

Adopting and Adapting:

Automated Vehicle Checklist for State Policymakers

1. AV Regulations at the State Level

- ___ Make sure testing AVs is not only allowed, but also that it fosters the development of an entire ecosystem of automakers and/or tech firms, research institutes, and localities engaged in the field. Also, states have an advantage when they collaborate with their neighbors. Although there is a competitive nature in state-level AV policy, each state will be more attractive to AV development if there are fewer regulatory hurdles at their borders.
- ___ Adopt the current (and future) NHTSA/SAE AV definitions, and use them when developing AV policies.
- ___ Design balanced reporting and permitting requirements that meet state needs for transparency and safety, but are not overly burdensome on AV testers. There is no rule of thumb on whether states should require AV testers to obtain a permit or submit reports to state officials. The AV industry is not opposed to testing permits and reporting, so long as the process is not too bureaucratic, cumbersome, or reveals proprietary corporate information.
- ___ Allow NHTSA to regulate the certification of commercially-ready AV technologies
- ___ Continue to lead in states' traditional regulatory areas such as licensing of human drivers, enforcing traffic laws, and regulating insurance and liability. States should assign crash liability to whatever (human or machine) is responsible for the driving task if there is an at-fault collision. AV developers should assume full liability in the case of a crash during testing. And AV firms should have insurance requirements for when their software is operating the vehicle.
- ___ Work with NHTSA and neighboring states to ensure that the liability definitions have few discrepancies.
- ___ Identify current state and local laws that might be in conflict with the capabilities of future commercial-ready AVs. Proactively modify those laws so that they allow for permitted or certified AV systems, while still requiring safe human operation.
- ___ Allow specific pilot programs for driverless AV testing through partnerships with AV developers, localities, and research groups.
- ___ Create AV advisory committees of no more than 30 people that includes representatives from state government offices, local government, auto manufacturers, AV technology firms, safety advocates, public transit industry, trucking industry, taxi industry, and other relevant experts. States should rely on industry associations or rotating seats to ensure that group sizes are manageable yet include perspectives from different organizations in the industry.
- ___ Develop nonbinding "statements of principles" that address the following topics:
 - ___ **Privacy.** States need to clearly delineate expectations about data ownership and access to the data in the case of a collision. Manufacturers must protect the privacy of the vehicle owners and companies should not be allowed to distribute personally identifiable information about vehicle owners or occupants without their approval and knowledge.

- ___ **Cybersecurity.** States need to proactively define AV developers' limited liability for crashes that result from a security breach, and ensure that all AV developers are taking cybersecurity seriously.
- ___ **Roadway safety.** States should emphasize that AVs must be able to recognize, yield to, and share the roadway with all users of the roadway.
- ___ **Consumer advocacy.** Consumers need to be aware of what their vehicle is capable of and what is it not. States can set principles for consumer information for new and used cars with AV features. In addition, consumers should be informed of data ownership rules prior to purchasing an AV.
- ___ **Data sharing.** Creating initial guidelines for data sharing can set the stage for future data sharing agreements that can bring benefits to both public sector agencies and private companies.

2. State AV infrastructure investment and funding

- ___ Use AVs as a way to galvanize support for a robust state of good repair program, targeted to unsafe roadways and work zones across the state.
- ___ Initiate pilots of DSRC and 5G wireless CV technologies, particularly when a private entity is willing and able to support the pilot financially.
- ___ Incorporate CV and AV technologies into state vehicle fleets as states turnover those vehicles and purchase new ones. Features like vehicle connectivity, automatic emergency braking, blind spot monitoring, and advanced cruise control can help to both prevent collisions and pilot new technologies.
- ___ Research different approaches to implementing and using a VMT fee on AVs as a way to (1) create a new revenue stream for state transportation investment and (2) encourage the responsible use of AVs on public roadways.

3. State funded AV research and workforce training

- ___ Establish AV testing grounds in partnership with universities, military bases, localities, industrial zones, and/or privately-managed roadways.
- ___ Fund research at universities to understand the potential short-, medium-, and long-term effects of AVs on the transportation network, including the environment, social equity, and economic vitality.
- ___ Revise state research procurement methods so that the results keep pace with the rapid development of AV technology. Procurement for research should target outcomes, rather than specific processes, for developing the research.
- ___ Include AVs in long-range state transportation plans, not as a given outcome, but a potential scenario to anticipate.
- ___ Form partnerships with universities and the private sector to implement targeted retraining or career development programs that proactively address and prepare for the adverse effects of automation.
- ___ Work with academic institutions to retrain workers whose jobs may be lost to automation.