Electronic Ticketing

James Bender – Innovation and Technology Manager

Wisconsin Transportation Builders Association
Wisc. Dells

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WisDOT e-Ticketing team

- NC – Jed Peters & Adam Holquist
- NE – Jesse Hanson & Rebecca Rooyakkers
- SE – Eric Hanson
- SW – Cody Kammerzelt & Adam Kopp
- BTS – Erik Lyngdal & Barry Paye
- BPD – Tyler Rongstad, David Castleberg
- OBOEC – Teresa Rademacher
- FHWA – Nick Perna

FWHA Everyday Counts

Providing all stakeholders with an electronic means to produce, transmit, and share materials data and track and verify materials deliveries enhances safety, streamlines inspections, and improves contract administration processing. Using electronic ticket exchanges enables access via mobile devices and simplifies handling and integration of material data into construction management systems for acceptance, payment, and source documentation.

Benefits of e-Ticketing

- e-Ticketing enhances data collection while reducing exposure to adjacent vehicular traffic and construction equipment for inspectors and work crews while retrieving paper tickets.

- **Time Savings -** Real-time access, via electronic handling of tickets, reduces processing time for quality assurance and payment, decreasing the inherent delays in paper-based project administration.

- **Quality -** Project documentation is more consistent and efficient using e-Ticketing platforms. Standardized data enables archiving for future reference, leading to improved design, construction, maintenance, and operations.

What is Digital?

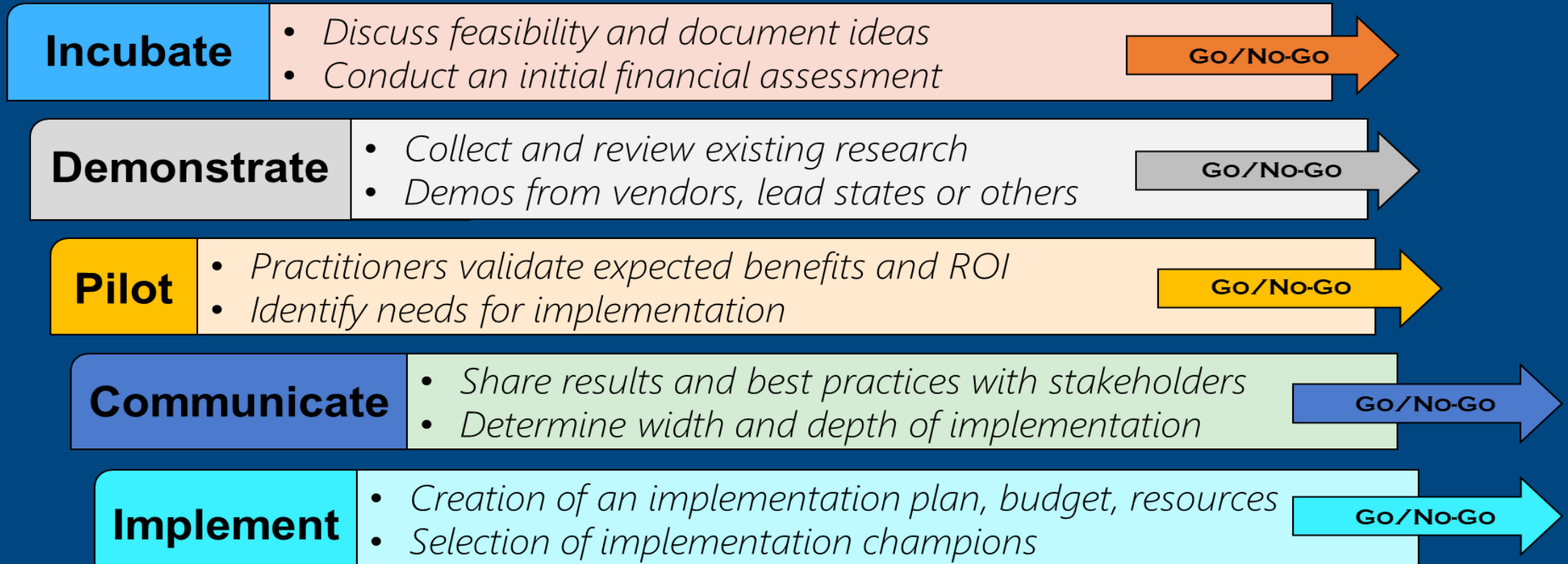|	Paper	Paperless	Electronic	Digital
Information	**Handwritten, Printed**	**Image**	**Data**	**Object**
	Physical Cabinets	*.pdf, .bmp*	*.dxf, csv*	*model, services*
Workflow	**Organic**	**Implied**	**Explicit**	**Seamless**
	Learned	*email inbox*	*documented, semi-automated, Semi-measured*	*automated, Notifications, Performance mgmt*
Integration	**None**	**Shared**	**Interoperable**	**Integrated**
	printed & filled-out forms, snail or inter-d mail	*email a roadway design pdf*	*dxf emailed from consultant to DOT and back again*	*same model accessed, reviewed, marked up by all parties, auto-push of model data to traffic/maint. operations sys.*

