



Preparing for an AV-Ready Iowa



**94% Crashes – Driver
Error/Choice**

**80% Potential Reduction in
Crashes**

Transportation System Management and Operations (TSMO)

Traffic
Management
Center

Intelligent
Transportation
Systems (ITS) &
Communications

Traveler
Information

Traffic Incident
Management

Emergency
Management

Work Zone
Management

Active
Transportation
and Demand
Management

Cooperative
Automated
Transportation

Becoming AV Ready



Two-Prong Approach



Support Drivers
Today



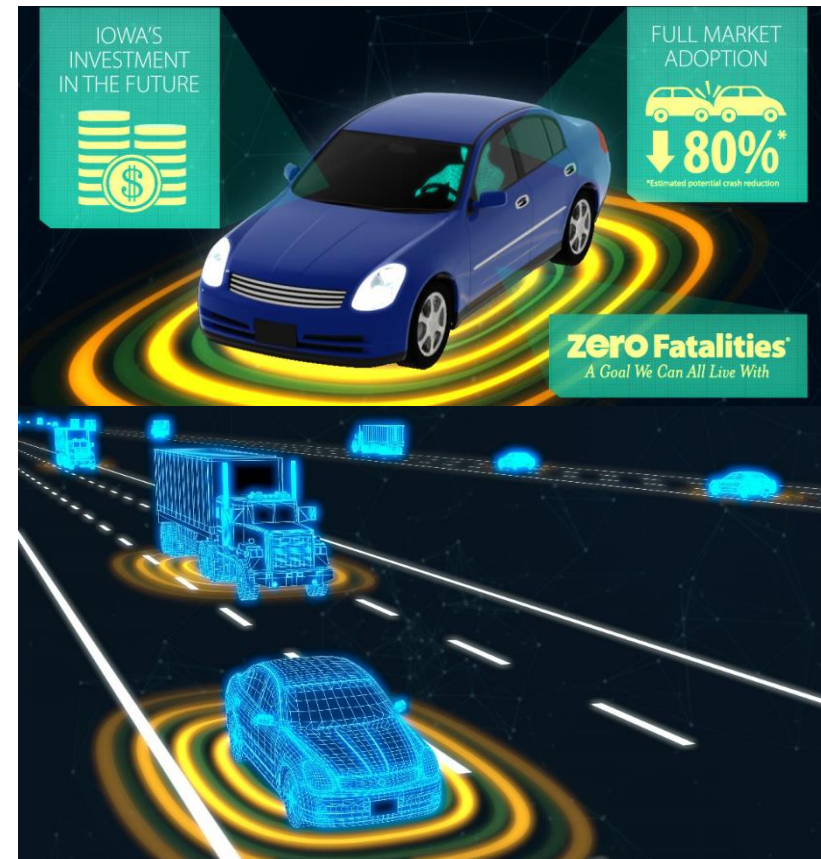
Support
Advanced Driving
Systems Tomorrow



AV-READY

AV Readiness in Iowa

1. Infrastructure Readiness
2. Organizational Readiness
3. State Level Readiness
4. National Level Readiness



Infrastructure Readiness



Pavement Markings



Starting with new projects on Interstates

- ✓ 6" (Wider) Pavement Markings
- ✓ Long Life Marking Material
- ✓ Shadow stripe on the white skip line
- ✓ Wet Weather Markings
- ✓ Durable Legends, Arrows, ONLY's, Stop Bars, Cross Walks



Work Zones

Can we provide a feed with every lane closed within our state every minute?



