## ANNUAL REPORT















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## ABOUT PAVE

PAVE is a diverse coalition that unites industry partners, nonprofit groups, academics, and public sector entities who believe in the potential of automated vehicle technologies -- and understand the importance of education in realizing that potential.

This annual report outlines PAVE's activities, milestones and progress during 2024. We are proud of how far we've come, and we're looking forward to new opportunities in the year ahead.

## FROM THE EXECUTIVE DIRECTO

2024 was a year of continued growth for PAVE, with new initiatives to expand public education, to support industry collaboration, and to grow partnerships with the public sector. From hosting the first Autonomous Trucking Weekend at the Texas State Fair to convening two AV Safety InfoShare workshops, we led initiatives to help prepare the public for an autonomous future.

The autonomous vehicle industry made many headlines in 2024, with new developments across the ecosystem. We saw deployments expand across the map; companies growing, pivoting, and closing their doors; state and federal governments defining their regulatory approaches; and the industry weaving existing technologies with AI. Waymo surpassed 25 million driverless miles traveled, and autonomous trucks announced plans for driverless routes in the near future.

These changes necessitated corresponding public education, and PAVE delivered, with public events, new initiatives, industry workshops, online engagements, and public sector gatherings. We continued to build on the success of our ongoing programs, completing our 123rd PAVE Virtual Panel, surpassing 10,000 downloads of the PAVEcast, and attending over 20 AV-related events.

In a PAVE Virtual Panel in February, Marc Williams, the executive director of the Texas Department of Transportation (DOT), announced that Texas roads are open to autonomous freight. To help prepare Texans to share the roads with AV trucks, PAVE teamed with the Texas DOT and PAVE members Aurora, Plus, and TORC for a first-ever Autonomous Trucking Weekend at the Texas State Fair. Visitors were able to see three autonomous cabs first-hand and learn about the technology, asking questions about safety, the workforce, the supply chain, and more.

The swift growth of autonomous trucking has also elevated conversations about the workforce transition. To foster conversation and share workforce-related resources, PAVE teamed up with about 20 companies and organizations to launch the US AV Jobs Coalition. The coalition's website, <u>USAVJobs.com</u>, is a centralized platform with research, training programs, educational initiatives, workforce data, and an AV jobs database. We debuted the coalition in a workshop at the TRB ARTS conference in San Diego in July. Then, in October, we continued the conversation with a listening session with Teamsters' Senior Legislative Representative and Policy Advisor Cole Scandaglia. Co-hosted by PAVE, CTA, and K&L Gates, the listening session provided an opportunity for industry members to hear from this key stakeholder group, seeking opportunities to collaborate on the common priority of job growth in this burgeoning industry.

PAVE members agree that the North Star for vehicle automation is increased safety; we believe in the potential of AVs to help eliminate deaths on our roads and highways, and we believe that industry collaboration can accelerate safety progress. To this end, PAVE worked with MITRE to convene two AV Safety InfoShare workshops in 2024, with keynotes from NTSB Chair Jennifer Homendy and former NHTSA Administrator Mark Rosekind. Modeled after the aviation industry's longtime InfoShare sessions, the workshops allowed safety leaders to discuss challenges, best practices, and potential areas of collaboration in a confidential environment. We look forward to growing this effort in the years ahead.

To expand AV education far and wide, our 2024 travels included the Bay Area, San Diego, Detroit, Dallas, Austin, Phoenix, and Niagara Falls, where we ran demonstration events for the public sector, educational exhibits for the public, and collaborative workshops. Additionally, PAVE's international footprint grew with the launch of PAVE UK in February, an initiative supported by the UK government and the University of Warwick.

Another challenge in AV public education is helping the public to differentiate between autonomous vehicles, which manage the driving task without human intervention, and vehicles with Advanced Driver Assistance Systems (ADAS), which include many sophisticated automated technologies but require an attentive human operator behind the wheel. To help drivers understand this critical distinction, PAVE and the Alliance for Automotive Innovation launched a PSA titled "Who's Driving?" to highlight the role of the driver in ADAS-equipped cars. We debuted the PSA at the GHSA annual meeting in September, receiving positive feedback from industry companies, safety advocates, and public sector agencies alike.

