

The Forum for America's Ideas

Wisconsin Steering Committee on Autonomous & Connected Vehicles

State and Federal Activity Addressing Autonomous Vehicle Technology

National Conference of State Legislatures

November 18th, 2017



NATIONAL CONFERENCE *of* STATE LEGISLATURES

National Conference of State Legislatures



- Non-profit, bi-partisan organization.
- Members are all 50 state legislatures, 7,383 legislators and 30,000 legislative staff in 50 states, D.C. and U.S. territories.
- Offices in Denver and D.C.
- Among our goals - To provide legislatures with information and research about policy issues, both state and federal.
- NCSL tracks state policy developments in all public policy areas.



States with Enacted Autonomous Vehicle Legislation

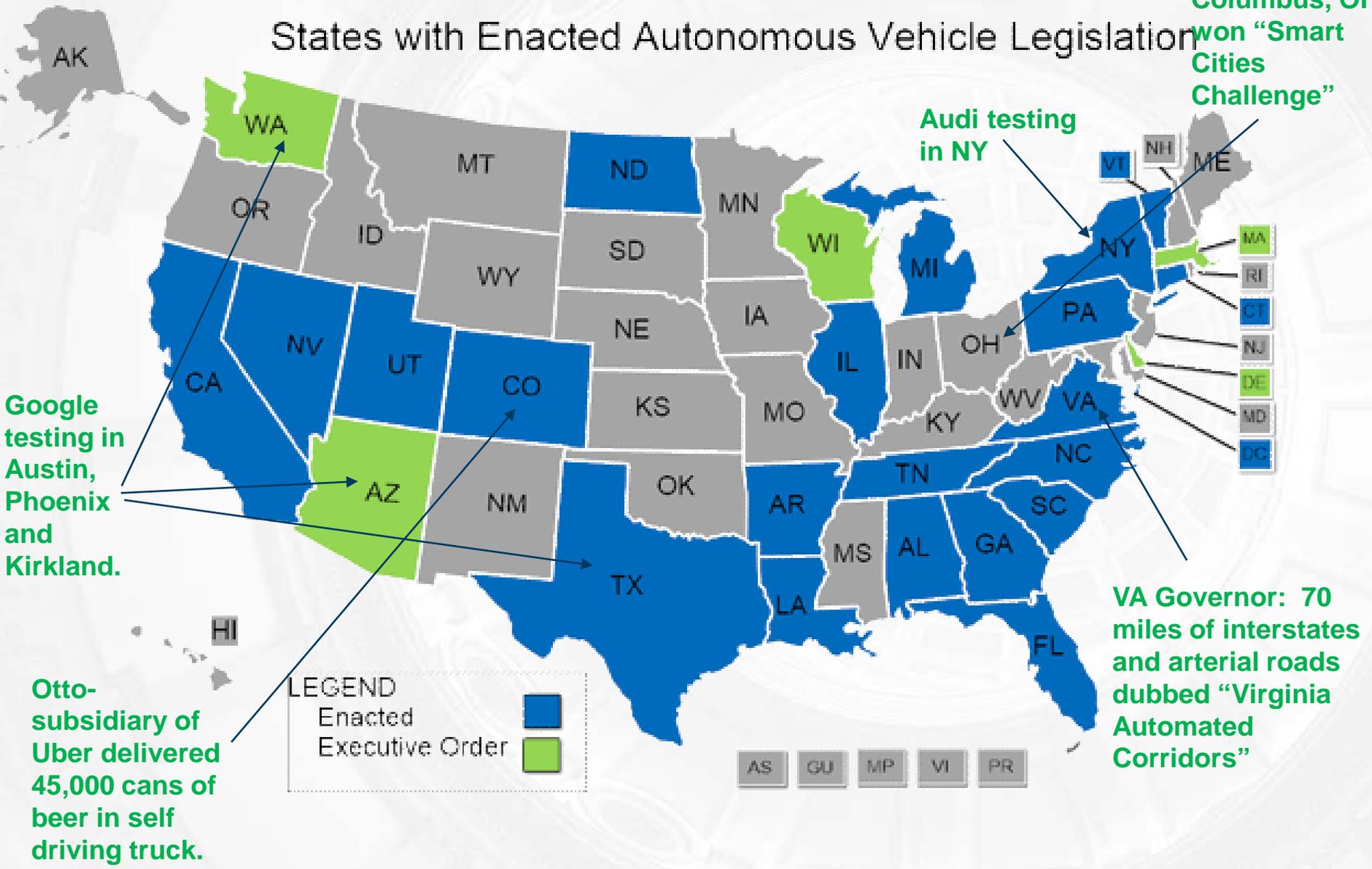
Columbus, OH won "Smart Cities Challenge"

