



# Technologies to Improve Work Zone Safety

**APRIL 21, 2025**

**Moderator:** **Bradley M. Sant, JD, CSP, ASP**, Senior Vice President of Safety and Education, American Road and Transportation Builders Association (ARTBA)

**Panelists:**

**Thomas Parbs**, Vice President, Sales, HAAS Alert

**Todd Hartnett**, Director, Business Development, Ver-Mac

**Michael Gallant**, Director of Industry Relations & Government Affairs, HaulHub Technologies

**Haley Norman**, Direct Traffic Control

**Mark Buckalew**, Chief of Construction and Materials, Delaware Department of Transportation

**Jim Weston**, Roadway Operations Manager at Washington State Department of Transportation

**Travis Parsons**, Director of Occupational Safety and Health, Laborers' Health & Safety Fund of North America

# Stewardship for Safety

PROTECT EMPLOYEES AND SAVE LIVES | FOSTER EMPLOYEES' HEALTH & WELLNESS  
BUILD SAFER ROADS & STRONGER COMMUNITIES







## Tom Parbs

**Vice President – HAAS Alert**

- 22 years dedicated to solving organizational challenges.
- Partnered closely with roadway agencies to tackle critical road safety issues.
- Road safety advocate and helps drive global adoption of HAAS Alert's Safety Cloud advance warning, digital alerting technology.