The PSA was one pillar in PAVE's efforts to educate young drivers about automated technologies; we believe AVs offer much promise for the transportation future of young Americans. To further inspire young adults' exploration of AVs, we ran the second annual PAVE Essay Contest and Scholarship Program, which encourages high school students to write about what autonomous vehicles could mean for their communities. We received more than 200 entries - doubling entries from the previous year - and awarded scholarship funding to three students, thanks to a generous donation from PAVE member STEER. The winning students visited STEER's headquarters and experienced AV technology firsthand.

We're proud of our 2024 accomplishments but recognize that our success would not be possible without our incredible members. Their innovation, insight, and enthusiasm for public education propel our mission forward. We remain committed to our goals and believe now more than ever that public acceptance is imperative to reach the transformative potential of AV technology. So thank you, PAVE members, for your steadfast support. We can't wait to see what 2025 brings!

-Tara

Tara Andringa PAVE Executive Director

### OUR MEMBERS



## **BIG PICTURE**

PAVE launched new initiatives in 2024 while also building on its successful existing programs. We participated in 22 industry events, including demonstration rides with May Mobility at the ITS America Conference in Phoenix, and led two breakout sessions at the TRB ARTS Conference. More than 200 students entered PAVE's second annual essay contest, we hosted a first-of-its-kind Autonomous Trucking Weekend at the Texas State Fair, and we co-led two successful AV InfoShare workshops. PAVE's popular virtual panel series continued to attract large audiences, and we recorded more than 20 episodes of the PAVECast. We also welcomed new members; from our launch in 2019, we've grown over 300%.



77 PAVE **MEMBERS** 



34% ARE NONPROFITS

Re 22% ARE STARTUPS

INDUSTRY EVENTS

13

VIRTUAL PANELS

## ENGAGEMENT SNAPSHOT

# 50% **YOUTUBE** WATCH TIME

INCREASE IN SOCIAL ENGAGEMENT





IO.7K PAVECAST DOWNLOADS

08 WWW.PAVECAMPAIGN.ORG

## **IMPACT** AND REACH

#### VIRTUAL PANELS

PAVE continued to build on its virtual panel series in 2024, reaching 123 panels completed since our inception. We had nearly 2,000 registrations for PAVE panels in 2024, and surpassed 42,000 panel views on YouTube.



#### WEBSITE & SOCIAL MEDIA

In 2024, PAVE's social media audience surpassed 9,100 followers. We garnered over 110,000 social media impressions and over 7,000 engagements. Our website continued to host thousands of visitors worldwide.

#### PAVECAST

The PAVEcast also grew in its second year, with more than 10,700 downloads. Top episodes included "From Bedside to Fedside: Insights From an Emergency Physician Turned NHTSA Administrator," and "The Future of Freight: A Look Into Torc Robotics' Texas Road Tour."

#### PAVE NEWSLETTER

PAVE's newsletter has more than 3,000 subscribers and continues to grow every month. In 2024, we expanded our newsletter dissemination from biannually to quarterly.



## **INITIATIVES** AND ACTIVITIES

#### VIRTUAL PANELS

PAVE's virtual panel series continued with great success in 2024. As of the end of the year, PAVE reached 123 panels, with more than 21,000 registrations and over 42,000 views of the recordings on YouTube.

#### **Topics included:**

- How Amazon is Redefining Transportation
- US and UK Perspectives on AVs & Insurance
- AV Operations in Texas (2-Part Series)
- AVs & Accessibility
- How Electrifying AVs Can Help the Planet
- Insights from Michigan's I-94 CAV Corridor



- Using Big Data to Predict AV Performance
- Oxa and Beep's Commercial Deployments
- Legal Frameworks and Safety Standards
- Workforce Development
- Thermal Cameras Improving ADAS
- Leveraging the InfoShare Model for AVs



#### **PAVECASTS**

The PAVEcast surpassed over 10,000 downloads in its second year. We interviewed PAVE members to highlight their innovative work, and spoke with other leading voices on all aspects of the AV industry.

