Innovative Technology Deployment (ITD) Program Update

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

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Analysis, Research & Technology Forum

March 23, 2022

Agenda

- FMCSA's role in AV research
- FY22 Innovative Technology Deployment Grant Program
- ADAS & ADS activities

ITD Grant Program

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

What is the ITD Program?

Program provides → **Enabling States to** → **Efficiently, securely collect & share uniform data**

FUNDING

EXPERTISE

Implement technologies that comply with uniform requirements

About:

- motor carriers
- vehicles
- drivers

Among State and Federal enforcement agencies

How ITD Supports FMCSA's Safety Mission

ITD empowers States to apply cutting-edge technology to the challenge of improving highway safety.

- **Focuses enforcement** on high-risk CMV operators
- **Integrates systems** to improve accuracy, integrity, and verifiability of CMV data shared nationally
- **Improves efficiency** with electronic CMV screening

ITD INNOVATIVE TECHNOLOGY DEPLOYMENT

ITD Deployment: Core Elements

Safety Information Exchange

- Aspen or equivalent inspection system
- CVIEW

Backbone of ITD Program

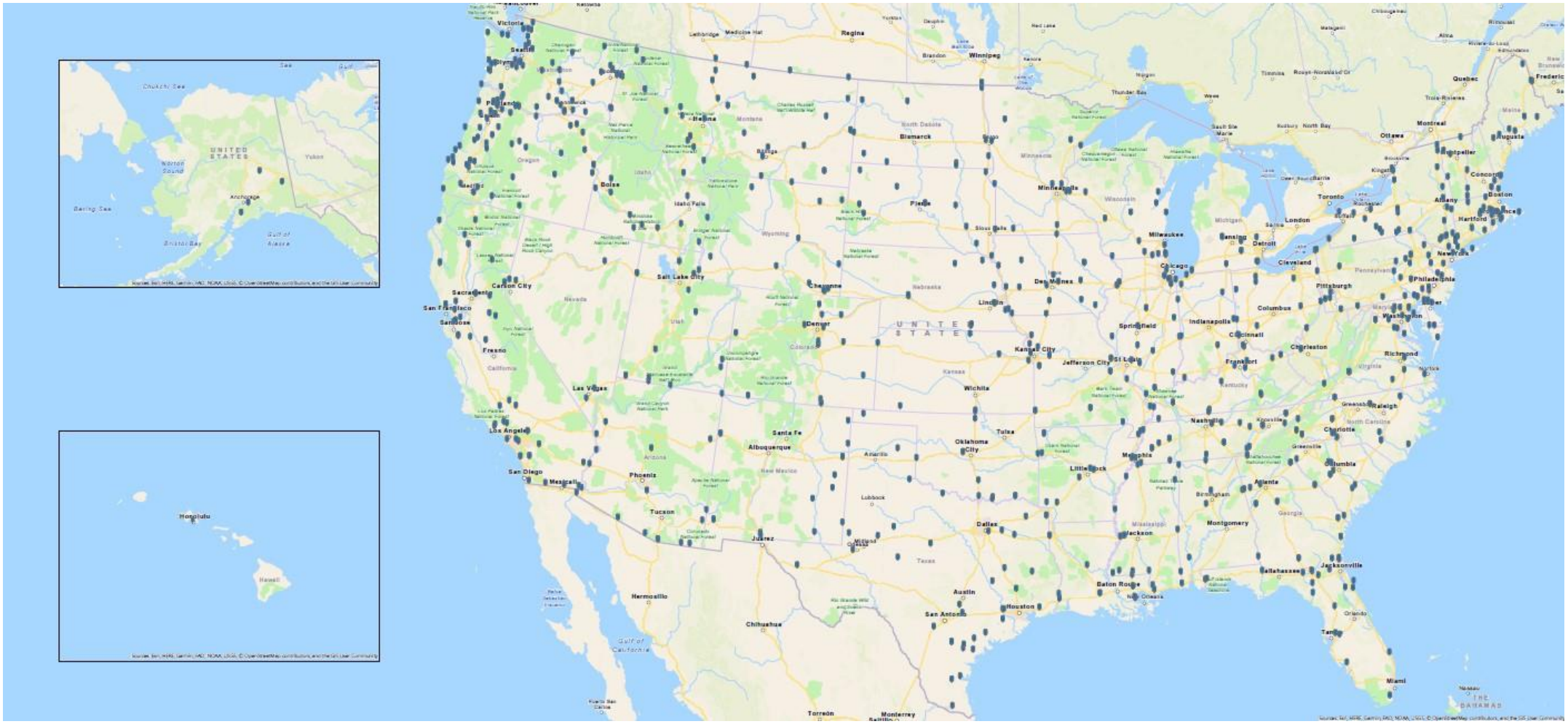
Credentials Administration

- Automated processing of IRP/IFTA credentials
- IRP/IFTA Clearinghouses to share vehicle reg. data and automate funds settlement

Electronic Screening

- E-screening at minimum of one site

Weigh Stations and CMV Screening Technologies



800+ locations in 50 States

(as of March 2021)

