Federal Automated Vehicles Policy:
Model State Guidelines

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Presentation Outline

➢ Federal Autonomous Vehicle (AV) Policy Overview

➢ Model State Guidelines for Implementing AVs

➢ Connecticut & Other State Actions

Federal Automated Vehicles (AV) Policy Overview

➢ Published by National Highway Traffic Safety Administration (NHTSA) in September 2016

 ▪ Calls for annual updates

➢Includes four sections:

1. Performance Guidance for Vehicle Manufacturers
2. Model State Guidelines for Implementing AVs
3. Current Federal Regulatory Tools Under NHTSA
4. New Federal Regulatory Tools & Authorities Needed

Federal Automated Vehicles Policy

Accelerating the Next Revolution In Roadway Safety

September 2016

U.S. Department of Transportation

NHTSA
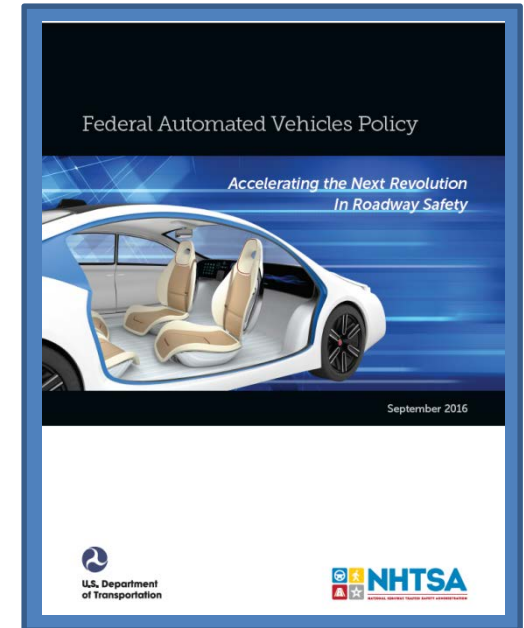
Federal Automated Vehicles (AV) Policy Overview

➢ Provides recommendations, <u>not mandates</u>

 ▪ Allows industry and states to innovate

 ▪ Speeds-up initial regulatory framework

Federal Automated Vehicles (AV) Policy Overview

➢ Creates national framework for the regulation of AVs

Allows industry to rely on national vehicle standards,
not patchwork of state-by-state vehicle standards

Federal Automated Vehicles (AV) Policy Overview

➢ Defines <u>federal vs. state</u> regulatory responsibilities

Federal Responsibility	State Responsibility
Vehicle Performance & Technology	**Most Other Aspects**
▪ Sets vehicle safety standards *(supersedes State laws)* ▪ Enforces compliance with vehicle safety standards ▪ Investigates & manage recalls ▪ Educates public about safety issues ▪ Publishes guidance for manufacturers	▪ Test & deploy AVs on public roads ▪ License and train (human) drivers ▪ Register and title vehicles ▪ Set insurance limits & liability rules ▪ Reviewing traffic laws & regulations

Defined federal-state roles is crucial for successful deployment. 6

Federal Automated Vehicles (AV) Policy Overview

➢ Adopts <u>SAE levels of automation</u> as national standard

Levels of Automation		Description	Long Description	Monitors Driving Environment	Fallback Performance
Low	0	No Automation	Human driver does everything.	Human Driver	Human Driver
	1	Driver Assistance	System assists human driver perform some driving tasks, but does not monitor driving environment.	Human Driver	Human Driver
	2	Partial Automation	System performs some driving tasks, but does not monitor driving environment.	Human Driver	Human Driver
High	3	**Conditional Automation**	**System performs some driving tasks, monitors parts of the driving environment, but human drivers must be ready to take back controls.**	**System**	**Human Driver**
	4	**High Automation**	**System performs all driving tasks, monitors driving environment, but only operates in certain environments and conditions.**	**System**	**System**
	5	**Full Automation**	**System performs all driving tasks, under all conditions. No human needed in vehicle.**	**System**	**System**

Highly Autonomous Vehicles (HAV) are <u>responsible for monitoring driving environment</u>.