#### Featured episodes included:

United States of AV Regulation: Insights from Bryant Walker Smith AVs in a New Administration: An Interview with Finch Fulton Live from the State Fair: TxDOT Leaders on Autonomous Trucking AVs & Accessibility: The Road to Inclusive Autonomous Mobility

#### PAVE UK LAUNCH

This year marked a significant milestone for the global PAVE effort with the launch of PAVE UK in February. The UK government's Centre for Connected and Autonomous Vehicles (CCAV) provided funding to establish PAVE UK and selected the University of Warwick to manage the project.

PAVE's Executive Director, Tara Andringa, spoke at the launch, which took place at the Royal Automobile Club in London. This partnership is a great step forward in our international AV education journey.



"While countries and regions have adopted different regulatory approaches to automated vehicles, the challenge of AV education is global in nature. Given the tremendous leadership from the UK both in its approach to AV policy and to civic engagement on the technology, we are incredibly excited for the influential role PAVE UK will play in leading public education."

- Tara Andringa, Executive Director

#### ITS AMERICA DEMOS WITH MAY MOBILITY

In April 2024, PAVE partnered with May Mobility to provide AV demo rides to over 100 attendees of the ITS America Conference in Phoenix, AZ.

The event gave us an opportunity to engage with both public and private sector leaders from across the country about how AV technology could improve local transportation ecosystems.







#### **INAUGURAL AV SAFETY INFOSHARE EVENTS**

Based on the success of the InfoShare model in the aviation industry, PAVE teamed with MITRE to convene the first-ever AV Safety Infoshare session in spring 2024, followed by a second session in December.

At both events, Safety Management Systems (SMS) experts from leading AV companies discussed challenges and industry-wide practices that could improve road safety. Participating companies included Aurora, Beep, Cruise, Nuro, Forterra, STEER, Torc, Uber, VW, Waymo, Zoox, and more.



## SECOND ANNUAL PAVE ESSAY CONTEST & SCHOLARSHIP PROGRAM

In the second annual PAVE Essay Contest and Scholarship Program, we received more than 200 submissions - doubling submissions from the inaugural year. High school students wrote essays that described what AV technology could mean for the future of transportation in their respective communities.

The contest was open to high school students in the greater Washington D.C. area. Generous PAVE member sponsors – STEER, Maryland Department of Transportation, and District Department of Transportation – provided outreach support and scholarship funding.

To celebrate the winners, STEER hosted an award ceremony where students saw an AV in action, toured the facility, and learned about careers in the AV field.





#### AUTO INNOVATORS TECH SHOWCASE

In June, PAVE exhibited at the Alliance for Automotive Innovation's Auto Tech Showcase in Washington D.C., and PAVE Executive Director Tara Andringa spoke on a panel about the future of auto safety.

We were joined by PAVE member Teledyne FLIR and others from the industry and public sector.





#### "WHO'S DRIVING?" PSA

In September, PAVE and the Alliance for Automotive Innovation released a PSA titled "Who's Driving?" The video aims to educate the public on a critical safety message: an attentive driver is required in all vehicles available today, even when using sophisticated ADAS technology.

Visit <u>whoisdriving.org</u> to watch the PSA and download resources to share.

#### US AV JOBS COALITION

At the TRB ARTS conference in July, PAVE launched the U.S. AV Jobs Coalition, an online platform that provides research-backed information on the workforce and greater economic impacts of AVs.

The coalition's website, <u>usavjobs.com</u>, is a hub for resources, statistics, and initiatives that illuminate the workforce impacts of AVs on the U.S. economy. The coalition has a robust schedule of workforce initiatives planned in 2025.



#### AUTONOMOUS TRUCKING WEEKEND AT THE TEXAS STATE FAIR

In early October, PAVE and members Aurora, Plus, and Torc exhibited at the Texas State Fair for a first-of-its-kind Autonomous Trucking Weekend. The three companies brought autonomous cabs for fair visitors to explore.

During the event, we talked with attendees about what autonomous trucks could mean for Texas and provided an opportunity for them to see and learn about the vehicles. The event was intended to help prepare Texans for driverless deployments expected in 2025.