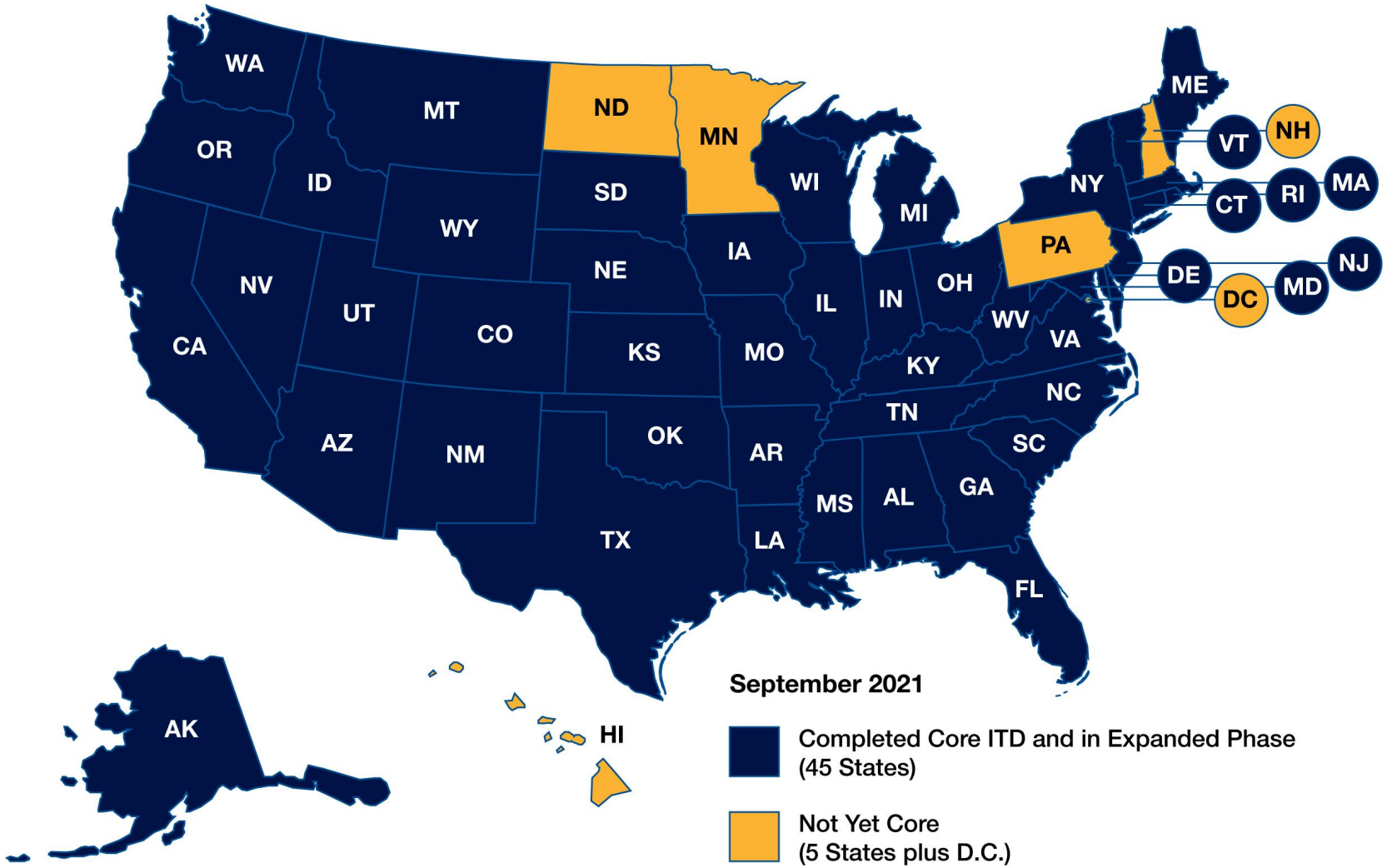
ITD Core Deployment

45 States

currently ITD Core Compliant and applying Expanded ITD functionality

5 States & DC

working toward full Core Compliance



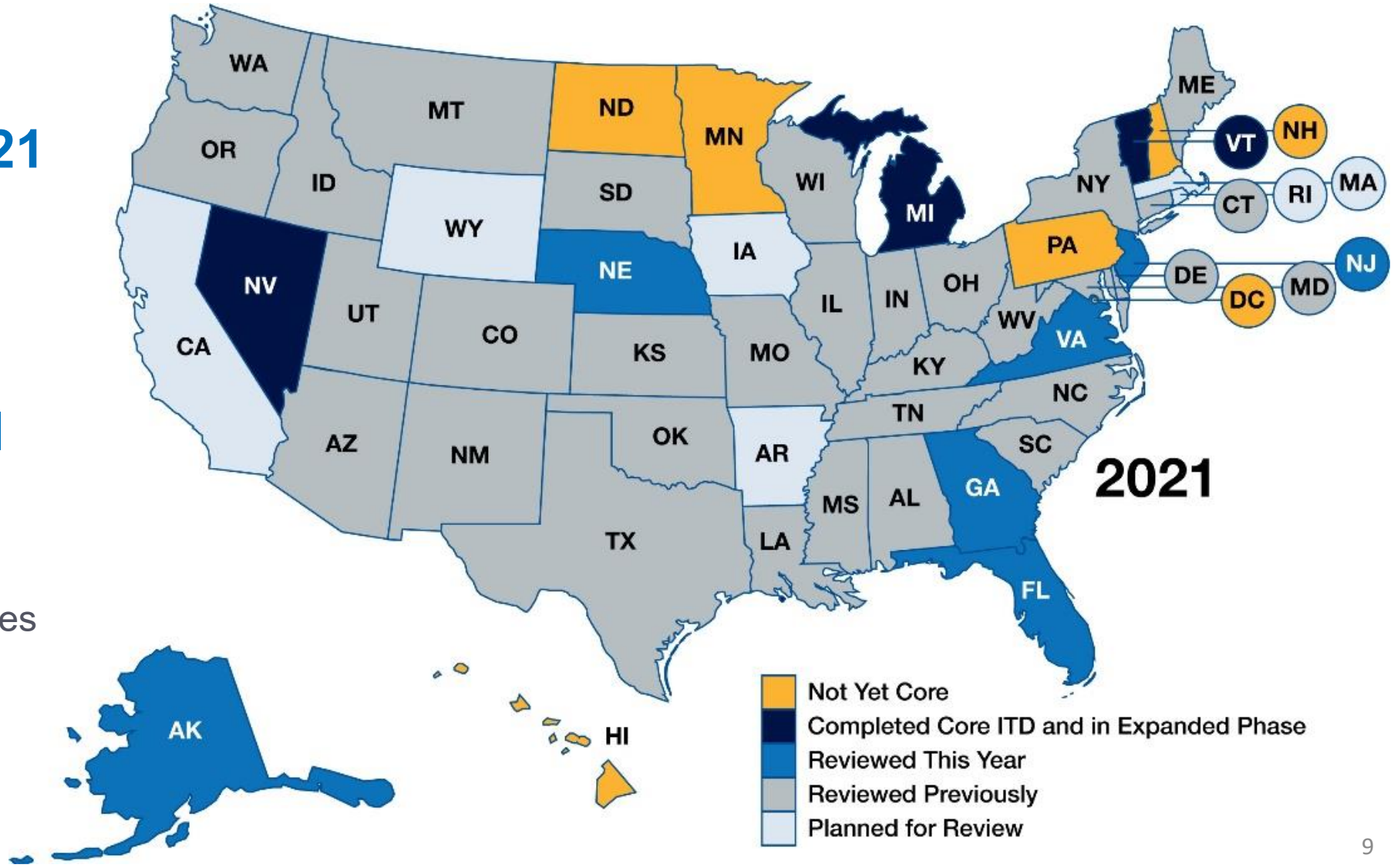
Status of Core Compliance Reviews

6 State reviews conducted in 2021

through the ITD Core Compliance Monitoring Program.

42 States in total

have been reviewed or are planned for review by the end of 2022, representing all Core States other than those most recently Core certified.



