



AVs and the Workforce: Research, Programs, and Resources

North Dakota Autonomous Trucking Conference

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WHAT'S PAVE?

And the case for public education

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About PAVE

- PAVE is a 501(c)(3) nonprofit coalition that launched in 2019.
- Our work seeks to educate the public on automated vehicles and their potential.
- Members include OEMs, start-ups, consumer advocates, and nonprofits.
- We also have advisory councils of academic and public sector partners.



Key Beliefs

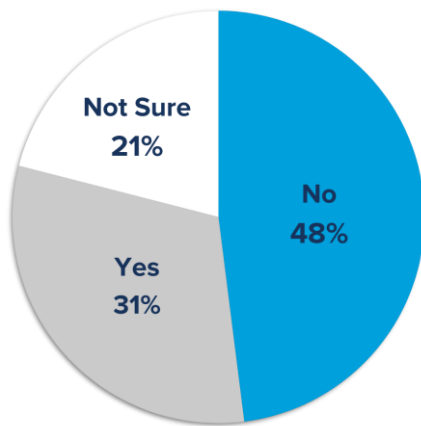
Belief #1

AVs have the potential to **significantly improve** our transportation ecosystem

Belief #2

Public acceptance is essential for AVs to achieve their full potential

Public Attitudes on AVs



A public opinion poll commissioned by PAVE in the U.S. found that **48%** of respondents said they would never get in a robotaxi.

The Power of Knowledge

Our public opinion poll found that **more knowledge & exposure to technology** are two factors that change attitudes.

60%

Say they would trust AVs more if they understood the technology.

58%

Say they would have greater trust in AVs if they could take a ride.



The Case for Public Education

- The "Click it or "Ticket" campaign united the public and private sectors in a joint highway safety campaign.
- Launched in North Carolina in 1993 and evolved into a national campaign through NHTSA in 2003.
- The campaign drove seatbelt laws and boosted usage to 90%.

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How We Educate



Media & Messaging

Educational Webinars
"PAVEcast" Podcast
Digital Media Campaigns
Public Service
Announcements



Events & Demonstrations

Ride & Drive Demos
Static Vehicle Demos
Public Event Exhibits
K-12 Events



Public Sector Engagement

Educational Workshops
Lunch Briefings
Town Halls
Listening Sessions

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Media & Messaging: Clearing the Confusion

- PAVE partnered with 5 safety organizations to standardize naming conventions for ADAS technologies.
- It was not intended to replace automakers' proprietary systems, but to help consumers assess and understand vehicle capabilities.

CLEARING THE CONFUSION:
Common Naming for
Advanced Driver Assistance
Systems



Events & Demonstrations: Texas State Fair

- PAVE, TxDOT, and members hosted an “AV Trucking Weekend” at the Texas State Fair in October 2024.
- The exhibit included 3 autonomous trucks, hands-on exhibits, and educational programming.
- It allowed us to converse with thousands of Texans on AVs and autonomous trucks.



Public Sector Engagement: LA CAV Innovation Day

- In April 2025, we partnered with Stantec to host a CAV Innovation Day at LaDOTD.
- The event included demo vehicles, panels and presentations, and research posters.
- Feedback was positive, and attendees were interested in more experiential elements at future events.

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Key Takeaways

- Automation technologies can significantly increase road safety.
- **Exposure and education** can build trust and acceptance in new technologies.
- Education is always a **two-way conversation**
- **Partnerships** between the public and private sector are key to success.



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AVs & the Workforce

Research, Programs, and Resources

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Current State of the Trucking Workforce

- **Millions of U.S. jobs** are connected to trucking and freight activity.
- **Demand** for long-haul drivers is high.
- **Supply chain** needs are ever-increasing.
- An **aging workforce** and **driver shortages** strain capacity.

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What is the Middle Mile & Why Does it Matter?

- **Middle-mile** = freight transport between distribution/ fulfillment centers, hubs, and retail depots.
- Routes are often **fixed and repeatable**; speeds and road types are predictable.
- These characteristics make them a good environment for **automation**.



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How is Autonomy Changing the Workforce?

- **Reshaping local driver roles:** more short-haul, higher-paid routes (e.g., first/last mile) and hub-based driving.
- **Additional responsibilities:** automation shifts some tasks from driving to supervision, fleet operations, and remote monitoring.
- **Specialized roles:** autonomy technicians, sensor calibration techs, and data analysts.

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New Job Opportunities

- **Technical roles:** Autonomy engineers; sensor technicians; vehicle calibration technicians.
- **Operations & logistics:** Remote operations specialists and monitors; fleet planners.
- **Support & growth roles:** Training instructors; upskilling program managers.



Training and Transition Pathways



Short-term: Certification for AV inspection and pre-trip checks - Upskilling mechanics on electric drivetrains and sensor systems.



Medium-term: Remote operations training; Dispatch and planning; new routing tools.



Long-term: Degree/certificate programs for autonomy engineering and AV fleet management.

Existing Programs



Bronx Community College + Waymo:
Autonomous Vehicle Training Curriculum



Gallatin College + Aurora: Associate of Applied Science in Photonics and Laser Technology



De Anza College + Nuro: Autonomous and Electric Vehicle Technician Pathway

What Can the Public Sector Do?

- **Invite Stakeholder Input:** Establish a workforce committee composed of public and private sector stakeholders.
- **Conduct Research:** Analyze regional and state-specific workforce needs and opportunities.
- **Build Programs:** Create curriculum and/or enhance existing workforce and training programs.

How Do We Engage the Public?

- Position AV industry as creating **higher-skilled**, often **better-paid** local jobs.
- Emphasize **quality of life** improvements.
- Foster a **two-way dialogue** with opportunities for learning and questions.
- Lead with **fact-based** research.



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The US AV Jobs Coalition

- Started in 2024 by PAVE + Members.
- Provides research-backed information for the public and policymakers on the economic impacts of AV advancements.
- Learn more and find resources on the website: <https://usavjobs.com/>



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Key Coalition Beliefs



**America is the
birthplace of AV
technology**



**The current driver
shortage is slowing our
economy**



**AVs are already
creating good jobs for
Americans**



**AVs will introduce
new jobs for diverse
skill sets**



**AVs will be deployed
over time, not
overnight**

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Thank You!

- Learn more about PAVE:
pavecampaigh.org
- Learn more about the US AV Jobs Coalition:
usavjobs.com
- Get in touch:
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