Audi testing in NY

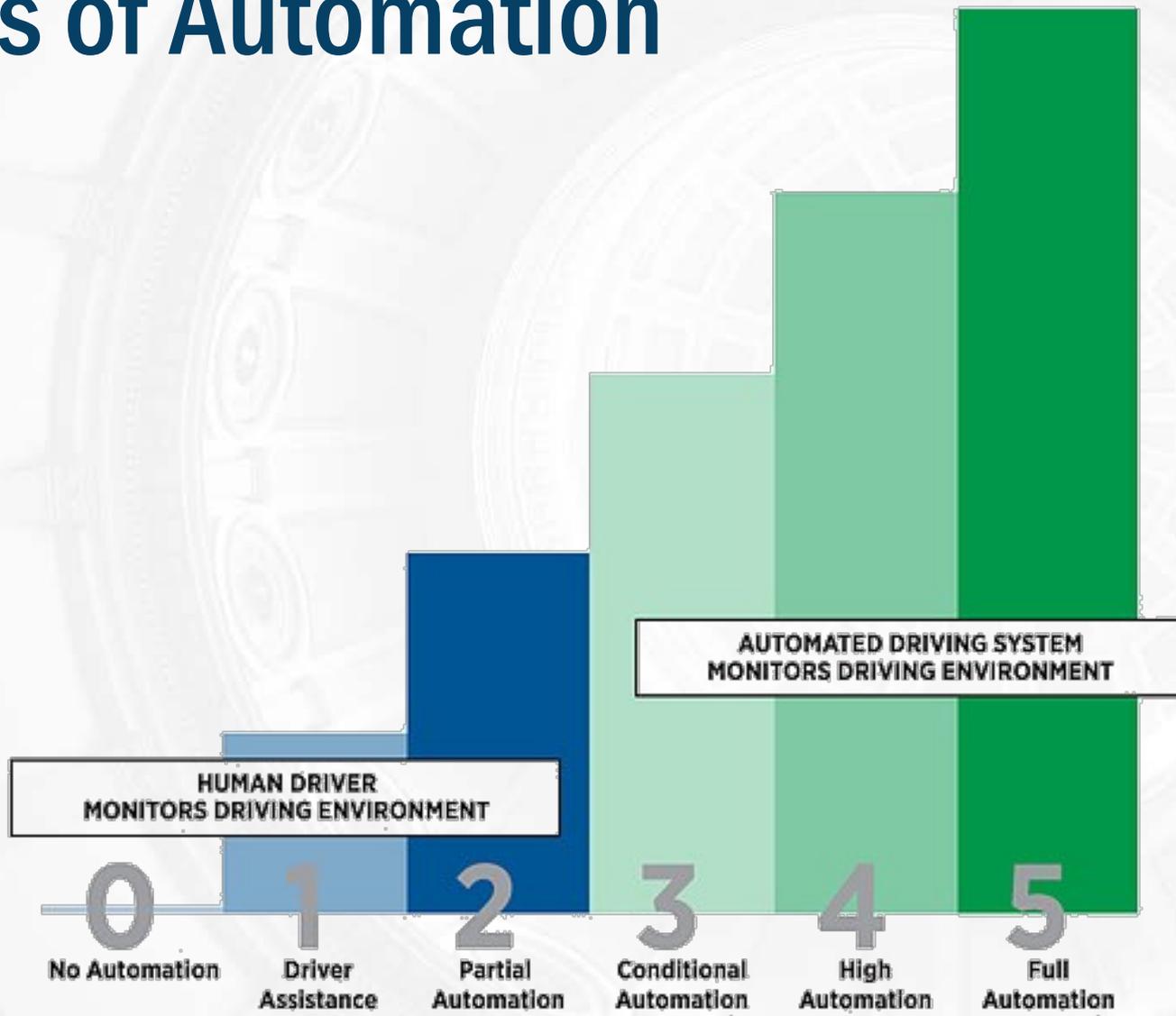
Google testing in Austin, Phoenix and Kirkland.

