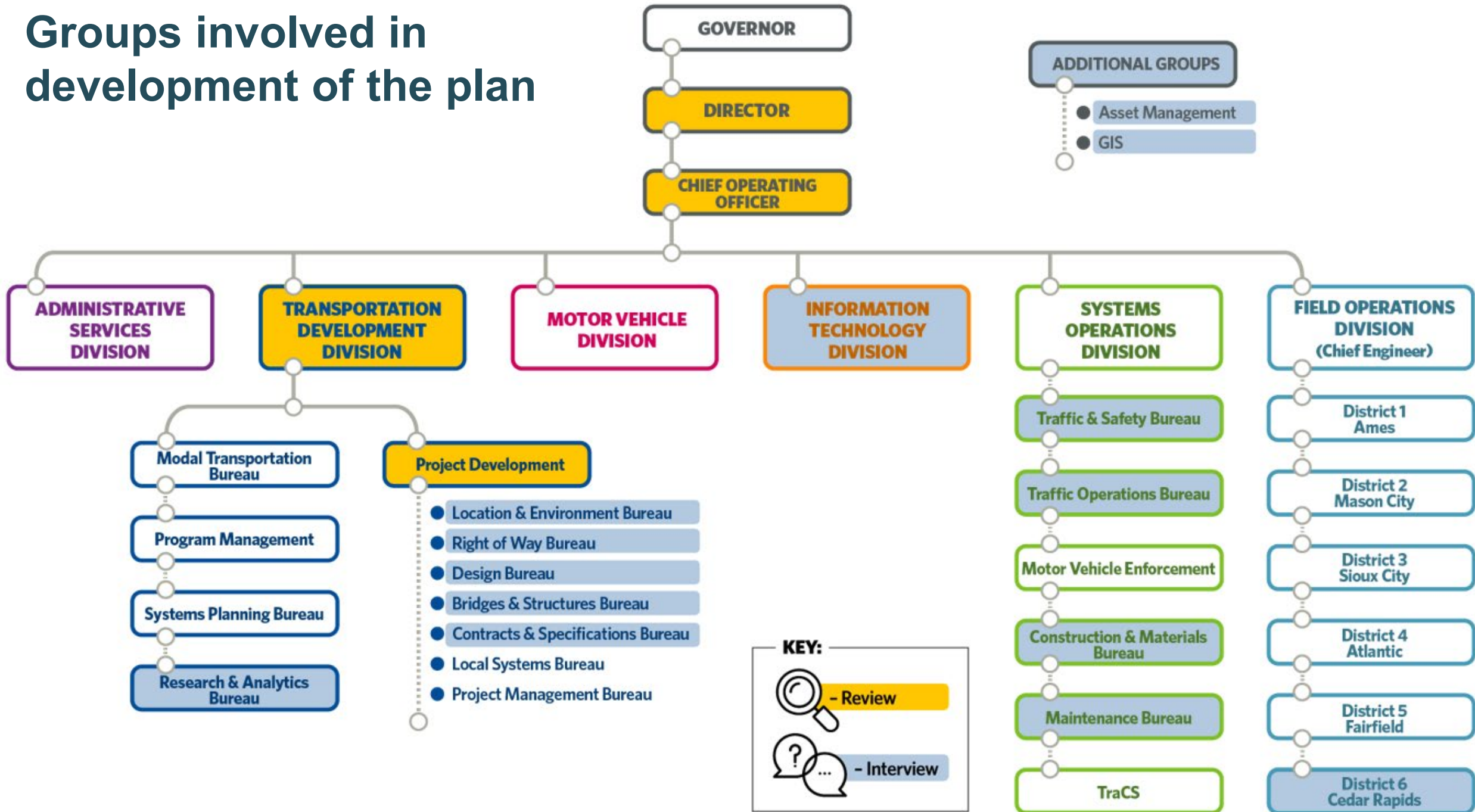
Streamlined data collection that reduces duplication of work



