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Via Electronic Submission

Michael A. Halem
Acting Assistant Secretary for Research and Technology
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Re: DOT RFI – Research to Support Establishing a National Strategy for Transportation Digital Infrastructure

Dear Mr. Halem:

The Consumer Technology Association® ("CTA") appreciates the opportunity to respond to the U.S. Department of Transportation's ("DOT") Request for Information on establishing a national strategy for transportation digital infrastructure ("TDI").[1] CTA supports DOT's effort to modernize transportation through digital infrastructure and urges the Department to accelerate the integration of unmanned aerial systems ("UAS") and autonomous vehicles ("AVs") across the transportation ecosystem. Coordinated federal policy to advance these technologies will improve infrastructure management, enhance safety, and strengthen U.S. global competitiveness.

As North America's largest technology trade association, CTA represents the innovation economy. Our members—from startups to global brands—support more than 17 million American jobs and lead the development of artificial intelligence ("AI"), robotics, and other emerging technologies that improve productivity, safety, and economic growth. CTA's membership includes companies across the AV ecosystem, including suppliers, manufacturers, software developers, and service providers.

CTA commends DOT for recognizing that the future of transportation is inherently multi-modal and for seeking to break down longstanding stovepipes across modal administrations, including the Federal Aviation Administration, the National Highway Traffic Safety Administration ("NHTSA"), and the Pipeline and Hazardous Materials Safety Administration. A coordinated, enterprise-level approach to digital infrastructure is essential as physical and digital transportation systems become more interconnected.

[1] Office of the Assistant Secretary for Research and Technology; Request for Information-Research to Support Establishing a National Strategy for Transportation Digital Infrastructure, 91 Fed. Reg. 5150 (Feb. 4, 2026).

Unmanned Aerial Systems (Drones)

As transportation infrastructure becomes more digitized, DOT should treat drones as a core component of TDI—not only as airspace users, but as tools that inform the development, construction, maintenance, monitoring, and modernization of physical infrastructure across all modes. Commercial drones already deliver clear safety, efficiency, and cost benefits by enabling high-fidelity data collection for roads, bridges, rail, pipelines, and other assets.

Federal, state, local, tribal, and territorial agencies report improved efficiency, shorter inspection timelines, lower operational costs, and enhanced worker safety. According to surveys conducted by the American Association of State Highway and Transportation Officials, state DOT adoption of UAS grew from 72% in 2019 to 93% in 2023.[2] As of 2023, all surveyed state DOTs used drones for surveying, 84% used them for bridge inspection and construction or maintenance activities, 64% used them for pavement inspection, and 20% used them for rail line inspection.[3] Agencies reported strong returns on investment, including savings of up to $2 million annually and an average reduction of more than 2700 staff hours per year, driven by lower equipment costs, improved labor efficiency, enhanced worker safety, and reduced insurance exposure.[4]

CTA urges DOT to advance TDI by accelerating the routine integration of UAS into efforts to modernize physical transportation infrastructure across all modes. These digital tools modernize infrastructure management by enabling data-rich inspection, real-time condition assessment, and the use of digital twins for roads, bridges, railways, and related assets. By promoting their wider use, DOT can support preventative maintenance, improve asset lifecycle planning, and enhance safety while reducing costs and operational disruptions.

Autonomous Vehicles

CTA has long urged Congress to adopt a federal framework for nationwide testing and deployment of AVs. AVs can make roads safer, provide new mobility options for seniors and people with disabilities, improve supply chain efficiency, and boost America's economy. Writing to the Senate Committee on Commerce, Science, and Transportation last month, CTA noted that AVs have logged more than 145 million miles on U.S. roads—and deployment continues to accelerate.[5] Over 7 million miles, Waymo found that the rate of AV crashes with reported injuries is 85% lower than in human-driven crashes.[6] In 2019, NHTSA found that annual crash-

[2] *2024 AASHTO Quick Snapshot UAS Survey*, at 2, American Association of State Highway and Transportation Officials at 2 (2024), https://acrobat.adobe.com/id/urn:aaid:sc:va6c2:42edb7d3-b6a8-4b5f-90ec-e7a483a1aef3.
[3] *Id.* at 3.
[4] *Id.* at 5.
[5] Letter from Gary Shapiro, Executive Chair & CEO, CTA, to Sen. Ted Cruz, Chairman, Senate Committee on Commerce, Science, and Transportation and Sen. Maria Cantwell, Ranking Member, Senate Committee on Commerce, Science, and Transportation, at 1 (Feb. 4, 2026), https://www.cta.tech/media/dpyhzr0s/2426-cta-letter-to-senate-commerce-re-av-hearing.pdf.
[6] *Waymo Significantly Outperforms Comparable Human Benchmarks Over 7+ Million Miles of Rider-Only Driving*, Waymo (Dec. 20, 2023), https://waymo.com/blog/2023/12/waymo-significantly-outperforms-comparable-human-benchmarks-over-7-million/.

related medical expenses totaled $31 billion.[7] Replacing conventional vehicles with AVs will save billions of dollars per year in medical expenses alone.