Otto-subsiary of Uber delivered 45,000 cans of beer in self driving truck.

VA Governor: 70 miles of interstates and arterial roads dubbed "Virginia Automated Corridors"



Levels of Automation



State Laws: Nevada



- ❑ First state to authorize the testing/ operation of autonomous vehicles in 2011.
- ❑ Nevada Center for Advanced Mobility established in 2016.
- ❑ October 2016: 1st Autonomous Vehicle Restricted License issued.
- ❑ Otto violates Nevada Law
- ❑ 2017 Legislation



State Laws: California



- ❑ Passed Legislation in 2012
- ❑ 2015 draft regulations and backlash
- ❑ Enacted AB 1592
- ❑ September 2016: Revised draft of regulations.
- ❑ March 2017: Proposed Driverless Testing and Deployment Regulations



State Laws: Michigan



- Michigan passed 4 bill package in 2016
 - ▣ Eases testing restrictions
 - ▣ Allows autonomous vehicles to be driven on roads in the state when they are sold to the public.
 - ▣ Allows for truck platooning
 - ▣ Finalized American Center for Mobility



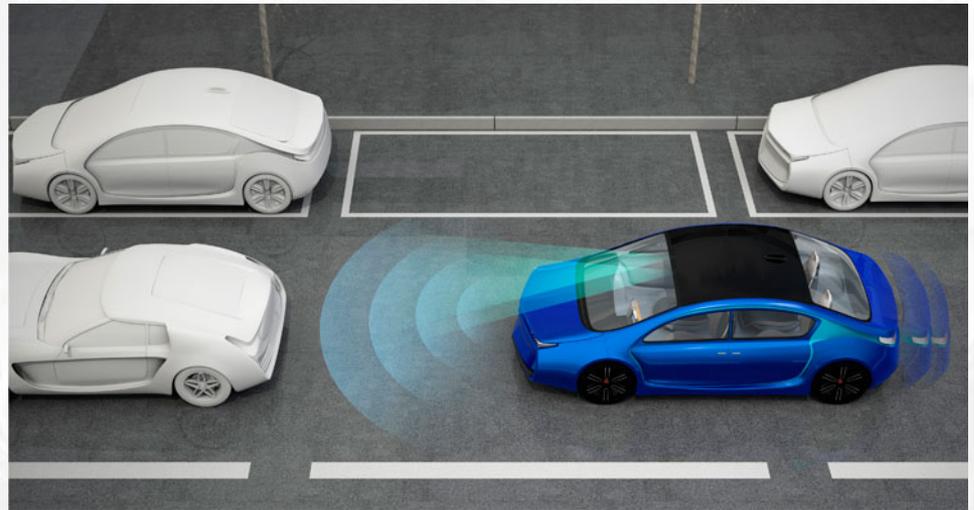
Testing

- At least 8 states and Washington DC have enacted legislation regarding testing
 - ▣ California, Colorado, Connecticut, Florida, Michigan, Nevada, New York, Utah



Definitions

- Defining significant terms
 - ▣ Autonomous vehicle
 - ▣ Automated driving system
 - ▣ Operator



Insurance



- \$5,000,000 typical for testing
 - ▣ California, Florida, Nevada, New York
- \$10,000,000 required in Michigan
- States also addressing liability for “upfitting” AVs



Commercial Use

- Implications for freight transportation
- Following-too-closely laws
 - AR, FL, GA, MI, NV, SC, TN, TX



Image from <http://www.truckinginfo.com/channel/fuel-smarts/article/story/2016/04/platooning-is-on-the-way.aspx>



Studying the Technology

- Work groups or task forces
 - ▣ In all four executive orders
 - ▣ Alabama
 - ▣ North Dakota
 - ▣ Utah
 - ▣ Vermont