Federal Automated Vehicles (AV) Policy Overview

➢ Includes [model state guidelines](#) for implementing AVs

- ▪ Implementation occurs at state and local levels
- ▪ Provides direction and flexibility for states
- ▪ Includes four basic action items

Model State Guidelines

① Form a [technical committee](#) to shape state policy on AVs

- Governor's Office
- Motor Vehicle Department
- Department of Transportation
- Law Enforcement Agencies
- Highway Safety Office
- Insurance Regulators
- Office of Information Technology
- Office(s) Representing Aging and Disabled

- Transit Authorities
- Toll Authorities (if any)
- Transportation Research Centers
- Vehicle Manufacturing Industry
- Bicyclist & Pedestrian Advocates
- Consumer Groups
- Other Interested Parties

Model State Guidelines

② Update state motor vehicle laws & regulations

- Licensing and training (human) drivers

- Registering and titling AVs

- Setting insurance & liability rules for AVs

- Reviewing existing traffic laws / regulations

Model State Guidelines

③ Manage <u>testing process</u> on public roads

- Designate lead agency
- Coordinate with technical committee & jurisdiction authorities
- Establish conditions or limits for testing (i.e. local roads only)

Vehicles Should:	Operators Should:
- Meet all federal vehicle safety standards and guidelines - Be properly registered and titled under state law - Obtain and carry vehicle permit - Only be operated by persons who received training	- Hold a valid state driver's license - Provide summary of training - Provide proof of insurance ($5M) - Follow all traffic laws - Take responsibility for all traffic violations

*The testing process ensures order, safety and study before deployment.*

Model State Guidelines

④ Oversee [deployment of vehicles] on public roads

- Should occur after testing

- Continually engage stakeholders to update state and federal policies, regulations & laws *(may need further study)*

- Work with NHTSA & other states to address transition issues

What is Connecticut Doing?
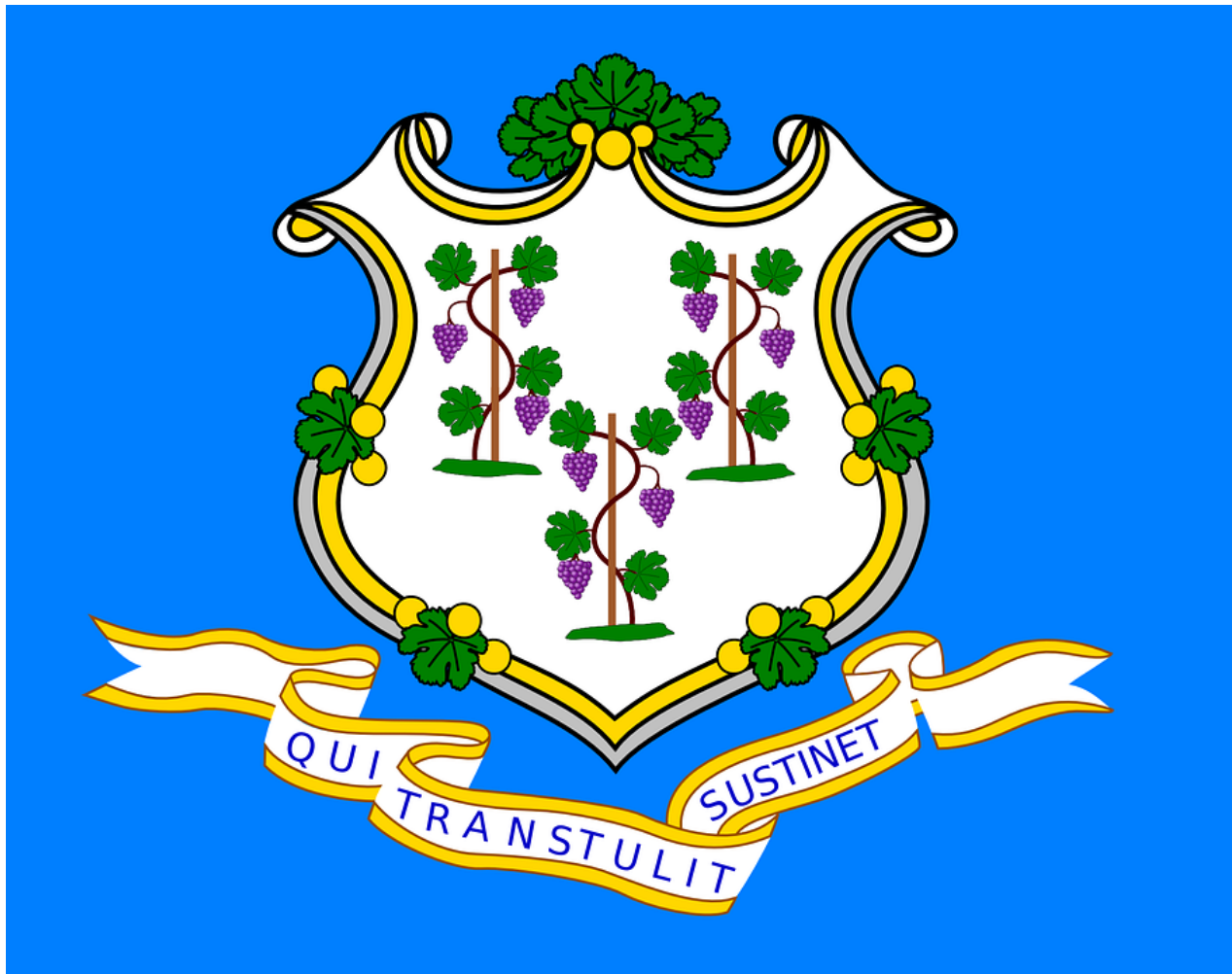
Connecticut Actions

➢ Formed [inter-agency workgroup](#) *(modeled after Fed. Guidelines)* to discuss what policies, regulations & laws CT might need for testing & deployment.

