Ext. Comm. - Testimony - 2025 - Maryland SB 949 -
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Position: FAV

March 5, 2025

The Honorable William C. Smith, Jr.
Chair, Senate Judicial Proceedings Committee
251 Taylor House Office Building
Annapolis, Maryland 21401

SB 949: Vehicle Laws - Fully Autonomous Vehicles
Position: Favorable

Chair Smith:

The Alliance for Automotive Innovation[1] (Auto Innovators) appreciates the opportunity to express our support for SB 949. SB 949 will establish a legal framework that supports the full deployment of AVs and will better equip Maryland's residents, businesses, transportation system, environment, and law enforcement to take advantage of the benefits presented by this technology.

AVs Can Improve Safety

The cars and trucks that consumers are buying today are the safest vehicles ever built. Even so, more than 40,990 people died in traffic crashes in the United States in 2023, including 621 in Maryland[2][3]. The 621 deaths in 2023 were an increase from 566 fatalities in 2022. The evidence shows that driver behavior – drivers who are impaired, unbelted, speeding, or driving recklessly – are significant factors in the increase in roadway fatalities. That is what vehicle safety is a priority and automated vehicle technology holds the promise to increase safety and reduce these numbers.

AV Deployment Is a Key Component of American Competitiveness

Autonomous driving has the attention of Washington, D.C., and the state's – and rightly so. Government has a role to play here, with governments at the state and federal level playing their traditional regulatory roles. Regulatory harmonization and coordination are key to creating a clear pathway for AV deployment and the significant safety, mobility and efficiency benefits that AVs promise. On top of the obvious safety benefits, AVs can provide accessible transportation options for seniors and individuals with disabilities and a chance to reduce traffic congestion and create new jobs and supply chains. All stakeholders should strive toward building trust within the AV ecosystem.

The sooner advanced automated driving systems can be brought to market and into the roadgoing fleet, the sooner the lifesaving promise of this technology may be realized. To fulfill this potential, our members – both automakers and technology suppliers – must have regulatory consistency and

[1] From the manufacturers producing most vehicles sold in the U.S. to autonomous vehicle innovators to equipment suppliers, battery producers and semiconductor makers – Alliance for Automotive Innovation represents the full auto industry, a sector supporting 10 million American jobs and five percent of the economy. Active in Washington, D.C. and all 50 states, the association is committed to a cleaner, safer and smarter personal transportation future. www.autosinnovate.org.
[2] https://zerodeathsmd.gov/resources/crashdata/crashdashboard/
[3] https://crashstats.nhtsa.dot.gov/Api/Public/Publication/813561

regulatory certainty. As you are aware, the design and planning of a new vehicle takes between 5-7 years, as the modern vehicle is comprised of over 30,000 parts, sourced from thousands of different suppliers, and each must be designed, integrated, produced, and assembled.

The longer it takes to get that regulatory structure, like SB 949, in place, the more skittish AV developers are going to get, especially when there is competition for capital for other pressing priorities related to electrification and battery manufacturing everywhere. Even if we don't get our act together in the U.S., the technology isn't going away. We'll cede our AV leadership to China and other nations already setting the right conditions to make AVs a reality.

Conclusion

AVs hold tremendous promise for a cleaner, safer, smarter future for mobility, but only if we work together on smart policies, like SB 949, that are modernized to address the tremendous opportunities that AV technologies hold when it comes to improving roadway safety and expanded mobility for millions of Americans. As our companies start to make plans and critical decisions about where and how and when to build and deploy these technologies, they need to know that policies are in place here in the U.S. that will support those plans and those decisions.

Thank you for your consideration of our position. For more information, please contact our local representative, Bill Kress, at (410) 375-8548.

Sincerely,

Josh Fisher
Senior Director
Alliance for Automotive Innovation.

[MD] SB 949_AVs_TechNet.pdf
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March 3, 2025

The Honorable William Smith, Jr.
Chair
House Judicial Proceedings Committee
Maryland Senate
2 East Miller Senate Office Building
11 Bladen Street, Annapolis, MD 21401

RE: SB 949 (Love) - Vehicle Laws - Fully Autonomous Vehicles – Favorable

Dear Chair Smith and Members of the Committee,

On behalf of TechNet, I'm writing to share our support of SB 949 on fully autonomous vehicles.