# Think Differently

## Traditional Approach

Traffic deaths are *inevitable*

*Perfect* human behavior

Prevent *collisions*

*Individual* responsibility

Saving lives is *expensive*

VS

## VISION ZERO

Traffic deaths are *preventable*

Integrate *human failing* in approach

Prevent *fatal and severe crashes*

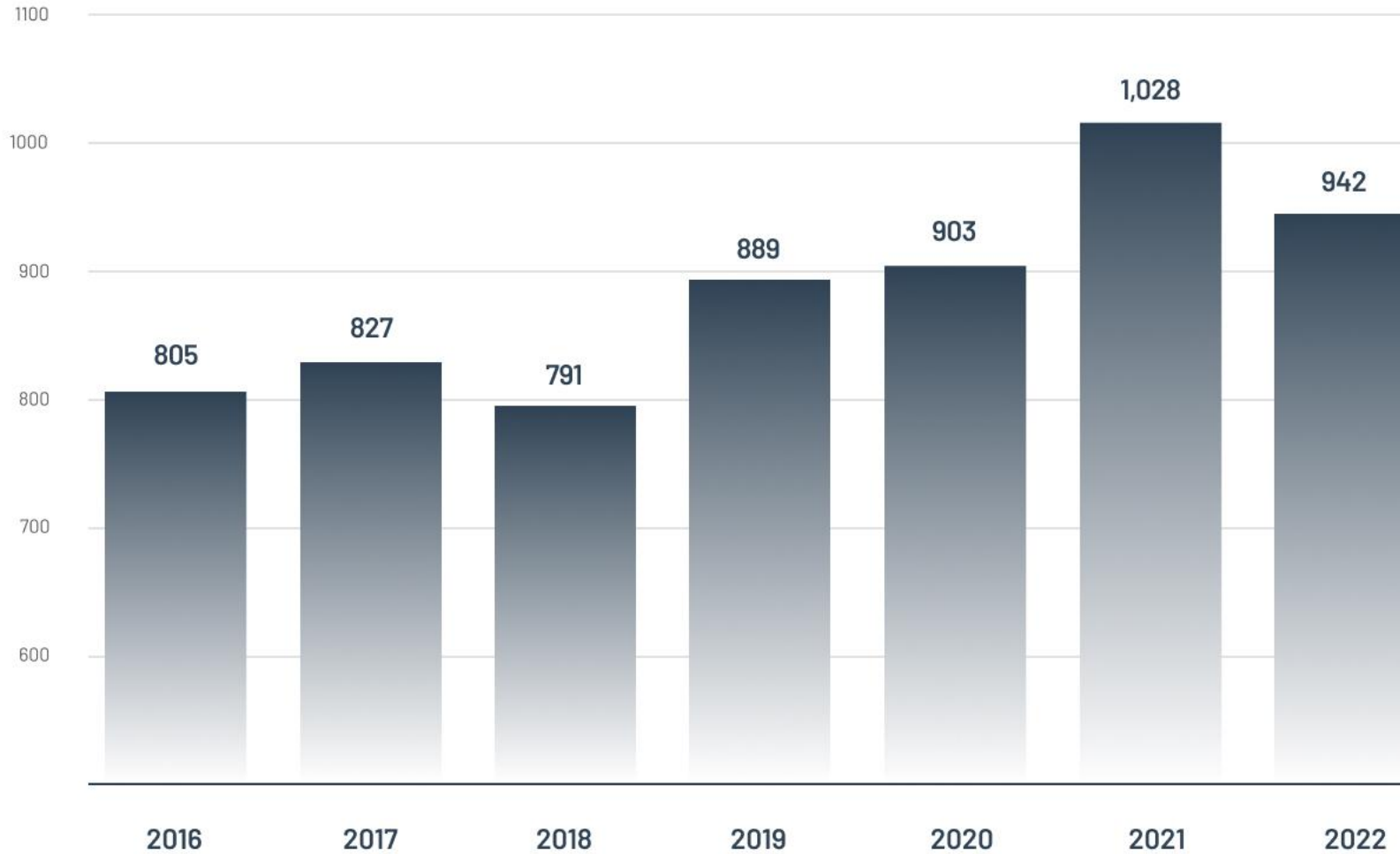
*Systems* approach

Saving lives is *not expensive*



## Responder and Work Zone Fatalities

Source: National Safety Council, NHTSA



Traffic fatalities

UP  
25%

from a decade earlier.

Fatal and serious  
crashes cost nearly

\$1.9  
TRILLION

## Annual Estimated Collisions

Towing	110,000
--------	---------

Fire	16,000
------	--------

EMS	4,500
-----	-------

Law Enforcement	30,000
-----------------	--------

Buses	24,000
-------	--------

<b>Work Zones</b>	<b>115,000</b>
-------------------	----------------





## Current State

**90%**

90% of drivers are confident they know the details of Move Over laws.

Source: National Safety Council

**315**

Every day there are 315 collisions in our roadway work zones.

Source: National Safety Council, NHTSA

**110**

Every day there are 110 injuries to crew members working in roadway work zones.

Source: AASHTO

**3**

Every day 3 crew members are killed working on the roadway in a work zone.

Source: AASHTO





## Current State

**90%**

90% of drivers are confident they know the details of Move Over laws.

Source: National Safety Council

**315**

Every day there are 315 collisions in our roadway work zones.

Source: National Safety Council, NHTSA

**110**

Every day there are 110 injuries to crew members working in roadway work zones.

Source: AASHTO

**3**

Every day 3 crew members are killed working on the roadway in a work zone.