2021 State Activities Addressing ITD Priorities

Notify drivers of work zone, congestion, incidents

Detect Federal OOS carriers

Detect OOS vehicles

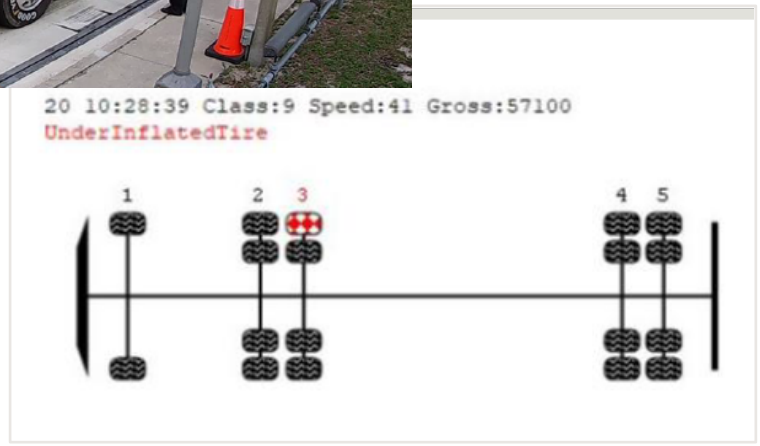
Share CMV parking availability

Other ITD projects

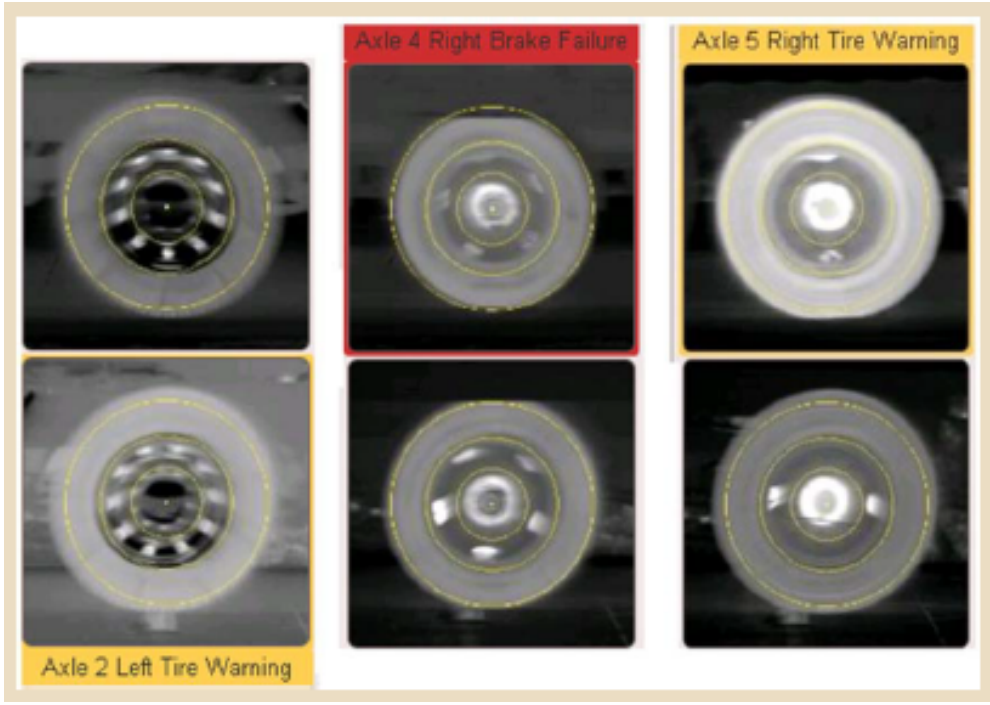
# of States	2	15	22	3	26

Detecting CMVs with OOS Tire Abnormalities

- Automated tire anomaly screening
  - Analyzes tire-contact footprint and flags issues such as underinflated, flat, mismatched, missing tires



- Infrared tire inspection
  - Inspects thermal images and flags vehicles with potentially faulty equipment based on heat signature



Detecting Federal OOS Carriers

ITD Program encourages States to upgrade OS/OW permitting systems to routinely check for OOS orders and automatically deny (hard stop) OS/OW permits to OOS carriers

Immediate: **Help keep OOS carriers off the road**

Longer term: **Capturing and analyzing this information could provide insight into**

- **ROI**
- **Value of integrating with other systems**

2022 ITD Grant & Program Priorities

U.S. Department of Transportation
Federal Motor Carrier Safety Administration

FY 2022 ITD Grant (part of the High Priority Grant)

$20M
Allotted

- No State funding match required
- Applications due March 31, 2022

PRIORITIES

1. Core Compliance
   - Safety Information Exchange
   - E-credentialling
   - E-screening
2. Work Zone Notification
3. Federal OOS Order Detection