Work Zones

Limited resources and time



Work Zone Data

- **Work Zone Data Exchange (WZDx)**
- **Smart Arrow Board Deployment**
- **Improved Work Zone Data Feed**
- **Iowa Work Zone Data Hub**



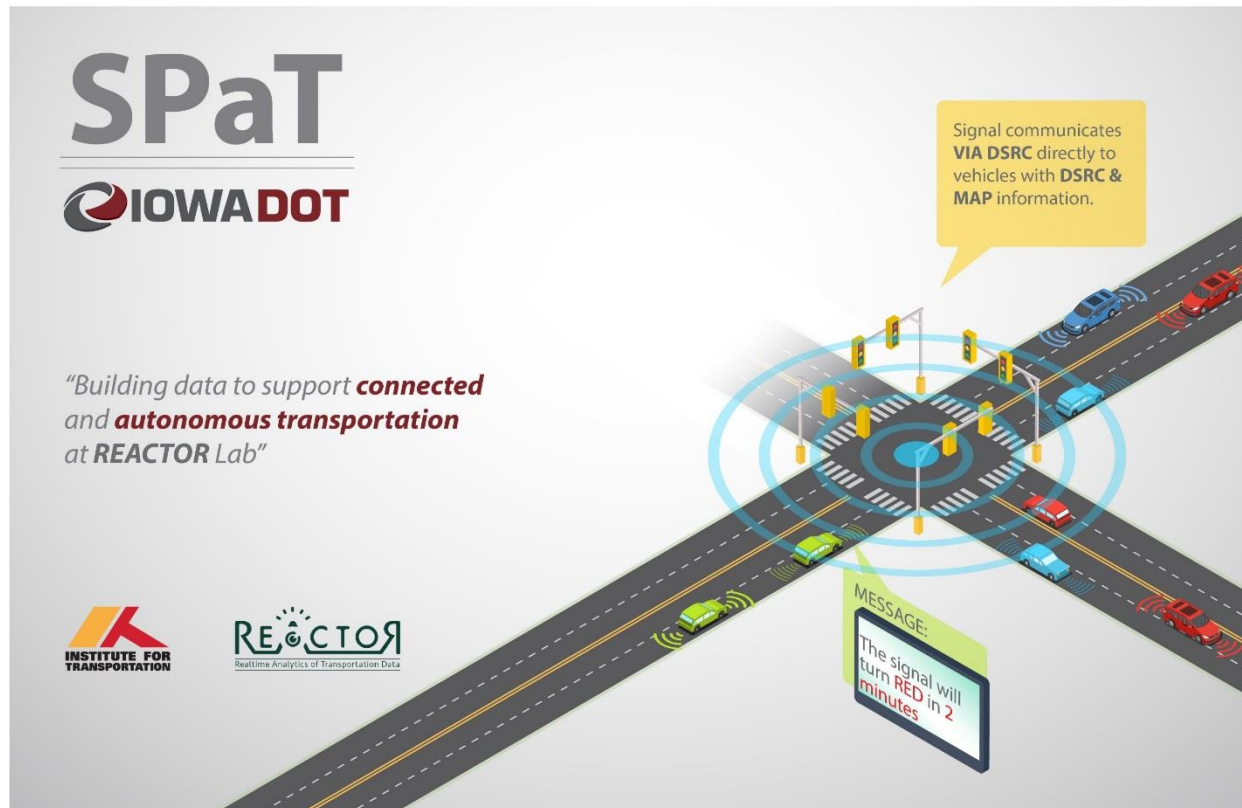
Work Zone Technology

Deployment of Connected Technology

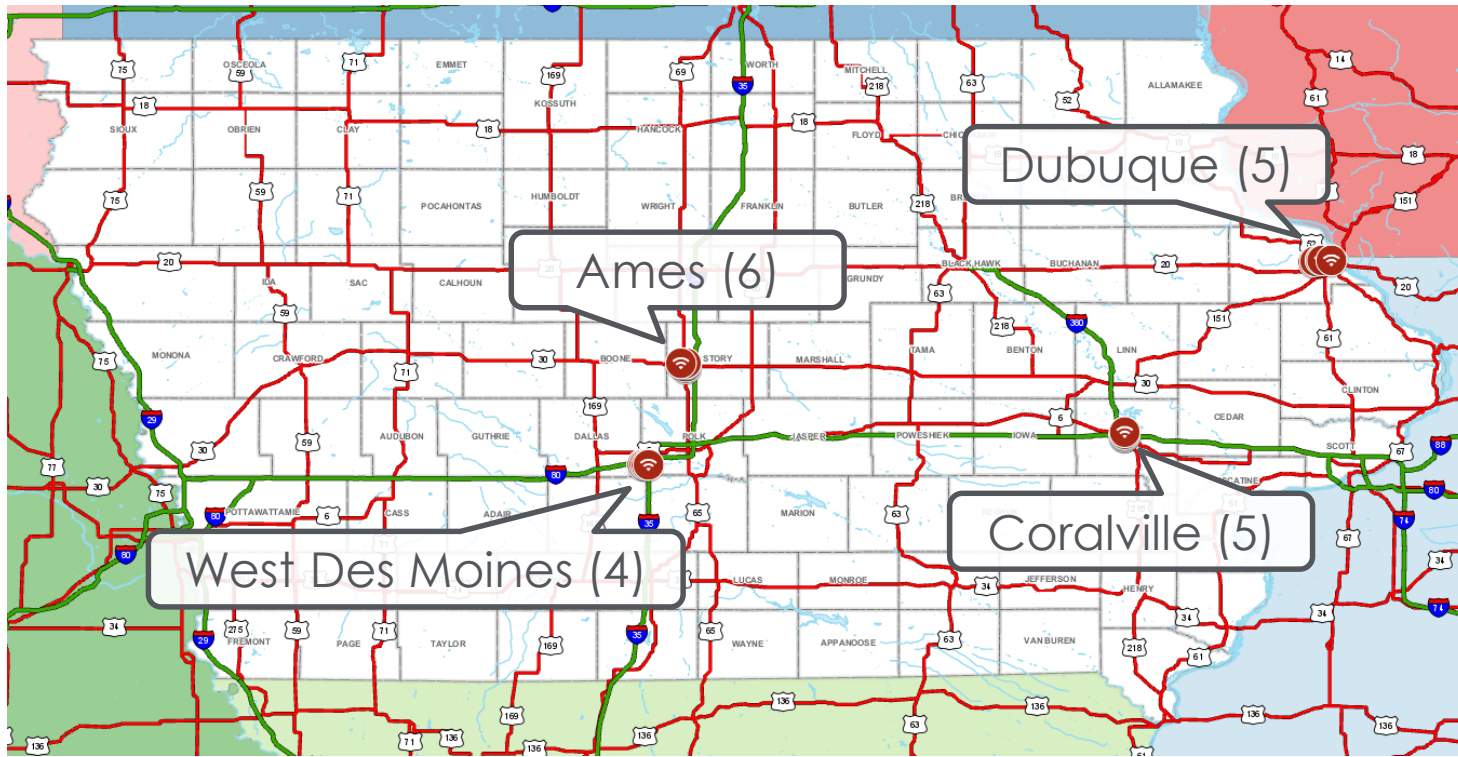


I am: **ID# 77**
 I am: **Location (lat, lon)**
 I am: **ON**

National Connected Vehicle Signal Phasing and Timing (SPaT) Deployment Challenge

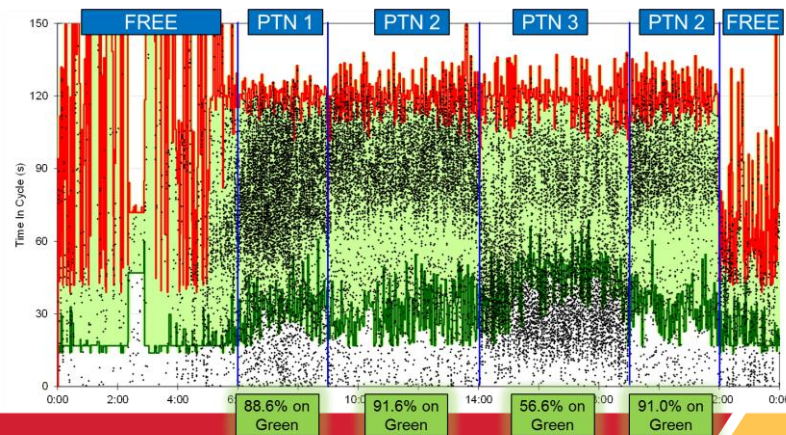
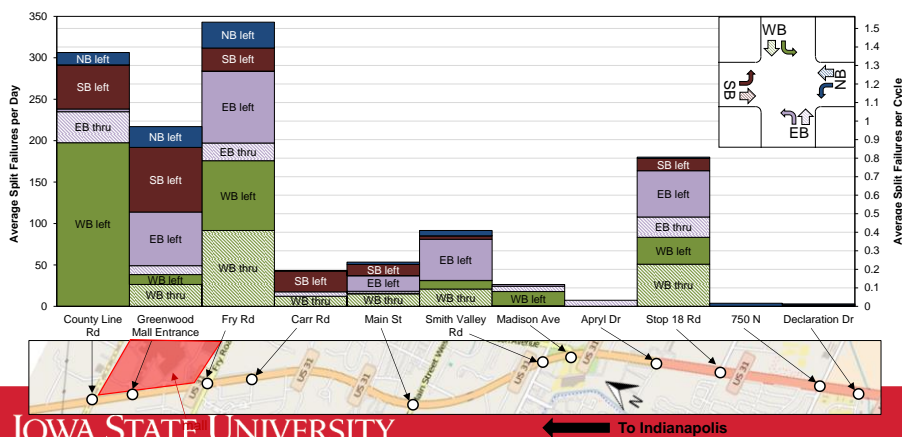


National Connected Vehicle Signal Phasing and Timing (SPaT) Deployment Challenge



Automated Traffic Signal Performance Measures (ATSPM)

- Method of monitoring traffic signal operation – can scale to entire system
- Provide situational awareness
- Based on high-resolution data collected by modern signal controllers



Organizational Readiness



Cooperative Automated Transportation (CAT) Service Layer Plan

- Overview
- Seven Tactical Areas
- 24 identified actions
 - CAT Pilots
 - CAT-Ready Data
 - Public Outreach & Education