Source: AASHTO



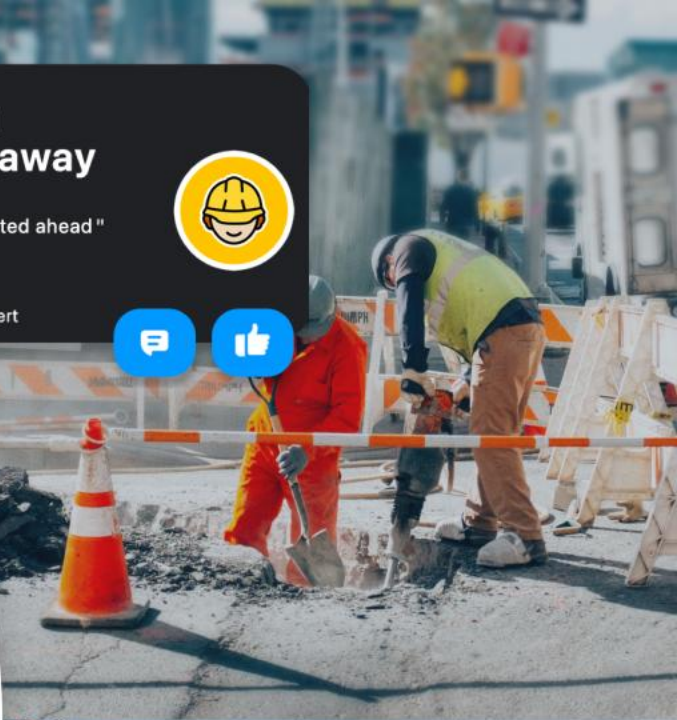
**⚠ CAUTION**

**Emergency Vehicle Ahead**



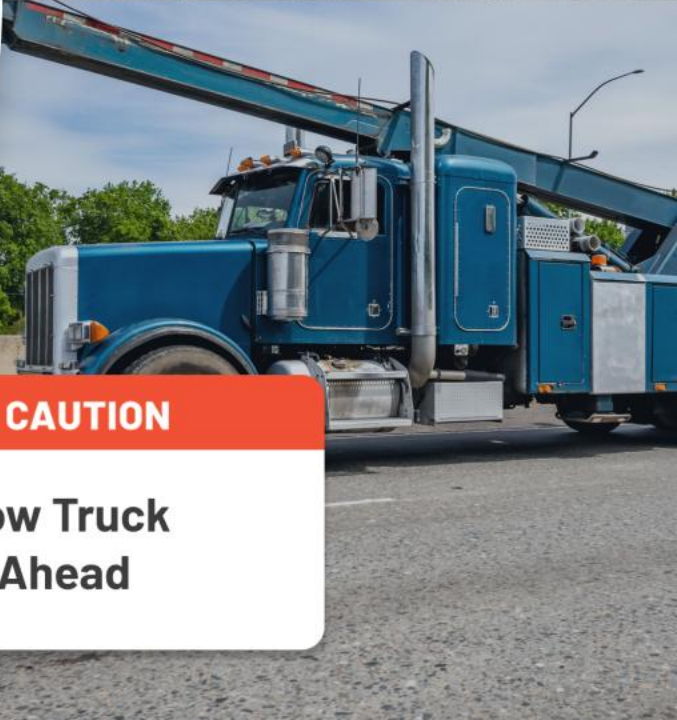
**Construction**  
**0.4 miles away**  
I-35  
"Construction reported ahead"

1 min ago by HAAS Alert



**Hazard**  
**0.4 miles away**  
I-35  
"Utility vehicle ahead"

1 min ago by HAAS Alert



**⚠ CAUTION**

**Tow Truck Ahead**



# Safety Cloud Digital Alerting

When on scene with your flashing lights activated, Safety Cloud alerts approaching drivers to warn them of your work zone ahead.



WORK ZONE AHEAD



Drivers receive digital alerts **up to 30 seconds in advance** before intersecting with your work zone.





Construction

**0.4 mi. away**

**I-70 E Castle Rock Valley**

**Construction Workers Ahead,  
Slow Down and Move Over**



21 sec ago by HAAS Alert



Crystal Valley





**Solution:** Safety Cloud® Digital Alerting



**! Hazard**

Kennedy Expy E

Last updated: today at 3:00 PM

Maps



**Solution: Safety Cloud® Digital Alerting**

**SAFETY CLOUD®**  
POWERED BY HAAS ALERT



**Jeep®**

**DODGE**



© HAAS, INC. | ALL RIGHTS RESERVED



**Solution:** Safety Cloud® Digital Alerting

4:45

53°out.