TechNet is the national, bipartisan network of technology CEOs and senior executives that promotes the growth of the innovation economy by advocating a targeted policy agenda at the federal and 50-state level. TechNet's diverse membership includes dynamic American businesses ranging from startups to the most iconic companies on the planet and represents over 4.5 million employees and countless customers in the fields of information technology, artificial intelligence, e-commerce, the sharing and gig economies, advanced energy, transportation, cybersecurity, venture capital, and finance. TechNet has offices in Austin, Boston, Chicago, Denver, Harrisburg, Olympia, Sacramento, Silicon Valley, Tallahassee, and Washington, D.C.

Autonomous vehicles (AVs) enable tremendous societal benefits by improving road safety, increasing access to transportation for all, enhancing efficiency of goods movement, creating jobs, helping to reduce congestion, and meeting consumer demand, while promoting innovation and growth across various sectors of the economy. Accordingly, TechNet supports policies that encourage the safe and efficient deployment of AVs on public roads in the United States. States should avoid adopting policies that will create, increase, or maintain barriers to the testing, development, and deployment of this technology and the benefits that come with it.

TechNet supports SB 949 as the bill aligns with the 25 other states that have passed authorizing AV language. We support and prioritize harmonization of laws between jurisdictions to avoid a patchwork of policies that may stifle or impede innovation. We believe that this bill promotes policies that lead to a clear pathway for driverless commercial operations. Additionally, this bill is a business-friendly model and technology-neutral. SB 949 will foster continued innovation in the

industry in Marland, avoid picking winners and losers, prioritize public safety, and protect intellectual property.

TechNet views AVs and related technology as job creators, with the AV industry playing a critical role in enhancing state and local economies, economic competitiveness, and opportunity overall. Thank you for your work on this important issue and please don't hesitate to reach out with any questions.

Sincerely,

Margaret Durkin

Margaret Durkin
TechNet Executive Director, Pennsylvania & the Mid-Atlantic

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Testimony from:
Robert Melvin, Northeast Region Director, R Street Institute

Testimony in Support SB 949, "Vehicle Laws – Fully Autonomous Vehicles."

March 5, 2025

Senate Judicial Proceedings Committee

Chairman Smith and members of the committee,

My name is Robert Melvin, and I am the Northeast region director for the R Street Institute. The R Street Institute is a nonprofit, nonpartisan, public-policy research organization engaged in policy analysis and outreach to promote free markets and limited, effective government, including in the areas of technology and innovation policy. This is why we have an interest in Senate Bill 949.

SB 949 creates a regulatory framework for highly autonomous vehicles (AVs) in Maryland and authorizes their operation without a human driver provided that they comply with federal safety standards and state traffic laws. The bill also outlines legal responsibilities of autonomous vehicles, mandates the creation of law enforcement interaction plans, sanctions their use in transportation services, and precludes local jurisdictions from banning or regulating their operation. This critical measure will position Maryland as a leader in the cutting-edge autonomous vehicle industry while helping to address challenges facing its residents.

In Maryland, recent data has shown that fatal crashes have been increasing over the past several years, growing from 493 in 2019 to 573 such incidents in 2023.[1] There are a variety of factors that are causing this issue, but some of the primary offenders are human driving errors, such as drunk and aggressive driving, as well as distracted driving.[2] Traffic congestion is another issue plaguing drivers in the state, with surveys ranking Maryland 50th overall for gridlock.[3] Traffic jams are also costing its drivers significant time and money, with overall amounts ranging between $1,371 to $2,465 depending on where they reside in the state.[4] While there is no one-size-fits-all approach to addressing these challenges, SB 949 could help ameliorate these issues.