- Available October 2019



Research Partners



IOWA STATE
UNIVERSITY

Preparing for an AV-Ready Iowa



 Preparing for an AV-Ready Iowa

ADS FOR RURAL AMERICA

UNIVERSITY OF IOWA

MARCH 2019

IN PARTNERSHIP WITH THE IOWA DOT
AND IOWA STATE UNIVERSITY



Project Goals:

- **Improve safety** on our Nation's roadways by beginning to lay the groundwork for the safe integration of ADS
- Work to **address disparities** in our Nation's roadway system by focusing demonstrations and ADS data gathering on rural roadways
- Demonstrate how ADS can be used to **enhance mobility** for transportation-challenged populations such as the aging populations in our rural communities

State Level Readiness



Recent Legislation

[House File 387](#)

An act relating to distance requirements for certain motor vehicles

[Senate File 302](#)

An act relating to motor vehicles operated by an automated driving system and making penalties applicable



Next Steps with SF302 Legislation

- **Broad rulemaking authority**
- **Internal AV Legislation Working Group**
 - Background
 - Recommendations to Iowa DOT executive management
 - Variety of topics being discussed



Iowa Advisory Council on Automated Transportation

- **Informally the AT Council or ATC**
- **Began July 2018 by the Iowa DOT**
- **Vision**
 - To create an AV-ready driving environment in Iowa for the safe movement of people and freight for a thriving Iowa economy
- **Mission**
 - Lead, coordinate, and enable the advancement of automated transportation systems in Iowa



How is the ATC supporting AV-readiness?

Communication, Outreach, & Education (*crosscutting*)



Infrastructure Readiness

- Digital
- Energy
- Electrification
- Planning
- Land Use
- Freight
- Security
- Institutional
- Workforce

Associated Subcommittee



Policy & Legislation

- Administrative
- Liability
- Insurance
- Finance
- Privacy
- Land Use Planning

Associated Subcommittee



Economic Development

- Workforce Development
- Employment
- Entrepreneurship
- Freight
- Commerce
- Efficiency
- Reliability
- Industry
- Manufacturing

Associated Subcommittee



Public Safety & Enforcement

- Regulations
- First Responder Safety
- Operator Responsibilities
- Safe Deployment
- Vulnerable Road Users