Agencies on Workgroup	Initial Draft Recommendations

▪ Office of Policy & Management (OPM)
 	
 ▪ Dept. of Motor Vehicles (DMV)
 	
 ▪ Dept. of Transportation (DOT)
 	
 ▪ Dept. of Emergency Services & Public Protection (DESPP)
 	
 ▪ Connecticut Insurance Dept. (CID)
	▪ Create **pilot program** to test AVs on local roads
	    o OPM as lead for pilot
	    o DMV as lead for registration of vehicles
	 ▪ Require state & local approval before testing
	 ▪ Require test vehicles & operators to adhere to federal safety standards + guidelines
	 ▪ Require vehicles to go through testing process
	 ▪ Establish oversight committee for on-going review, reporting and policy setting

Connecticut Actions

➢ Proposed <u>bills in legislature</u>:

- ▪ SB 260 – An Act Concerning Autonomous Vehicles

  Establishes pilot program for testing autonomous vehicles and a task force to study autonomous vehicles.

- ▪ SB 851 – An Act Concerning a Study of Autonomous Vehicles

  Requires the Department of Motor Vehicles to study issues relating to autonomous vehicles.

- ▪ HB 5185 – An Act Concerning Autonomous Vehicles

  Provides for the testing of autonomous vehicles and encourages Connecticut to keep pace with technology.

Connecticut Actions

➤ Initial reactions to proposed bills by stakeholders

Key Takeaways	Stakeholders
✓ Want CT to "get it right" ✓ Excited for benefits ✓ Want careful deployment ✓ Support phased approach (studying & testing) ✓ Encourage CT to follow Federal Guidelines & coordinate with other states ✓ Want to be part of the conversation	▪ American Insurance Association ▪ Insurance Association of Connecticut ▪ Property Casualty Insurers Association of America ▪ Connecticut Trial Lawyers Association ▪ Connecticut Office of Policy & Management ▪ City of Bridgeport ▪ City of Stamford ▪ City of New Haven Resident ▪ American Automobile Association (AAA) ▪ Alliance of Automobile Manufacturers ▪ Motor Transport Association of Connecticut ▪ Olie Robotics, LLC ▪ UBER

What are Other States Doing?