SB 949 would help bring regulatory clarity and consistency to autonomous vehicles in MD by establishing a foundation for AV operations. In doing so, it expands the choices available to consumers by permitting AVs on the roadways. Not only does it expand options for consumers, but it could save Maryland drivers money. Research has found that when AVs led human controlled vehicles that it resulted in a 42 percent decrease in fuel usage and eliminated stop-and-go traffic.[5] In addition, it would help make roadways even safer.

Research from Swiss Re, a major reinsurer, reviewed liability claims from collisions for 25.3 million fully autonomous miles driven by AV robo-taxis. It demonstrated that AVs are drastically safer than human drivers, with an 88 percent decline in claims related to property damage and a 92 percent decrease in bodily injury claims.[6] This suggests that AVs are 10.4 times safer than their human counterparts, with the safety rate of AVs doubling every five years.[7] Most often, it turns out that human drivers are the primary culprit in the limited instances of crashes involving AVs.[8]

Moreover, data indicates that AVs had 62 percent fewer police reported crashes, 78 percent fewer injury causing crashes, and 81 percent fewer airbag deployments when compared to an average human driver.[9] Considering that National Highway Traffic and Safety Administration data shows that accidents account for about $23 billion in U.S. medical expenses, a 90 percent decline in collision rates would decrease costs by about $20.7 billion annually.[10] While roadway safety and improve traffic flow are important reasons for authorizing AV deployment in Maryland, there are also economic benefits that one also must consider.

SB 949 will be economically productive for Maryland. One report estimates that the AV market could create as many as 455,000 new jobs over the next 15 years across the United States, with approximately 190 jobs generated for every 1000 AVs on the roads.[11] Considering that the state is ranked as the 3rd best state for AI jobs, and the 6th most innovative state, this proposal could help strengthen those positions and attract additional investment.[12]

While there may be some hesitation from individuals, it is important to point out that this isn't some experimental technology. In fact, it's been extensively deployed in many states, and Maryland already authorizes the testing of this technology on its roadways.[13] If this legislation is advanced, Maryland would join 25 other states that have sanctioned deployment of autonomous vehicles on its highways.[14]

In the end, SB 949 will help augment road safety, alleviate traffic congestion, and promote technological innovation and economic growth. For these reasons, we urge a favorable report of Senate Bill 949.

Thank you,

Robert Melvin
Northeast Region State Government Affairs Director
R Street Institute
rmelvin@rstreet.org

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[1] Maryland Department of Transportation, Motor Vehicle Administration, "Zero Deaths Maryland, Crash Summaries," Last accessed February 24, 2025. "https://zerodeathsmd.gov/resources/crashdata/.

[2] CDC, "Global Road Safety," May 16, 2024. https://www.cdc.gov/transportation-safety/global/index.html.

[3] Michelle Queen, "Study: Maryland Has Worst Traffic Congestion in U.S.," My Montgomery Community Media, January 17, 2023. https://www.mymcmedia.org/study-maryland-has-worst-traffic-congestion-in-u-s/#:~:text=Maryland%20ranked%2037th%20in%20the,fifth%20worst%20state%20for%20motorists.

[4] Alejandro Alvarez, "Highway congestion could be costing Maryland drivers thousands each year," WTOP News, May 2, 2023. https://wtop.com/local/2023/05/highway-congestion-could-be-costing-maryland-drivers-thousands-each-year/.

[5] Alexandre M. Bayen, "Eliminating Traffic Jams with Self-Driving Cars," University of California at Berkeley, March 15, 2021. https://ce.berkeley.edu/news/2537.

[6] Luigi Di Lillo, et al., "Do Autonomous Drivers Outperform Latest-Generation Human-Driven Vehicles? A comparison to Waymo's Auto Liability Insurance Claims at 25 million Miles," Waymo, 2024. https://waymo.com/research/do-autonomous-vehicles-outperform-latest-generation-human-driven-vehicles-25-million-miles/.

[7] Gale Pooley, "Waymo Drivers Are Way Safer (10x) Than Humans," *Human Progress*, Jan. 7, 2025. https://humanprogress.org/waymo-drivers-are-way-safer-10x-than-humans.

[8] Timothy B. Lee, "Human drivers are to blame for most serious Waymo collisions," *Understanding AI*, Sept. 10, 2024. https://www.understandingai.org/p/human-drivers-are-to-blame-for-most.