FM 104.3 HD



CAUTION  
Work Zone Ahead

Dismiss

Not There

66°

66°



**SAFETY CLOUD®**  
POWERED BY HAAS ALERT

**Jeep®**

**DODGE**



**RAM**



© HAAS, INC. | ALL RIGHTS RESERVED



5:34



A/C OFF



76

SYNC

CAUTION



Accident Ahead

Okay



App-Connect



Sound



Help



Settings







5:34



A/C OFF



76

SYNC

CAUTION



Emergency Vehicle Ahead

Okay



App-Connect



Sound



Help



Settings

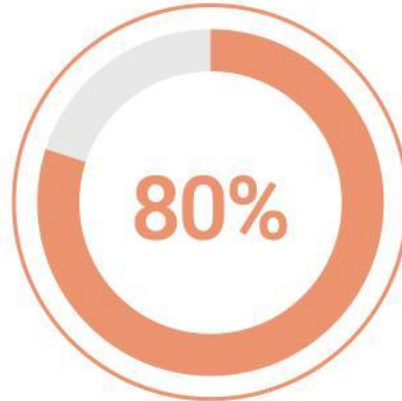






The odds of a crash were **up to 90% lower** when drivers received an advance alert.

Source: Drucker CJ, "An epidemiological approach to emergency vehicle advanced warning system development: A two-phase study", University of Minnesota, Dec 2013.



Digital alerting helped to reduce hard-braking events on the interstate **by 80%.**

Source: Purdue University, Evaluation of the Impact of Queue Trucks with Navigation Alerts, 2021.



Analysis showed a **25% reduction in speed** seconds after an alert.

Source: NHTSA HAAS Alert Study, 2021.



