



PARTNERS FOR AUTOMATED VEHICLE EDUCATION

2021
ANNUAL REPORT



WWW.PAVECAMPAIGN.ORG

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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 2021. We are proud of how far we've come, and we're looking forward to new opportunities in the year ahead.



From the Executive Director

From the Executive Director

This was, in so many ways, another unprecedented year. The second year of a pandemic, and the third of PAVE's existence, challenged our organization in new ways – but it also shone a light on the challenges of our transportation system and issues we need to think through to create a better system for our future. So, 2021 demonstrated that the need to accomplish our mission is greater than ever.

Our Members

That mission: help create a transportation system that improves safety, that expands mobility options, that is environmentally sustainable, and that is more equitable. We seek to do that through education, information, and outreach; we do it through contact. But for a second year, person-to-person events were difficult, if not impossible.

Big Picture

So, again in 2021, we sought new ways to keep the conversation about our transportation future going.

Engagement Snapshot

We continued our weekly panel discussions that cover broad topics across the automated vehicle ecosystem, which have had tens of thousands of viewings. We also added to the conversation with new forms of outreach. We partnered with the DriveOhio to run an educational two-day workshop to help communities prepare for an automated vehicle future. We began productive new partnerships with academia, the public sector, and other organizations. We teamed with J.D. Power and M.I.T.'s Advanced Vehicle Technology Consortium to conduct a survey of public views of AVs, and we ran a successful webinar with the Federal Motor Carrier Safety Administration's Tech-Celerate Now team about the growing world of AV technology in the freight and trucking space. And we joined dozens of events and conferences to help raise public understanding of AVs and their potential.

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One of the most gratifying aspects of our journey is the incredible members and partners who join us in this public education challenge. We were excited to welcome over 20 new members in 2021; we have now more than quadrupled in size since our 2019 launch. The growth and diversity of our membership, and the interest of so many academic institutions, government agencies and communities across the country, tells us that there is a real hunger for what PAVE can provide – an honest, fact-based conversation about how AVs can contribute to a better transportation future.

And as we look to the New Year, we look to new opportunities to broaden the conversation. In 2022, we will officially launch PAVE Canada – thanks to a generous grant from Transport Canada – and PAVE Europe.

The challenges PAVE seeks to address know no borders; with these new chapters, the conversation becomes international.

Whether you represent a founding member or one of our newest additions; a nonprofit advocacy group or academia; an industrial giant or a tech startup; an organization global in scope or one focused on the streets outside your window; your association with PAVE signals two fundamental shared beliefs: belief in the potential for a brighter future through AV technology, and a belief that we will fall short of that potential without investing in public education.

We are so grateful that the constituency for these shared beliefs continues to grow. I and the entire PAVE team are grateful for your support of our mission, and more importantly, for your efforts to build a safer, more mobile, more sustainable, and more equitable future.

Tara Andringa
PAVE Executive Director



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Big Picture

2021 was a year of continued growth for PAVE. The coalition expanded its outreach efforts, including building on its successful weekly virtual panel series, holding its first public sector workshop, and growing its social media presence. PAVE presented at conferences and events worldwide. The coalition gained over 20 new members from across the AV ecosystem, and it continued to build its advisory councils. PAVE won a grant from Transport Canada to create a chapter there, and the coalition is also set to launch PAVE Europe in 2022.

84

PAVE members

442%

growth in membership since launch

25%

of PAVE members are nonprofits

21

new members in 2021

35

PAVE members are start-ups

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Engagement Snapshot

54%

growth in social media audience in 2021

92%

LinkedIn audience growth in 2021

15.2K

YouTube views in 2021

30K+

2021 social media engagements

58%

Increase in YouTube subscribers

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➤ Virtual Panel Audience

PAVE hosted 40 virtual panels in 2021 – bringing the total to 69 panels since the series began in 2020.

- More than 8,000 registrations for PAVE panels in 2021.
- More than 10,000 views of PAVE’s panels on YouTube.
- Viewers came from industry, nonprofits, academia, the public sector, the media, and the general public.

40

PAVE virtual panels held in 2021

104

panelists participated in the discussions

10K

views of PAVE’s panel recordings on YouTube in 2021

➤ Website and social media

In 2021, PAVE’s social media audience grew over 74%. PAVE’s presence has grown on all platforms, including Twitter, LinkedIn, Facebook, Instagram and YouTube. PAVE’s website saw a 23.4% increase in visitors and received 10.3% more page views. The robust PAVE resource library also expanded to 847 educational resources.