[9] Waymo, "Waymo Safety Impact: Waymo Driver Compared to Human Benchmarks," Last accessed February 24, 2025. https://waymo.com/safety/impact/.

[10] Kareem Othman, "Exploring the implications of autonomous vehicles: a comprehensive review," Innovative Infrastructure Solutions, March 1, 2022. https://pmc.ncbi.nlm.nih.gov/articles/PMC8885781/.

[11] Chamber of Progress, "Opportunity AV: How Many and What Types of Jobs Will Be Created by Autonomous Vehicles?," October 3, 2024. https://progresschamber.org/wp-content/uploads/2024/03/Opportunity-AV-How-Many-and-What-Type-of-Jobs-Will-Be-Created-by-Autonomous-Vehicles.pdf.

[12] Maryland Business Support, "Data Rankings, Innovation and Industry," Last accessed February 24, 2025. https://business.maryland.gov/ranking/?bj-ranking-topics%5B%5D=innovation-industry.

[13] Ariel Wolf, et al., "State Autonomous Vehicle Laws and Regulations," Venable LLP, December 2024, https://books.venable.com/Autonomous-Vehicles/4/.

[14] Ibid.

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Uploaded by: Franz Schneiderman
Position: UNF

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Testimony to the Senate Judicial Proceedings Committee
SB 949 – Vehicle Laws – Fully Autonomous Vehicles
Position: UNFAVORABLE

The Honorable Will Smith
Judicial Proceedings Committee
2 East, Miller Senate Building
Annapolis, MD 21401
cc: Members, Judicial Proceedings Committee

March 5, 2025

Dear Chairman Smith and Committee Members,

I'm a consumer advocate and Executive Director of Consumer Auto, a nonprofit group that works to secure safety, transparency, and fair treatment for Maryland drivers and consumers.

We oppose **SB 949** because we are concerned that it would put Marylanders at unnecessary risk by, for the first time, explicitly authorizing the widespread private use of autonomous cars and trucks on Maryland highways – at a time when the industry continues to face serious safety questions, public faith in AV technology is limited, federal regulators are yet to establish clear or rigorous safety standards for autonomous vehicles, and Maryland lacks a legal framework of its own to regulate such vehicles.

While AV advocates often claim their vehicles are safer than conventional cars, the data on that issue are murky at best. Data from California in 2022, for instance, showed that the crash rate for AVs was much higher than for more conventional vehicles – with 96.7 out of 1,000 (i.e. almost 10%) of AVs getting in a crash (vs. 7.0/1,000 for all cars) and 26.3 crashes per million miles driven among AVs (vs. 0.7 per million for all cars.)[1] Another study widely reported last year found that AVs appeared to have lower crash rates overall but "also found self-driving cars had a crash rate five times as great as human drivers when operating at dawn and dusk, along with almost double the accident rates of human drivers when making turns."[2] And many analysts have noted how AVs struggle to deal with unusual or sub-optimal road conditions or situations they may not be programmed to handle.[3]

Part of the reason for this is that, for all their high-tech sensors, as Dr. Missy Cummings, a leading AV expert and head of George Mason University's Autonomy and Robotics Center, notes: "the computer vision systems in these cars are extremely brittle. They will fail in ways we simply don't understand."[4] And at this point we have no federal safety standards for AV software or vision systems.

As a Brookings report from July 2024 argued, the data just don't support faith in the superior safety of AVs at this point: "However easy it is to assume that self-driving cars must be safer, it is a mistake… The best conclusion for now seems to be that the safety advantages of self-driving cars are aspirational but have not been proven."[5]

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[1] https://www.statista.com/chart/32985/collisions-crashes-per-motor-vehicle-vehicle-miles-traveled-by-type-of-vehicle/
[2] https://www.newscientist.com/article/2435896-driverless-cars-are-mostly-safer-than-humans-but-worse-at-turns/
[3] https://www.nytimes.com/2023/10/11/opinion/driverless-cars-san-francisco.html
[4] https://www.nytimes.com/2023/10/11/opinion/driverless-cars-san-francisco.html
[5] https://www.brookings.edu/articles/the-evolving-safety-and-policy-challenges-of-self-driving-cars/