97%  
of drivers who received  
a digital alert **slowed  
down and moved over**

Source: DIG Insights study of 1,516 licensed Ontario drivers



# Worker Presence Alert System

**Fight motorist  
distraction and  
apathy!**

14<sup>th</sup> April 2025

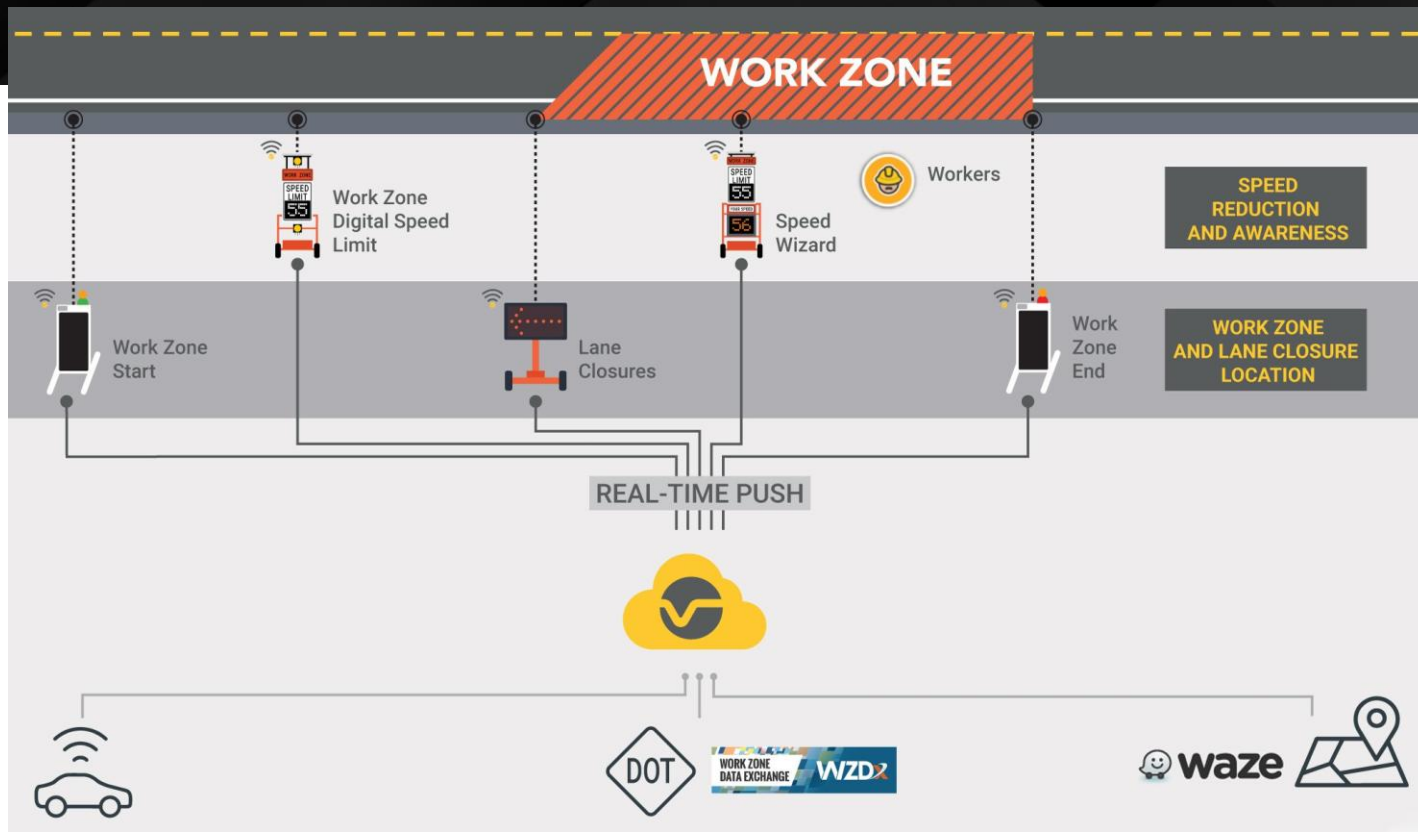






# Smart. Connected. Digital.

Today, people are connected. Cars are connected. Work Zones are connected too.





What we didn't know,  
**until now!**

Workers' safety cannot  
rely on analog solutions.

They need to be  
**CONNECTED** to save lives.





# Increasing awareness throughout the work zone

**Real Time Guidance**



**Digital Visibility**



**Worker Presence  
Signs**



**Speed Management  
Based on Worker Presence**



**Navigation  
Apps**

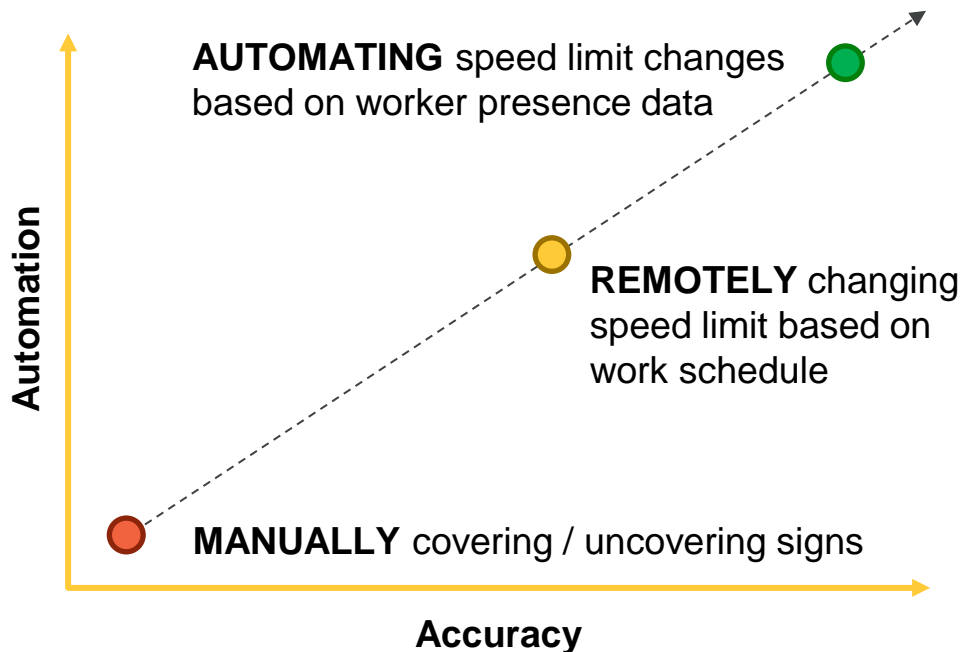


**In-car Infotainment  
Systems**





# Automation = Accuracy = Worker Safety



**Automation**  
**boosted accuracy**  
from 1% to 90%,  
ensuring safer,  
condition-based  
speed when workers  
are present.



