



Regulating Autonomous Vehicles

BY BEN HUSCH AND ANNE TEIGEN

Self-driving cars, also known as autonomous vehicles, have the potential to revolutionize how—and how safely—people get from point A to B. As the technology continues to develop, federal, state and local governments are studying, debating and addressing the prospective benefits and challenges of this burgeoning transportation revolution.

There were [more than 35,000 highway fatalities](#) on America's roadways in 2015, with 95 percent of automobile crashes caused, at least in part, by driver error. Proponents of autonomous vehicles argue that they could remove human error from the driving equation and prevent the lion's share of crashes. They also see the production of autonomous vehicles as a possible economic boon for their state.

But questions about exactly how these vehicles will operate and interact on the roadway persist. Some are concerned that driverless vehicles could pose a danger to other motorists and pedestri-

ans, particularly when there is a mix of driverless and traditional vehicles on the road. Others are concerned about cybersecurity and privacy. There is also still the open question of to what degree "connected vehicles"—which communicate with other vehicles—and infrastructure are needed and feasible to maximize benefits and safety.

State Action

Eleven states and the District of Columbia have passed legislation related to autonomous vehicles. Additionally, governors in [Arizona](#) and [Massachusetts](#) have issued executive orders. These laws vary in scope, however.

California, Florida, Michigan and Nevada passed comprehensive regulations governing the testing of autonomous vehicles. Nevada, the first state to pass an autonomous vehicle law in 2011, allows autonomous vehicles to be tested in the state, but the vehicle must be registered, insured and have a certificate of compliance issued by the state Department of Motor Vehicles.

Did You Know?

- So far in 2017, 28 states have introduced legislation related to autonomous vehicles.
- The Federal Autonomous Vehicle Policy includes no new rules or regulations—only guidance—for states.
- Although it will likely be many years before fully autonomous vehicles see widespread deployment, there is much for states to accomplish in areas such as traffic enforcement, insurance, registration, licensing and more.

Florida is the first state to allow anyone with a valid driver's license to operate an autonomous vehicle on public roads. [Florida's law](#) does not require that an operator be in the vehicle, but the remote operator must have a means to engage or disengage the autonomous technology if necessary. In [California](#), the Contra Costa Transportation Authority is authorized to test the first fully autonomous vehicle not equipped with a steering wheel, brake pedal or accelerator on certain public roads. Michigan enacted a four-bill package in 2016 that allows autonomous vehicles to be driven on public roads, eases testing restrictions for manufacturers, allows commercial use of autonomous vehicle technology and establishes the American Center for Mobility, a testing facility for connected and driverless cars.

Tennessee prohibits local governments from banning the use of autonomous vehicles. It also allows drivers to view a visual display, like a television or movie screen, in "Level 3" autonomous vehicles (which can be driven by both humans and technology) because research showed that drivers could re-engage, or take over, more quickly when visually stimulated. Virginia passed a similar law.

Louisiana added autonomous vehicle technology definitions into its highway regulatory act and Alabama, North Dakota and Utah lawmakers passed legislation to study and evaluate best practices and safety standards and report back with recommendations.

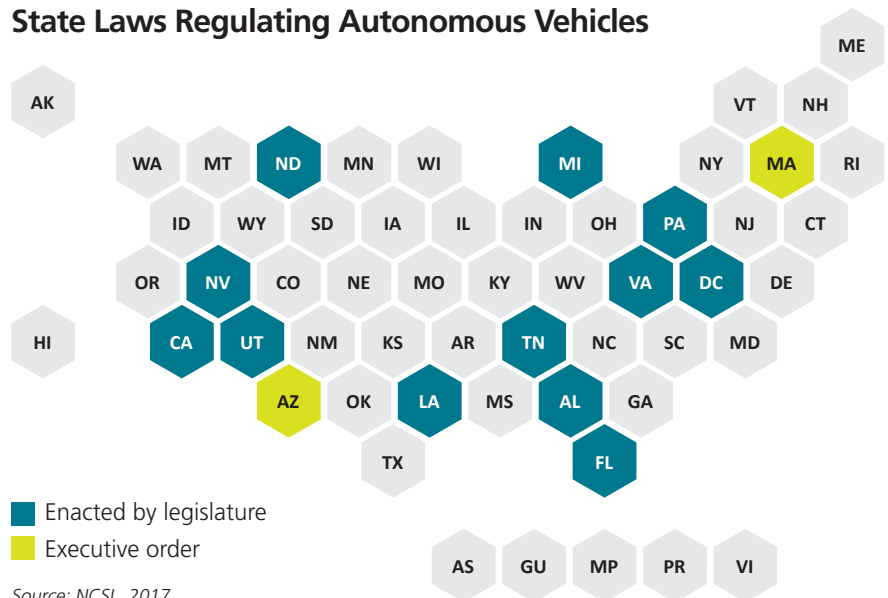
So far in 2017, [28 states](#) have introduced legislation related to autonomous vehicles.

Federal Action

The National Highway Traffic Safety Administration [released](#) the first iteration of its "Federal Automated Vehicles Policy" (FAVP) last September, with annual updates expected. Section 2 of the guidance, the Model State Policy (MSP) delineates federal versus state authority. While the federal government is responsible for setting motor vehicle safety standards, states remain the lead regulator when it comes to licensing, registration, traffic law enforcement, safety inspections, infrastructure, and insurance and liability.

The MSP outlines a road map for states wanting to move ahead with testing and eventually deploying autonomous vehicles. It offers steps a state could consider rather than a detailed set of legislative language. Specifically, it notes that "this guidance is not mandatory," though the agency may make "some elements of the guidance mandatory and binding through future rulemakings." Further, it identifies several areas of state law that might require updating to accommodate a world full of automated vehicles. These include law enforcement and emergency response, vehicle regis-

State Laws Regulating Autonomous Vehicles



trations, liability and insurance, education and training, vehicle inspections and maintenance, and environmental impacts

Finally, the guidance lays out some possible policy changes that NHTSA believes could help it better respond to this new technology. These include additional funding to support more research, a larger network of experts, premarket approval authority for vehicles and software upgrades after vehicles sell.

Although no formal actions have been taken by the 115th Congress as of publication, two themes are beginning to emerge. The first, and potentially most consequential, is that of federal pre-emption. At a February hearing of the Energy and Commerce Subcommittee on [Digital Commerce and Consumer Protection](#), witnesses from the autonomous vehicle industry were asked about the impact of state actions on their business. Many described the potential for significant negative impacts if a patchwork system to determine vehicle requirements emerged, although none of the witnesses could cite any specific legislation passed by states.

The other theme beginning to take shape revolves around the National Highway Traffic Safety Administration's [Federal Motor Vehicle Safety Standards](#) (FMVSS), which regulate the safety of conventional vehicles. While states cannot deviate from these standards, NHTSA has yet to issue standards for autonomous vehicles. Further, while NHTSA can authorize, on an annual basis, exemptions for some vehicles from complying with certain standards—such as having a steering wheel or brake pedal—there appears to be a growing desire to increase these annual exemptions to allow for greater testing of autonomous vehicles.

Additional Resources

[NHTSA Federal Autonomous Vehicles Policy](#)

[NCSL Autonomous Vehicle Resources](#)

Rand Corporation, ["Autonomous Vehicle Technology: A Guide for Policymakers"](#)

NCSL Contacts

Ben Husch
(202) 624-7779

Anne Teigen
(303) 856-1652