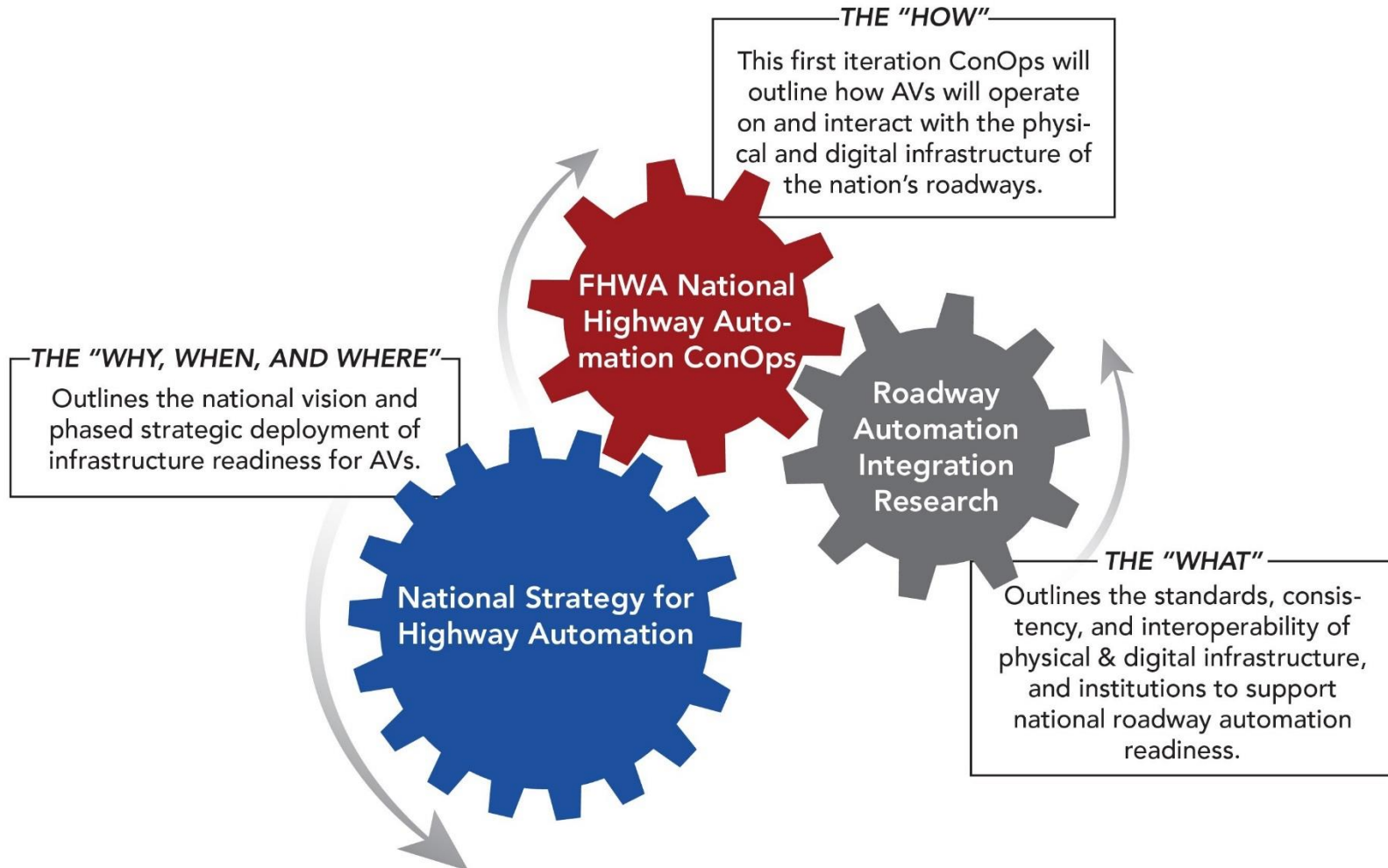
Associated Subcommittee

Research, Testing, & Development (*crosscutting*)

National Level Readiness



National AV-readiness





THANK YOU!



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