➢ 13 States <u>have laws</u> or executive orders related to AVs
➢ 31 States are currently <u>considering legislation</u> related to AVs
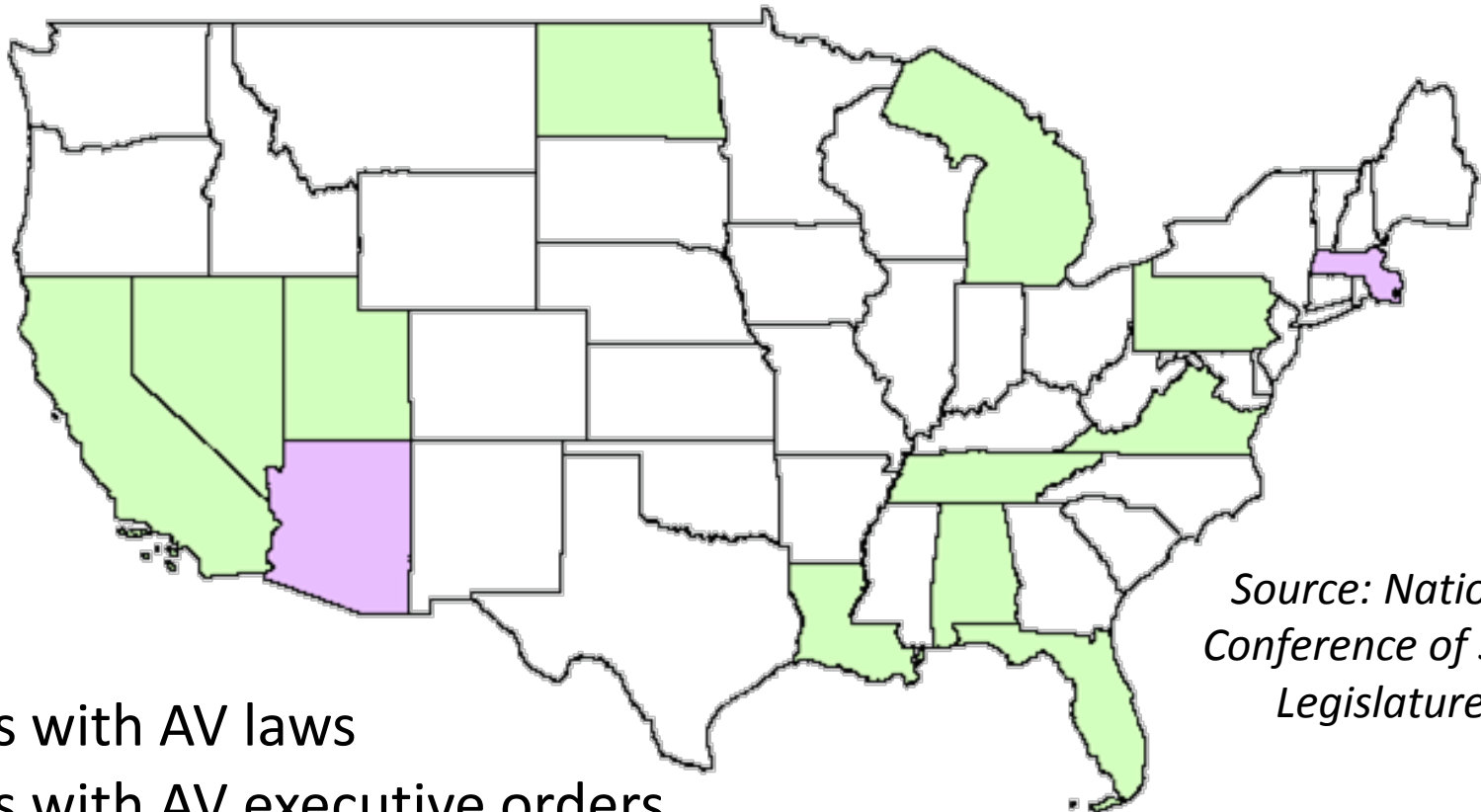
Source: National Conference of State Legislatures

■ States with AV laws
■ States with AV executive orders

CT DOT Actions

➤ Expanding UCONN partnership to help the State research and prepare for opportunities and challenges ahead.

➤ Have an internal workgroup at CT DOT to review Federal proposals, coordinate comments with other states and develop next steps.

- Policy & Planning
- Highway Safety
- Highway Operations
- Engineering
- State Traffic Administration

➤ Developing technical resources *(in-house & consultant)*
  - Participating in training & conferences
  - Coordinating with AASHTO and other states
  - Consultant to provide technical assistance

For More Information
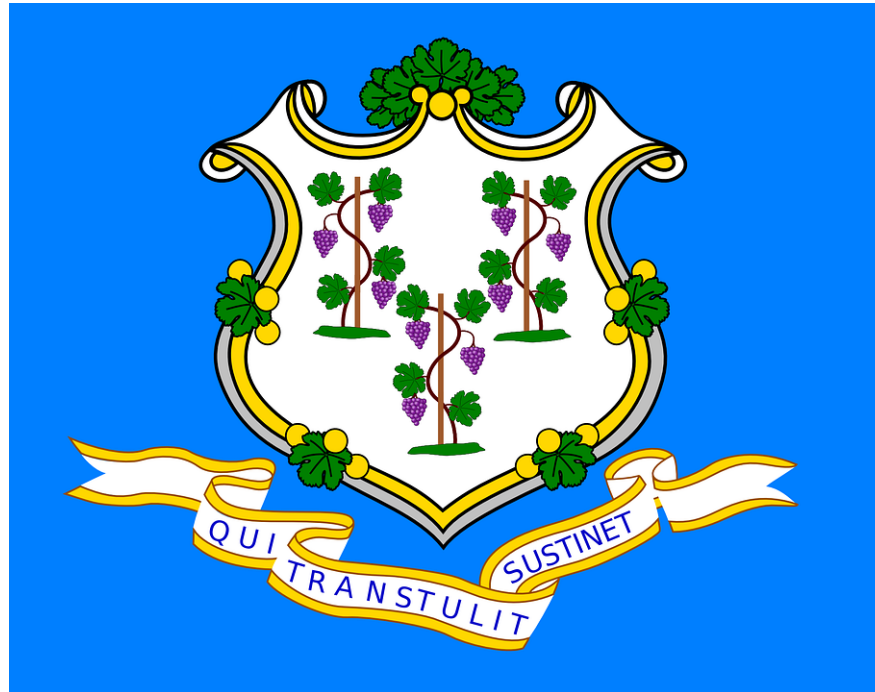
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