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Given such problems, and some deadly, well-publicized crashes caused by AV malfunctions, it's not surprising that public faith in AV technology is limited – and seems to be falling. In 2023 68% of Americans told AAA last year that they were outright afraid of self-driving vehicles (up from 55% in 2022) while just 9% said they trusted the technology. [6]

To be fair, **SB 949** does make an effort to establish some rules of the road for AVs and does stipulate that autonomous vehicles on state roads must be capable of operating "in accordance with Maryland vehicle law" and "in compliance with all applicable federal motor vehicle safety standards." But this offers little reassurance that they will be safe, as Maryland has not developed regulations specific to AV tech and, more troublingly, Congress and the lead federal auto safety agency (NHTSA) have yet to establish such standards.

Indeed, in May 2023, Jennifer Homendy, the chair of the National Transportation Safety Board lamented that, "The federal government isn't doing their job in that area… The NTSB has called on regulators to set performance minimums for these features [AVs], to test vehicles rigorously against those standards and provide the results to consumers. But we're still waiting." [7]

Two years later, we're still waiting. Worse still, a couple weeks ago the Elon Musk-led DOGE group apparently fired half the people working on a special task force NHTSA had established to examine AV safety and about 10% of the agency's workforce. This will almost surely leave NHTSA even less prepared to oversee AV tech effectively. As one of the fired engineers remarked, "If the question is, will this affect the federal government's ability to understand the safety case behind Tesla's vehicles, then yes, it will."[8]

To this point, Maryland has (wisely, I think) moved slowly on this unproven technology. While MDOT has articulated a "Vision for Connected and Automated Vehicles" and the state passed legislation in 2023 that authorizes limited conversions of vehicles into AVs, mostly for off-road commercial and industrial uses, the state has not acted to authorize widespread private use of AVs on public roads.

SB 949 would change that equation dramatically by allowing a person (or a transportation network or a for-hire vehicle firm) to operate "a fully autonomous vehicle on a highway in the state without a human driver" and, in fact, specifically precluding a state agency or local government that may have concerns about their safety from prohibiting their operation. While I know the bill sponsors are looking at amendments that may provide additional safeguards (and I'm happy to discuss those ideas), as written the bill's safety provisions are really rather modest: They require, basically, that the vehicles meet state and federal laws and that the AVs can achieve a "minimal risk condition" and submit a plan for interaction with law enforcement after a crash or failure.

I fear those stipulations leave serious safety concerns unresolved, especially given that (as noted above) no system of federal or state regulations to ensure AV safety yet exists. Safety advocates also note that

[6] https://info.oregon.aaa.com/aaa-fear-of-self-driving-cars-on-the-rise/
[7] https://www.cnn.com/2023/05/06/business/ntsb-automatic-driving-safety/index.html
[88] https://www.washingtonpost.com/business/2025/02/21/musk-doge-tesla-autonomous-vehicles-nhtsa/

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what AV systems may deem a "minimal risk condition" after a system failure may not be a safe situation for other drivers at all.

As drafted, the bill also sets no limits on the size or number of AVs allowed on Maryland roads. It could therefore enable an unlimited number of large AV trucks, as well as smaller self-driving cars, to be on our roads – all while specifically prohibiting state agencies or local jurisdictions or from setting up even local prohibitions on them. The safety concerns this might raise in sensitive or risky areas like school zones or areas with a high density of pedestrian traffic are serious.

Until or unless we have clear data, reviewed carefully by experts outside the industry itself, that shows AV vehicles (including trucks) are safe and a regulatory framework in place to help ensure they will operate safely on public roads, moving to allow their widespread use (in unlimited numbers, in fact) -- as **SB 949** would do -- would, I fear, expose Maryland drivers to serious, ill-understood, and unnecessary risks.

We oppose SB 949 and ask you to give it an UNFAVORABLE report.

Sincerely,

Franz Schneiderman
Consumer Auto