Proposed Plan for implementation

- 2023 – WisDOT encourages the use of e-ticketing on projects.
  - Evaluate
- 2024 – Publish e-ticketing specification
  - Include on select projects
  - Evaluate
- 2025 - e-ticketing increase the number of select projects
  - Evaluate
- 2026 - e-ticketing Mandatory for all projects with exception (TBD)
  - Evaluate

5 Steps to Innovation

Incubate
- Discuss feasibility and document ideas
- Conduct an initial financial assessment

Go/No-Go

Demonstrate
- Collect and review existing research
- Demos from vendors, lead states or others

Go/No-Go

Pilot
- Practitioners validate expected benefits and ROI
- Identify needs for implementation

Go/No-Go

Communicate
- Share results and best practices with stakeholders
- Determine width and depth of implementation

Go/No-Go

Implement
- Creation of an implementation plan, budget, resources
- Selection of implementation champions

Go/No-Go

Standard Specifications

- <u>In 2024 Design Standard Specifications</u>

109.1.4.3 Add option for electronic load tickets.

(1) Electronic load tickets <u>may</u> be provided as a substitute for printed tickets. Include the information as specified in 109.1.4.2 on each electronic ticket.

(2) Automatically generate electronic tickets using a system that is <u>fully integrated with the load-out scale system</u> being used to weigh the material. Ensure <u>data input cannot be altered</u> and provide offline capabilities to prevent data loss.

3) Provide electronic tickets in <u>real-time</u> by allowing the department access to the tickets utilizing a webbased or app-based system compatible with iOS and Android.

(4) Provide the capability to record information and comments on each ticket.

(5) For each project ID and bid item, submit an electronic daily summary of the individual tickets daily as work is completed. In the daily summary, include the unique information for each individual load ticket. Provide the daily summary data in an <u>importable format,</u> such as comma separated values (.csv).

What's being Evaluated

- Materials
- Locations
- Connectivity
- Recycling in Place
- Systems
- Integrations
- Costs
- Partner Readiness
- Exceptions

New AASHTO Material Delivery Management System Standardization

- The material delivery management system (MDMS) manages the following data associated with delivery of material to a contract:

  - **Source (E-Ticket):** Data generated by the source's loadout software, such as contract, project, source, and mix design identification, material code, ticket number, and loading and weight information. This data is considered as the E-Ticket.

  - **Loading and delivery event:** Data generated such as dumping details, date and time stamps for given event types, and durations.

- AASHTO Journal - New AASHTO Material Delivery Management Guide (transportation.org)

Applications

- WisDOT is <u>NOT</u> directing anyone to use any software for e-ticking. There are multiple vendors that provide ticketing software

- In 2024 WisDOT is piloting HaulHub to connect to your vendor software and equipment to manage e-tickets

HAULHUB TECHNOLOGIES

What is HaulHub

- Yes, it is an e-Ticketing software company.

- HaulHub should allow WisDOT to create a simple connection to integrate with your software

- Its is expected to be **versatile** to work efficiently with all construction materials types, providing a comprehensive solution to our partners

- **Consistency** for all operations, ensuring standardized processes and smoother workflows across different projects and locations

- **Flexible** for WisDOT to connect with any loadout system, allowing for efficient data exchange and collaboration, regardless of the many systems used.

HaulHub

Any e-Ticketing Vendor

Any Material Type

e-Ticketing Momentum with HaulHub's Solutions
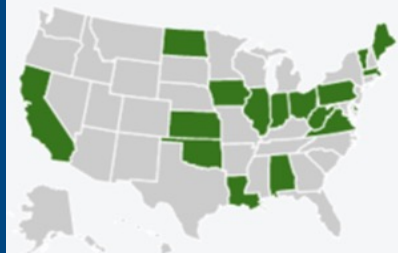
→ 20 Transportation Agencies
→ 350 Material Producers
→ 2,750 Material Plants
→ 20 Point of Sale Systems
→ 56+ Million e-Tickets

Why is WisDOT Piloting HaulHub

1. Consistency
2. Flexibility
3. Integration with WisDOT systems
   - Digital Data
   - Data flows in a database vs static data

E-Ticketing Takeaways

- **Safer** projects and shorter work zone traffic impacts
- Improve efficiency and accuracy in recording and sharing material ticket information
- Seamless project **collaboration** through digital communication across plants, job sites, and transportation agencies
- Enhance **data integrity and reduced risk** of errors and disputes with audited secure permissions for every teammate
- **Real-time access** to ticket data for better project management

E-ticketing 2024

- Communication
- E-ticketing landing page on WisDOT Project (AWP) Knowledge Base
  - https://awpkb.dot.wi.gov/content/default.htm
- Piloting Haulhub
  - Haulhub integration with AWP
- List of select project posted
- Development of exception process
- Continued evaluation of e-ticketing

Questions – Discussion - Feedback

• Questions, concerns, issues, thoughts

E-Ticketing, Wisconsin