

Autonomous Vehicle Guidance Gives Industry Room To Grow

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On Jan. 8, the U.S. Department of Transportation and the White House's National Science and Technology Council issued version 4.0 of their guidance on the deployment of autonomous vehicles — referred to hereafter as AV 4.0.

AV 4.0 outlines the U.S. government's enterprise-wide involvement in AV policy and development, with the objective of signaling that the United States wants to be on the cutting edge of AV research, development and manufacturing. It does not discuss the DOT's upcoming AV rulemaking or identify best practices (unlike past iterations), nor does it create binding requirements. But AV 4.0 makes clear that the White House will play a key role in federal AV efforts moving forward.

The new guidance emphasizes the U.S. government's commitment to fostering American leadership in AV development and integration while ensuring safety and privacy. It promotes industry leadership in AV development, deployment and self-regulation.

AV 4.0 details current U.S. government efforts to research, develop and deploy AVs and related technologies, and provides a topic-specific overview of federal AV activity with details of specific agencies involved. It contemplates collaboration with industry, academia, nonprofits and standards development organizations in addition to state, local, tribal and territorial governments, or SLTTs.

AV 4.0 also provides 10 guiding principles, an expansion of the original six DOT principles, grouped into three core interests. The intent is to drive consistent AV policy across the U.S. government and to foster research, development and integration of AVs in the United States. This guiding approach may implicitly acknowledge the difficulty in achieving consistent AV policy in the complex U.S. regulatory environment.

Core Interests and Principles

AV 4.0 establishes 10 guiding principles organized into three core interests. The following section provides an overview of the three core interests and the guiding principles that fall within them.

Protect Users and Communities

AV 4.0 presents four principles to further this interest: (1) Prioritize safety; (2) emphasize security and cybersecurity; (3) ensure privacy and data security; and (4) enhance mobility and accessibility. The new guidance envisions collaboration between developers, manufacturers and service providers to prevent and investigate threats targeting AVs while



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simultaneously protecting privacy and civil rights.

AV 4.0 promotes the development of standards and best practices across the transportation system to deter, respond to and safely recover from physical and cybersecurity threats. A key goal is to protect driver data, passenger data and the data of passive third parties (e.g., pedestrians) from unauthorized collection, use and sharing.

Promote Efficient Markets to Ensure Rapid Deployment of AV Technologies

AV 4.0 presents three principles to further this interest: (1) Have the U.S. government remain technology neutral; (2) protect American innovation and creativity; and (3) modernize regulations. The new guidance emphasizes the need to protect and enforce intellectual property rights, technical data and sensitive proprietary communications.

AV 4.0 also promises the elimination of outdated regulations that impede AV development or that do not sufficiently address developing safety, mobility and accessibility needs. A key goal is to pursue development of a consistent regulatory environment that understands the need for consistency not just at the federal level, but also consistently with SLTTs and international laws and regulations.

AV 4.0 contemplates U.S. government advocacy to promote foreign and domestic laws that are performance-based and nonprescriptive, and that do not discriminate against American products or services.

Facilitate Coordinated Efforts Among Stakeholders

AV 4.0 presents three principles to further this interest: (1) Promote consistent standards and policies; (2) ensure a consistent federal approach; and (3) improve transportation system-level effects. The guidance promotes the development of voluntary consensus standards and evidence-based and data-driven regulations.

AV 4.0 contemplates federal efforts to engage with SLTTs and industry to promote the development and implementation of voluntary consensus standards, advance policies supporting AV integration throughout the transportation system and seek standardized global technical standards and regulatory policies.

Federal funds and grants used for AV and connected vehicle research should promote American leadership by complying with Executive Order 13788, "Buy American and Hire American," and Executive Order 13881, "Maximizing Use of American-Made Goods, Products, and Materials."

Cross-Agency U.S. Government Involvement in AV Policy

A core purpose of AV 4.0 is to document and promote federal cross-agency investment and involvement in core research and development activities related to AVs.

The new guidance details the role played by 38 federal agencies in supporting the AV sector. Unlike prior iterations that focused solely on the DOT, AV 4.0 frames these cross-agency activities as a coordinated effort led by the White House — while not losing sight of the DOT's role regarding safety.

AV 4.0 also outlines the administration's efforts to support AV technology growth and leadership by promoting related industries and sectors. This includes U.S. government

efforts related to advanced manufacturing; artificial intelligence; machine learning; science, technology, engineering and mathematics education and workforce development; supply chain integration; and quantum information science.

Other recent administration actions also relate to the overall goal of promoting the AV sector, including the recent release of a plan to facilitate American leadership in 5G adoption, "Facilitate America's Superiority in 5G Technology Plan," which addresses connected vehicles.

With regard to current U.S. government activities, AV 4.0 documents several key areas of U.S. government involvement in the AV sector through three key areas.

Fundamental Research

This includes promoting, financing and carrying out research related to:

- Safety, including of AVs, pedestrians and vehicles sharing the road with AVs;
- Ensuring mobility for all Americans, particularly for those with limited mobility due to disability, injury or age;
- Fundamental research regarding AVs and related issues;
- Security and cybersecurity of AVs and AV infrastructure;
- Infrastructure including developing needs;
- Access to spectrum cooperation and connectivity to, among other things, enable seamless use throughout the country; and
- Economics and workforce research regarding the impact of AVs on the current American workforce, particularly the potential effects on professional drivers.

Enabling Activities

This includes actively pursuing regulatory and nonregulatory activities to enable the adoption of AVs and their incorporation into the U.S. surface transportation system, including through activities like:

- Fostering collaboration with the federal government and greater access to federal government resources and processes, as well as better coordination between federal agencies;
- Developing voluntary consensus standards and other guidance to promote efficient industry self-regulation and private-sector conformity;
- Furthering regulatory rulemaking and similar activities by those agencies that have oversight of AVs or AV-related issues;

- Continuing AV-related taxation, trade and IP efforts, including tax incentives for AV research in the United States, promotion of American access to foreign markets through fair trade rules and continued promotion of strong IP protections;
- Encouraging efficiency and minimizing negative environmental impacts; and
- Continuing AV-related competition, privacy and market transparency efforts, including efforts to secure relevant data and protect privacy, as well as apply existing laws to punish deceptive or misleading claims related to AVs.

Resources for AV Innovators

This includes resources intended to help innovators build new technologies and market those developments, including:

- Transferring and sharing technology and knowledge from and between federal laboratories and development centers;
- Promoting small business administration resources to help start and grow businesses in the AV sector; and
- Furthering patent and IP resources to help innovators protect their AV work product.

Conclusion

AV 4.0 sets the stage for coordinated, cross-agency federal AV efforts to come. The new guidance makes clear that the White House views its role as central to those efforts, and that it welcomes industry involvement.

It also opens the door further for AV industry stakeholders to coordinate and collaborate with federal agencies to further AV development and implementation. AV 4.0 highlights the opportunities for industry engagement with the federal government, as well as the key issues of safety, cybersecurity and privacy that are paramount when developing AVs.

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