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Testimony from:
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In SUPPORT of Senate Bill 909, "Vehicle Laws – Fully Autonomous Vehicles."

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Senate Judicial Proceedings Committee

Chairman Smith and members of the committee,

My name is Robert Melvin, and I am the Northeast region director at the R Street Institute. The R Street Institute is a nonprofit, nonpartisan public policy research organization. We engage in policy analysis and outreach promoting free markets and limited, effective government in a variety of policy areas, including technology and innovation policy. It is for this reason we want to share our support for Senate Bill 909.

SB 909 establishes a comprehensive policy framework to govern the deployment of highly autonomous vehicles (AVs) in Maryland, permitting their operation without a human driver so long as they meet applicable federal safety standards and comply with state traffic laws.[1] In addition to authorizing deployment, the legislation sets minimum insurance thresholds, defines accountability when automated driving systems are engaged, and requires the submission of first responder engagement protocols to ensure public safety preparedness.

To prevent regulatory fragmentation, SB 909 precludes a patchwork of conflicting local rules and ensures consistent standards across Maryland. It authorizes autonomous vehicles for transportation networks and other for-hire services, broadening consumer access and enabling full market participation. The bill also updates outdated equipment statutes by exempting vehicles designed exclusively for autonomous operation from requirements written for human drivers, allowing vehicle design to evolve without being tethered to obsolete assumptions.

Critically, risk is internalized through the private insurance market through this measure. By establishing minimum coverage requirements when automated driving systems are engaged, the bill allows insurers to serve as de facto safety regulators through pricing. Typically, insurance carriers will require performance data, evaluate system safety, and adjust premiums based on crash outcomes. As a result, systems that perform poorly will face higher costs, while safer technologies will benefit from lower premiums. This market-based accountability serves as an ongoing incentivization mechanism spurring safety improvement without relying on prescriptive government design mandates built for human-driven vehicles. In effect, it aligns innovation with responsibility and strengthens overall roadway safety.

Recent trends in Maryland indicate a troubling rise in roadway fatalities, with the number of fatal crashes climbing from 535 in 2019 to 621 in 2023.[2] While multiple factors contribute to this increase, human error remains a leading cause—including impaired driving, reckless or aggressive behavior, and distracted driving.[3] Maryland ranks 44th nationally for traffic congestion—meaning it is among the more congested states, with only six ranking worse—and the financial toll of gridlock is substantial, costing drivers an estimated $638 to $2,183 annually depending on their location..[4] Although no single policy can resolve these complex transportation challenges, SB 909 represents a meaningful step toward improving safety and mobility in Maryland.

SB 909 has the potential to reduce costs for Maryland drivers. Research indicates that when autonomous vehicles operate at the front of traffic flow, they can smooth driving patterns, reduce stop-and-go conditions, and lower overall fuel consumption by as much as 42 percent.[5] By improving traffic efficiency, AV integration could translate into meaningful savings at the pump while also easing congestion on Maryland's roadways, and considering the insurance market factors it has the potential to drive down fatalities.

A recent analysis conducted by Swiss Re, one of the world's leading reinsurers, examined liability claims associated with 25.3 million miles driven by fully autonomous robo-taxis. The findings indicate that autonomous vehicles significantly outperform human drivers in safety outcomes, showing an 88 percent reduction in property damage claims and a 92 percent decline in bodily injury claims.[6] Overall, the data suggests AVs are approximately 10.4 times safer than conventional drivers, with their safety performance improving at a rate that effectively doubles every five years.[7] In the relatively rare cases where collisions do occur, the evidence frequently points to human drivers as the primary cause rather than the autonomous system.[8]

Additional evidence further underscores the safety advantages of autonomous vehicles. Compared to the average human driver, AVs were associated with 62 percent fewer police-reported crashes, 78 percent fewer injury-related collisions, and 81 percent fewer airbag deployments.[9] These reductions have significant economic implications. According to data from the National Highway Traffic Safety Administration, motor vehicle crashes generate roughly $23 billion annually in medical costs across the United States.[10] A 90 percent reduction in collision rates could translate into approximately $20.7 billion in annual savings.[11] Although improving roadway safety and easing congestion are compelling reasons to permit AV deployment in Maryland, the broader economic benefits also warrant serious consideration.

Considering that AV deployment is capital-intensive, companies will need to invest in fleet infrastructure, maintenance hubs, remote operations centers, and other areas. This legislation will help drive private investment in Maryland. One analysis projects that the autonomous vehicle sector could generate up to 455,000 new jobs nationwide over the next 15 years, with roughly 190 positions created for every 1,000 AVs deployed on the road.[12] For a state currently ranked as the sixth most innovative in the country, embracing this emerging industry presents a meaningful opportunity to reinforce that standing.[13] By establishing a supportive framework for deployment, this proposal could help draw additional private investment and further solidify Maryland's position as a hub for technological advancement.

Although some skepticism remains, autonomous vehicle technology is far from untested or speculative. It has already been deployed at scale in numerous states, and Maryland currently permits on-road testing of these systems.[14] Advancing this legislation would simply move the state from limited testing to

full authorization, aligning Maryland with the 26 other states that have already approved autonomous vehicle deployment on their highways.[15]

Ultimately, SB 909 advances multiple policy objectives at once—enhancing roadway safety, reducing congestion pressures, and supporting innovation-driven economic expansion. For these reasons, we respectfully request a favorable report on Senate Bill 909.

Thank you,

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