## Key takeaways

- **Connect workers** to the rest of your Connected Work Zone
- **Lower speed limit** only when and where needed, **based on worker presence**
- **Increase compliance** to speed displays and save time **through automation**
- **Alert drivers of worker presence** as they enter the work zone
- **Send notifications** to Waze and other navigational apps

**Saving workers' lives!**



**Scan to learn more  
or become a partner**





An aerial, high-angle photograph of a multi-lane highway. Several large trucks are visible traveling along the road, which is flanked by green trees and vegetation. The image is faded to serve as a background for the text.

# E-DOT

POWERED BY **HAULHUB**  
TECHNOLOGIES

[www.e-dot.com](http://www.e-dot.com)

[www.haulhub.com](http://www.haulhub.com)

## About Speaker

# Michael Gallant

Senior Program Manager  
Industry Relations and Government Affairs

- Massachusetts Native - Reside in Haverhill
- Struggling Patriots Fan
- Recovering Political Staffer | Campaign Professional
- Worked for Senators and Representatives in MA General Court
- Graduate of Westfield State University, Class of 2009
- Bachelors of Science: Criminal Justice
- Bachelors of Arts: Political Science



Solutions Expert

**Revolutionize transportation agency  
efficiency and safety through digital  
transformation.**

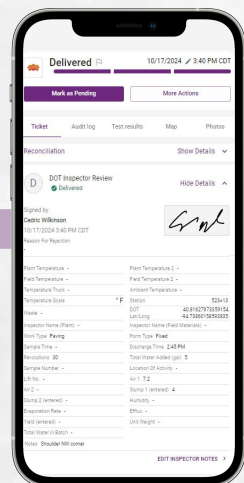
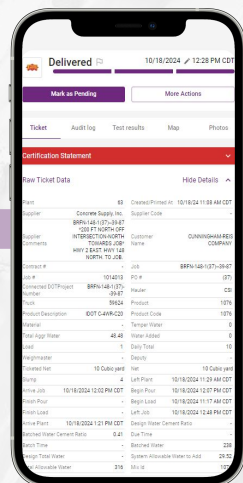
**Safety  
Digital As-Builts  
Interoperability**