4. Vehicle OOS Order Detection
5. CMV Parking
6. Enhanced Data Sharing/Quality
7. Other ITD Projects

What's Next for ITD

Electronic Inspections

- Proof-of-concept: **e-inspections of automated driverless vehicles** by gathering data from onboard sensors while the vehicle is in motion
- **CVSA Automated Driving Systems (ADS) Trip Inspection** requirement to ensure automated vehicles receive a robust inspection before departing
- Beginning work with CVSA on developing and testing a **Level VIII electronic inspection model program**
  - Coordinated with FMCSA's inspection modernization project

Planning for FY 2023 ITD Program Evaluation

- Refreshing cost/benefit information on e-credentialing and e-screening

North Carolina DOT New Commercial Trucking Alert System

- First in the Nation Pilot providing a service CMV drivers
- All of I-95 (182 miles), and rural portions of I-40
- Partnering with Intelligent Imaging Systems and INRX, a leader in transportation analytics and connected vehicle services
- Provide real time "in cab" alerts of urgent road conditions
- Will help CMV drivers to react more quickly to an event before encountering stopped traffic or major slowdowns
- 1-year study providing alerts began May 17th

More Information?

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ITD Program Website
https://www.fmcsa.dot.gov/itd

HP-ITD Grant Information
https://ai.fmcsa.dot.gov/Grants/HighPriority.aspx