



FACT SHEET: AV POLICY SECTION I: VEHICLE PERFORMANCE GUIDANCE FOR AUTOMATED VEHICLES

The Vehicle Performance Guidance for Automated Vehicles (“Guidance”) outlines best practices for the safe design, development and testing of automated vehicles prior to commercial sale or operation on public roads.

The Guidance includes a **15-Point Safety Assessment to set clear expectations for manufacturers developing and deploying automated vehicle technologies.**

For companies, the Guidance describes internal processes and strategies, organizational awareness, record-keeping, testing and validation, engagement with DOT and NHTSA, and improved transparency to support the safe deployment of HAV technology. The industry’s adoption and use of the Guidance, which DOT and NHTSA will review annually and update as necessary, will build public confidence and maintain the U.S. lead on these emerging automotive safety technologies.

Application

- **Systems:** The Guidance applies primarily to technologies where the system can do the entire driving task without reliance on the driver to pay continuous attention to the driving environment. Portions also apply to lower levels of automated driving systems.
- **Vehicles:** The Guidance applies to all classes of motor vehicles, including passenger cars, trucks and buses.
- **Organizations:** The Guidance covers any organization testing, operating, and/or deploying automated vehicles, which includes traditional companies (e.g. auto manufacturers, suppliers) and nontraditional companies (e.g. tech companies, startups, fleet operators).

The information generated from these activities will be shared in a way that allows government, industry, and the public to increase their learning and understanding as technology evolves, while protecting legitimate privacy and competitive interests.

15-point Safety Assessment

The 15-point Safety Assessment outlines objectives on how to achieve a robust design. It allows for varied methodologies as long as the objective is met. The Guidance asks manufacturers and other entities to document how they are meeting each topic area in the guidance. The issues include:

- **Operational Design Domain:** How and where the HAV is supposed to function and operate;
- **Object and Event Detection and Response:** Perception and response functionality of the HAV system;
- **Fall Back (Minimal Risk Condition):** Response and robustness of the HAV upon system failure;
- **Validation Methods:** Testing, validation, and verification of an HAV system;
- **Registration and Certification:** Registration and certification to NHTSA of an HAV system;



- Data Recording and Sharing: HAV system data recording for information sharing, knowledge building and for crash reconstruction purposes;
- Post-Crash Behavior: Process for how an HAV should perform after a crash and how automation functions can be restored;
- Privacy: Privacy considerations and protections for users;
- System Safety: Engineering safety practices to support reasonable system safety;
- Vehicle Cybersecurity: Approaches to guard against vehicle hacking risks;
- Human Machine Interface: Approaches for communicating information to the driver, occupant and other road users;
- Crashworthiness: Protection of occupants in crash situations;
- Consumer Education and Training: Education and training requirements for users of HAVs;
- Ethical Considerations: How vehicles are programmed to address conflict dilemmas on the road; and
- Federal, State and Local Laws: How vehicles are programmed to comply with all applicable traffic laws.

Portions of the Guidance also apply to developers of lower level automated systems that are designed to assist the driver but not take the over the driving task. The Guidance outlines a Safety Assessment for these systems as well.