Congress should adopt a national AV framework with flexible, forward-looking policies that recognize the evolving AV ecosystem and support innovation, safety, and U.S. global competitiveness. Fragmented state regulation and rigid or prescriptive approaches, such as requiring manual controls in fully autonomous vehicles, freeze innovation and hamper safety improvements.[8] To fully realize the benefits of AVs, this framework should preempt divergent state regulatory frameworks.

CTA also owns and produces CES®—the world's most powerful tech event and a forum for discussions on the intersection of AI and transportation. Recent panels have addressed the use of AI in vehicle manufacturing and the development of AVs. At these panels, industry experts have described how machine learning, advanced analytics, and generative AI support the full vehicle manufacturing process: "When you look through . . . all of the things that lead up to a vehicle being on the road, AI is everywhere inside of there."[9] This includes using AI to accelerate development of in-cabin electronics that combine safety-critical systems and autonomous driving solutions.[10] Experts stress how access to trusted and secure data to run the simulations is needed to ensure real-world safety for testing self-driving technology and other AI use cases.[11]

Today's current state-by-state approach to AV regulation threatens America's global mobility leadership and cedes ground to competitors like China. It stifles innovation and adoption through legal uncertainty, inconsistent compliance rules, and unneeded barriers to deployment. This patchwork of state AV laws heavily burdens small and mid-sized companies that lack the resources to manage state-by-state compliance.[12]

Connected and AI-Enabled Transportation Infrastructure

Transportation infrastructure should be connected, modern, digitally integrated, and capable of real-time operational awareness. Roadways, intersections, work zones, and freight corridors with sensors, communications, and edge computing will improve safety and efficiency for all road users.

AI will turn data into action. Machine learning and analytics can manage traffic in real time, detect hazards, optimize signals, improve incident response, and strengthen awareness in

[7] Lawrence Blincoe et al., NHTSA, *The Economic and Societal Impact of Motor Vehicle Crashes, 2019 (Revised)* at 2 (Feb. 2023), https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813403.pdf.
[8] Comments of CTA at 8, Dept. of Just. Docket No. OLP182 (filed Sept. 15, 2025) ("CTA DOJ Comments"), https://www.cta.tech/media/czhf5m3d/docketnoolp182_doj_rfi_burdensome_state_laws_cta.pdf.
[9] *Driven by AI: Smarter, Safer, Faster Vehicle Manufacturing*, at 06:58, CES (Jan. 8, 2026), https://www.ces.tech/videos/driven-by-ai-smarter-safer-faster-vehicle-manufacturing/.
[10] *Id*. at 19:07.
[11] *Physical AI and the Big Bang of Robotics and Autonomous Vehicles, presented by NVIDIA*, at 11:20, CES (Jan. 7, 2026), https://www.ces.tech/videos/physical-ai-and-the-big-bang-of-robotics-and-autonomous-vehicles-presented-by-nvidia/; *Driven by AI: Smarter, Safer, Faster Vehicle Manufacturing*, *supra* note 9, at 07:27, 34:49.
[12] CTA DOJ Comments at 6–7 (describing specific state laws affecting AV use, such as an Illinois requirement that a human must be in the driver's seat of an AV and a New York law requiring one hand on the steering wheel at all times).

complex settings like urban intersections and construction zones. Connected vehicle technology can extend these benefits by sharing time-sensitive information—such as signal timing, work zone alerts, and roadway hazards—with vehicles and traffic systems.

CTA urges DOT to prioritize interoperable, secure, and scalable digital infrastructure, including AI-enabled sensing, edge computing, and connectivity. A national strategy that treats connected, AI-enabled infrastructure as core to TDI will deliver near-term safety and efficiency gains while building a flexible foundation for future innovation.

Embed Security at the Outset

We must integrate information technology ("IT") and operational technology ("OT") to modernize infrastructure, while recognizing new threat vectors. As transportation systems interconnect, the distinction between IT and OT security must operate as a unified system. DOT should adopt a "Zero Trust" architecture as the standard for all new digital infrastructure investments. Further, policies should require any new infrastructure project to document a comprehensive security-by-design approach and ensure that safety-critical OT systems are protected by modern IT security controls.

CTA supports a clear comprehensive transportation digital infrastructure policy. By supporting integration of UAS, AVs, AI-enabled infrastructure, and embedded security, DOT can strengthen the nation's transportation ecosystem. Paired with coordinated federal policy, this approach will help secure the United States as a global leader in next-generation transportation that enhances safety and accessibility.

Thank you for the opportunity to comment.

Sincerely,

CONSUMER TECHNOLOGY ASSOCIATION

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