Ability to access the right information at the right time

Strategic Plan

Groups involved in development of the plan



Focus Areas



Data Requirements,
Standards and Guidelines



Data Collection
and Storage



Workflow Efficiency



Technology
Implementation

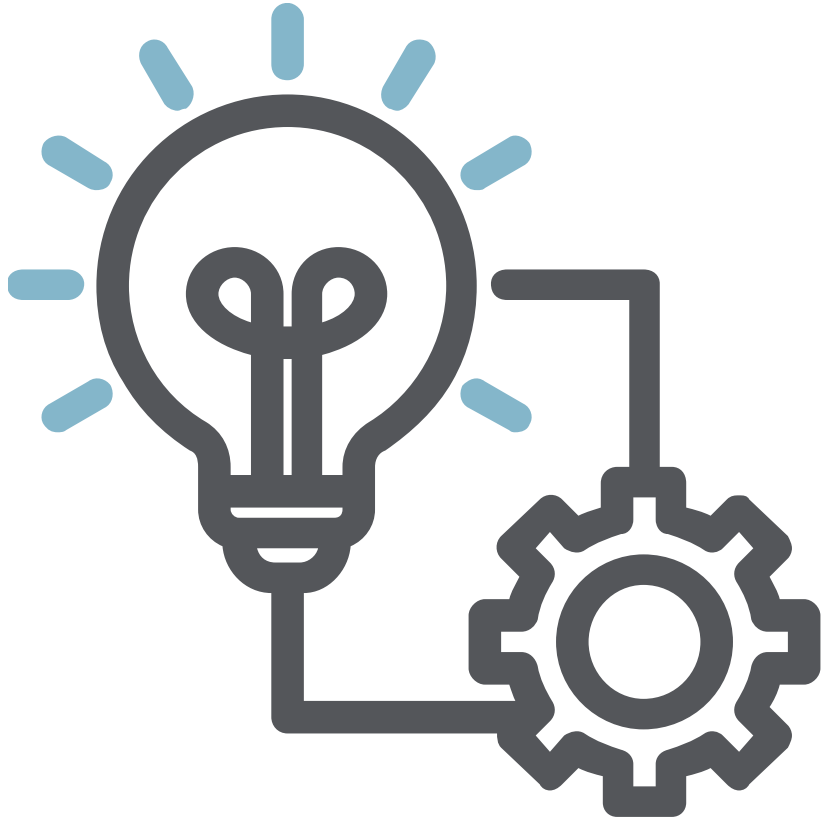


Workforce Development
Outcomes



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.

Tactical and Strategic Goals for Digital Delivery	Anticipated Duration of Minimal Level of Effort																			
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10										
TG1. Develop Stakeholder Communication and Engagement Plan (6 months)	■																			
TG2. Define Organizational Information Requirements (6-12 months)		■	■																	
TG3. Select Three Priority Assets and Develop a Prototype (2 years)			■	■	■	■														
TG4. Update Project and Exchange Requirements to Advance Digital Maturity		■	■	■	■															
TG5. Expand the Use of E-Ticketing to Include Additional Materials and Assets		■	■	■	■	■	■													

Tactical and Strategic Goals for Digital Delivery	Anticipated Duration of Minimal Level of Effort																			
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10										
SG1. Develop Standards to incorporate or Connect Data Harvested from Digital Design through Digital As-Builts into Authoritative Systems																				
SG2. Review Current Plan for Replacing ERMS and Make Updates to Improve Data Searching and Reporting																				
SG3. Improve Transfer of Data Between Various Department Systems																				

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

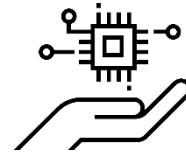
Considerations for Implementation



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**

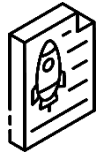


TECHNOLOGY ASSESSMENT

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



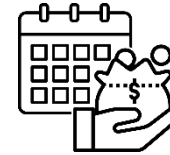
PILOT PROJECT INITIATIVES

- 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

FHWA Grant Opportunities

- 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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