Automated Vehicles – Are They Going to Help or Hurt Safety?

Major Sean Meagher - State Patrol
Kristin White - MnDOT
Three in Four Americans Remain Afraid of Fully Self-Driving Vehicles
1 What are Connected and Automated Vehicles
What is CAV?

A C E S

Automated  Connected  Electric  Shared
How does it work?

- Lidar (Laser Maps)
- Cameras
- Radar
- Cell Technology
- Central Computer
- Ultrasonic Sensors
- GPS
- Short-Range Radio
How does it communicate?
Truck Platooning

- Add truck platooning

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Levels of Automation

0  No Automation
   Model T
   Honda Fit
1  Driver Assist
   Ford Jeep
   Compass
2  Partial Automation
   Tesla
   Model 3
3  Conditional Automation
   Audi A8
4  High Automation
   EasyMile
   Shuttle
5  Full Automation

Highly Automated Vehicles

No Automation  Full Automation
Common Automation Today

- Adaptive Cruise Control
- Lane Departure Systems
- Automatic Braking
- Automatic Parking
- Collision Avoidance Systems
Minnesota’s Vision for CAV
Why CAV?

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Why CAV is Important

- Greater Mobility & Equity
- Workforce Impacts
- Traffic Operations
- Economic Development
- Infrastructure
- Health & Environment
3 Risks & Benefits
Minnesota Crash

Left Lane Closed

Vehicle Damage
What About Winter?
Benefits

Drowsy Driving

Distracted Driving

Impaired Driving
Preparing for AV
State Automated Vehicle Laws

- **Enacted legislation**
- **Executive Order**
- **Both**
- **None**

Map showing states in different colors indicating their status regarding automated vehicle laws.
State Leadership

**ADVISORY COUNCIL**
- Executive Report
- Partnerships
- Policies

**I-CAV TEAM**
- Technical expertise
- Coordination
- Programs

**POLICY SUBCOMMITTEES**
- Policy proposals
- Collaboration
Advisory Council
Report to Governor and Legislature by 12/01/18

Emphasis Areas

- Rural Minnesota
- Differently abled
- Low Income
- Tribal nations
- Elderly
- Communities of color
CAV Executive Report Key Themes

- Modernize policy
- Prioritize equity & accessibility
- Proactive statewide leadership
- Public education & outreach
- Diversify & supplement funding
- Promote public-private partnerships
5

Testing and Partnerships
Connected Corridors – Urban
Worker Safety

Crash cushion

Automated truck mounted attenuator
Engagement
Employee Engagement Plan

Build inclusive engagement strategies to help the state plan and prepare for emerging transportation technologies and trends.
Demonstrations

Super Bowl

Minnesota State Fair
AV Technical Demonstrations

Real-Time GPS Positioning

Winter Weather Impacts
Thank you