Automated Vehicles Issues

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Public Policy Objectives for AVs

“Thanks to a convergence of technological advances, the promise of safer automated driving systems is closer to becoming a reality. From reducing crash-related deaths and injuries, to improving access to transportation, to reducing traffic congestion and vehicle emissions, automated vehicles hold significant potential to increase productivity and improve the quality of life for millions of people.”

Secretary Elaine Chao, ADS 2.0
**Connected Vehicle**
Communicates with nearby vehicles and infrastructure; Not automated

**Connected Automated Vehicle**
Leverages autonomous automated and connected vehicles

**Autonomous Vehicle**
Operates in isolation from other vehicles using internal sensors

Source: USDOT
Definitions Are Important

- Connected Vehicles: V2V, V2I, V2X
- Automated or Autonomous Vehicle
  - SAE Levels
  - Low Speed Shuttles, Current Cars, Trucks, Buses
- Deployment Scenarios & Time Horizons
  - Low Speed Shuttles in Dedicated Spaces
  - Truck Platooning
  - AVs in Fleets: TNCs, Transit, Trucking, Corporate
  - Fully Autonomous Vehicles in Mixed Fleets/Traffic
Possible Public Postures on AVs

- Actively enable or **accelerate** the new technologies for specific public goals
- Actively **facilitate** the new technologies just for novelty’s sake or vague policy potentials
- **Respond** cautiously to transportation technology advances when approached
- **React defensively** to the disruptions caused by new technologies
- **Do nothing** and wait and see
AV Policy Issues — Testing vs Deployment

• **Technical Policy**: What will we allow to operate on our roads and streets and how perfectly?

• **Threshold Issues**: What issues need to be resolved or overcome for widespread deployment?
  - Privacy; Cybersecurity; Liability; Public Acceptance; etc.

• **Externalities - Policy Issues**:
  - Labor Disruptions; Revenue Disruptions (fees/tickets); Legal Liability;

• **Transportation Policy**: How are AVs to serve or facilitate societal goals?
  - Mobility, Safety, Equity, Quality of Life, Economic Vitality, Environmental Sustainability, Urban Form, etc.
Notional Cross Cutting Issues

- Mixed Fleet Operations – What & How?
- Law Enforcement and Emergency Responders
- Expectations – How will AVs Behave
- Education: Officials, the Public, Drivers
- Scenario Planning: Deployment Pathways?
- Protecting Public Safety & Public Interest
- Role of Connectivity & Internet of Things
- Workforce Development
- Other . . .
AV Active States Snapshot

- Programs: CA, CO, FL, MI, NV, PA, UT, . . .
- Corridors: MI, VA, MI-OH-PA, CA-AZ-NM-TX
- Studies Underway: AL, ND, UT, . . .
- Conferences: FL, NV, NJ, OH, TX [AVS 2018, . . .]
- Public-Private Coalitions: MI, TN

Source: NCSL – October 2017

Source: Global Automakers – January 2017
AV Challenges

• Risk of Technology Driving Public Policy
• Staying Abreast of Fast Moving Developments
• Uncertain Deployment Pathway
  ▪ Slow Speed Shuttles in Enclaves; Truck Platooning; Private AVs; Automated TNCs; Fleets ???
• Guarding Public Interest while Not Stifling Innovation
• Interoperability and Performance Parameters
• The Known-Unknowns and Unknown-Unknowns
• Partnerships with the Private Sector
Thank You!

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