Executive Orders



- **Arizona: August 2015**
 - ▣ **Directed agencies to support testing and operation of HAV's**
 - ▣ **Created “The Self-Driving Vehicles Oversight Committee”**

- **Massachusetts: October 2016**
 - ▣ **Established “The AV Working Group”**



Executive Orders



- **Washington: June 2017**
 - ▣ Established an autonomous vehicle work group
 - ▣ Requires that state agencies “support the safe testing and operation of autonomous vehicles on Washington’s public roads.”
- **Wisconsin: May 2017**
 - ▣ Created the Governor’s Steering Committee on Autonomous and Connected Vehicle Testing and Deployment
- **Delaware: September 2017**
 - ▣ Established the Advisory Council on Connected and Autonomous Vehicles



State Legislative Action: 2017 and Beyond

- 33 states considered legislation in 2017
 - ▣ 99 bills
- 41 states since 2012
- NCSL [Legislative Database](#)

TOPICS [Clear](#)

- All Topics
- Commercial
- Cybersecurity of Vehicle
- Definitions
- Infrastructure and Connected Vehicles
- Insurance and Liability
- Licensing and Registration
- Operation on Public Roads
- Operator Requirements
- Other
- Privacy of Collected Vehicle Data

STATES [Clear](#)

- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maine
- Maryland
- Massachusetts
- Michigan
- Minnesota

KEYWORD

STATUS

BILL NUMBER

YEAR

AUTHOR

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This search is based on the following filters:
Topics: All Topics
States: All States
Year: 2017

[Show All History](#) [Hide All History](#)

RESULTS Total States: 33 Total Bills: 96



Automated Driving Systems (ADS): A Vision for Safety 2.0



- ▣ Released in September 2017
- ▣ 2nd edition, update to 2016 Policy



Federal Automated Vehicle Policy (FAVP)

-Federal Roles-

Vehicle Safety

- **Design, Construction and Performance**
- **Federal Motor Vehicle Safety Standards (FMVSS)**



12 Priority Safety Design Elements

- ❑ System Safety
- ❑ Operational Design Domain
- ❑ Object and Event Detection and Response
- ❑ Fallback (Minimal Risk Condition)
- ❑ Validation Methods
- ❑ Human Machine Interface
- ❑ Vehicle Cybersecurity
- ❑ Crashworthiness
- ❑ Post-Crash ADS Behavior
- ❑ Data Recording
- ❑ Consumer Education and Training
- ❑ Federal, State, and Local Laws



Federal Automated Vehicle Policy (FAVP)

-State Roles-

Vehicle Use

- ❑ Driver Education and Training
- ❑ Traffic Laws and Regulations
- ❑ Vehicle Registration and Driver Licensing
- ❑ Insurance and Liability
- ❑ Law Enforcement/Emergency Response
- ❑ Safety Inspections



ADS: A Vision for Safety 2.0

Best Practices for Legislatures

- ❑ Provide a “technology-neutral” environment
- ❑ Provide licensing and registration procedures
- ❑ Provide reporting and communications methods for Public Safety Officials
- ❑ Review traffic laws and regulations that may serve as barriers to operations of ADSs



Federal Legislative Action

- ❑ SELF Drive Act (HR 3388)
- ❑ Four main sections
 - ▣ Significant expansion of federal preemption
 - ▣ Updates to and Exemptions from FMVSS
 - ▣ Safety Assessment Letters
 - ▣ Federal Automated Vehicles Advisory Council



Federal Legislative Action

- AV START Act
 - ▣ Maintenance of existing federal preemption but applicable to HAVs
 - ▣ Updates to and Exemptions from FMVSS
 - ▣ Detailed Safety Evaluation Report
 - ▣ Highly Automated Vehicles Technical Committee



Preemption

- Design and Construction
- Performance
- Operations
- Data



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Safety Assessment Letters

- House
 - ▣ Requirement “as contemplated by NHTSA guidance until formal rule

- Senate – Safety Evaluation Report (SERs)
 - ▣ Applicable to all upon testing
 - ▣ “shall describe through a documented assessment, testing and validation process, each of the subject areas”



NCSL Activities



Pre-Conference on Autonomous Vehicles



Questions?

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[NCSL's AV webpage](#)