#### TEAMSTERS LISTENING SESSION

In October, CTA, PAVE and K&L Gates held a live listening session with Cole Scandaglia from the Teamsters to discuss priorities for AV policy. CTA hosted the session, which was moderated by Sam Loesche of Waabi.

The session enabled industry participants to engage in a productive conversation with this significant stakeholder group.



#### 2024 ANNUAL MEETING

PAVE member K&L Gates hosted the 2024 PAVE Annual Meeting at their Washington, D.C. office. NHTSA Deputy Administrator Sophie Shulman delivered the keynote address. We discussed PAVE activities and future priorities, held our annual member survey, and concluded the day with a rooftop reception.

It was a great opportunity to connect with the PAVE community, hear input from members, and discuss plans for the future.



#### **EVENTS & SPEAKING ENGAGEMENTS**

PAVE participated in many events throughout the year, including providing speakers and organizing panels to discuss AVs and public education. 2024 events included:

PAVE UK Launch (PAVE Presentation) SXSW (PAVE Panelist) Reuters Panel (PAVE Moderator) ITS America Demos with May Mobility First AV Safety InfoShare Maryland Highway Safety Summit (PAVE Panelist) Redefining Mobility Summit (PAVE Panelist) AutoSens (PAVE Moderator) Auto Tech Showcase (PAVE Panelist) Second Annual PAVE Essay Contest TRB ARTS (Pave Moderators) CAR MBS (PAVE Panelist) **GHSA Annual Meeting (PAVE Panelist)** 

Women in Mobility Symposium (PAVE Co-Chair and Moderator)

**MOVE America (PAVE Panelist)** 

AV Weekend at the Texas State Fair

**PAVE Annual Meeting & Reception** 

Listening Session with CTA and Teamsters (PAVE Organizer)

Accelerate Women in Trucking Conference (PAVE Moderator)

Second AV Safety InfoShare

**13 PAVE Virtual Panels** 

23 PAVEcast Episodes

## GOVERNANCE

#### **BOARD OF DIRECTORS**

PAVE's Board of Directors includes a diverse group of leaders from all areas of the industry. They represent automotive and tech companies, advocacy groups, insurers, and consumer organizations.

#### 2024 PAVE BOARD MEMBERS:

ΔΔΔ Alliance for Automotive Innovation Amazon Audi of America **Aurora Consumer Technology Association** Cruise Gatik **K&L Gates Mobileye** NADA National Federation of the Blind Plus **Quantiv Risk Securing America's Future Energy** STEER **United Spinal Association** 

Waymo

Zoox

PAVE Executive Committee at TRB ARTS

"As vehicle automation continues to expand, PAVE's mission to educate the public on the potential of these transformative technologies has become more important than ever.

"PAVE members understand that public trust is paramount to achieving the transformative possibilities of AVs, and our work would not be possible without their steadfast support of our educational mission."

#### BRAD STERTZ PAVE CHAIRMAN

Audi / Volkswagen Group of America

Director, External Affairs





#### COMMITTEES AND WORKING GROUPS

PAVE's member-led committees play an important role in driving the messaging and direction of our organization. The committees include the Communications & Events Committee and the Public Sector Engagement Committee.

PAVE also convenes two working groups, one focused on trucking and freight and the other focused on insurance.

#### **ADVISORY COUNCILS**

PAVE maintains two advisory councils, an Academic Advisory Council and a Public Sector Advisory Council. These councils provide insight from leaders who believe in the coalition's mission to educate the public about AVs and their potential societal effects. For the first time this year, the Public Sector Advisory Council began holding a series of city-focused meetings to engage a more diverse group of public sector leaders.

 $28_{\rm ENTITIES}^{\rm PUBLIC\,SECTOR}$ 

30 COLLEGES AND UNIVERSITIES

REPRESENTED ON OUR ADVISORY COUNCILS

#### **COUNCIL LEADERSHIP**



#### Dr. Jeffrey Michael

Johns Hopkins University Academic Advisory Council Chair



#### Tara Olds MnDOT

Public Sector Advisory Council Chair

pavecampaign.org