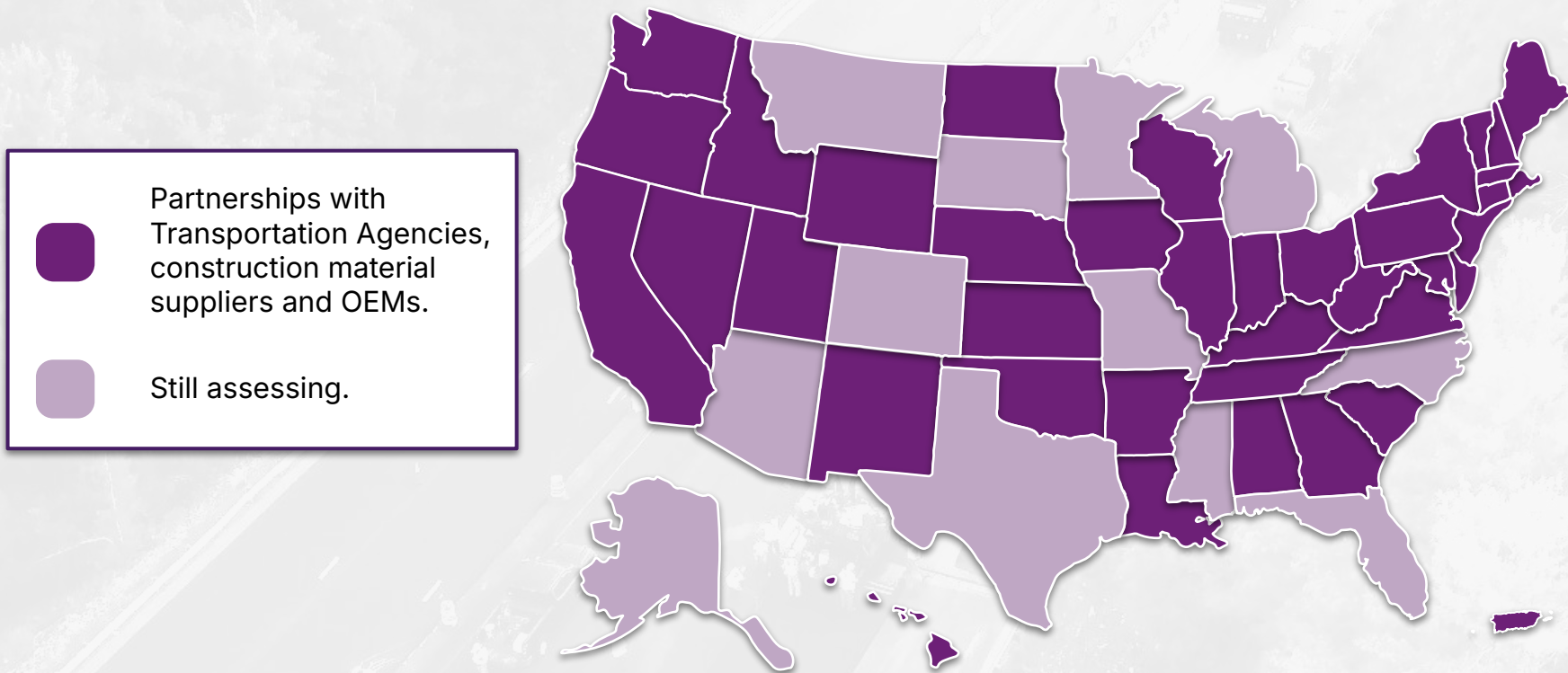


## Our Approach

Our approach began with **e-Ticketing**, digitizing materials tickets, laying the groundwork for comprehensive, **centralized aggregated data**.



## The Results: Nationwide Adoption



\* As of 03/2025. Visit [www.DOTRDY.com](http://www.DOTRDY.com) to learn more.

# Accelerating Digital Inspection Practices with Connected Machinery

### Purpose:

Proposes to integrate machinery data directly with contract and e-Ticketing driven material data. Material and machine data can be leveraged to begin automated work validation reporting, reducing time spent on low-value inspection activities at worksites, freeing up their time for higher-skilled work.

### Participants:

- Delaware DOT (Lead)
- Iowa DOT
- Nebraska DOT
- Louisiana DOTD

**Award Amount: \$4,000,000**



#### Machine AP1055F

Timestamp: 11/19/2023 3:28:00 PM  
Longitude: -75.72  
Latitude: 39.62  
Running Status: True

[See Full Machine Details](#)



#### Machine CB13

Timestamp: 11/19/2023 3:27:00 PM  
Longitude: -75.72  
Latitude: 39.62  
Running Status: True

[See Full Machine Details](#)



#### Ticket #619569

Timestamp: 11/19/2023 3:27:00 PM  
Inspector Longitude: -75.72  
Inspector Latitude: 39.62  
Product: 9.5MM 160GYR PG 76-22  
Ticket Status: Accepted  
Net Amount: 21.7

[See Full Ticket Details](#)



Questions? Get In Touch

# Michael Gallant

Senior Program Manager  
Industry Relations and Government Affairs



**Email :** [michael.gallant@haulhub.com](mailto:michael.gallant@haulhub.com)



**Phone :** 978-994-0606



**Web :** [www.e-dot.com](http://www.e-dot.com)



Solutions Expert