➤ PAVE Newsletter

PAVE’s newsletter has over 2,700 subscribers and saw a 43% growth rate in subscriptions in 2021.

➤ Media Engagement

In 2021, PAVE’s work was mentioned in news stories worldwide, including in publications such as Forbes, Roll Call, the Washington Post, Automotive News, TechCrunch, Consumer Reports, Yahoo Finance, and many others.

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➤ Weekly Panels

In May 2020, when the pandemic necessitated pausing in-person events, PAVE began hosting weekly virtual panels to encourage thoughtful conversation about AVs. These conversations continued throughout 2021; since the series began, we've received more than 13,000 panel registrations and more than 20,000 views of the recordings on YouTube.

PAVE has hosted 69 panels since the series began. The panels cover broad topics across the AV ecosystem and share diverse voices, addressing themes such as how AV technology works, how communities can prepare for the technology, how AVs are tested, and how the technology may affect society.



In 2021, 104 panelists participated in PAVE's weekly conversations, representing industry, academia, nonprofits, and public sector entities.

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➤ Public survey with J.D.Power and M.I.T

PAVE teamed with J.D. Power and M.I.T.'s Advanced Vehicle Technology Consortium in a nationwide survey of public attitudes toward AVs, titled the J.D. Power 2021 Mobility Confidence Index.

The survey sought to determine the accuracy of the public's knowledge of AV technology, their comfort level with the concept of automated vehicles, and the roadblocks to consumer acceptance.

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The survey found

19%

of respondents believe incorrectly that AVs are currently available for purchase or lease.



Some key findings of the survey:

- Overall, excitement about AVs is positively trending.
- Education is needed: Two-thirds of respondents reported knowing “just some” or “nothing at all” about fully automated, self-driving vehicles.
- Respondents who report having a great deal of knowledge about AVs also report greater comfort with the idea of riding in such a vehicle compared to those who state they know nothing at all (76% vs. 20%), and they report a greater likelihood of purchasing such a vehicle (79% vs. 20%).
- Consumers are slightly more comfortable with goods being transported in self-driving vehicles compared to themselves riding in one.

The survey included the views of 4,000 U.S. vehicle owners, age 18 and older.

➤ Public Sector Workshop with DriveOhio

A key aspect of PAVE's educational mission is to equip communities with the facts and information they need to help prepare them for a future with autonomous vehicles.



In May, PAVE teamed with DriveOhio and Ohio's Transportation Research Center to host a two-day workshop for public sector officials in Ohio, which included speakers from across industry, academia, government, and nonprofit organizations.

The workshop's educational sessions explored many facets of AV technology and its societal effects, including safety and regulation, the movement of goods, infrastructure, expanding mobility options for people with disabilities, workforce development, and AV Tech 101.

➤ Inclusive Design Challenge Video Series

The U.S. Department of Transportation's Inclusive Design Challenge encourages researchers and innovators to compete for \$5 million in prizes for designing AV systems and features that remove access barriers for people with physical, sensory, and cognitive disabilities.



After partnering with DOT to highlight the challenge, the PAVE team was so inspired by the innovations that we followed up with each of the 10 semi finalist teams to produce video interviews with the teams describing their winning proposals and how their innovations would make AVs more accessible.

➤ Speakers and Panels

PAVE has participated in many events worldwide, including providing speakers and panels. PAVE's 2021 events included:

AAA Ohio "Technology Takes the Wheel"	Lexington, KY: Mornings with Planning: Automated Vehicles
ACT Expo	Minnesota Governor's Council on CAV
ATSSA presentation	NTSB roundtable: Safe Road Users
AUVSI webinar	Pennsylvania AV Summit
CES	PIARC conference
Disruptive Women Powering Our Autonomous Future	SAE Detroit panels
Florida AV Speaker Series	Toll Roads of California Road Meeting
Electrification 2021: Frontiers of e-Mobility	Transportation Research Board Annual Meeting
IAA Munich	Velodyne World Safety Summit
Indy Autonomous Challenge	Vision Zero Network seminars

➤ Targeted work groups

PAVE launched a freight & trucking working group and an insurance working group to focus on targeted topics within the AV space. These groups discuss educational messages and activities that can help to raise the level of public awareness about these areas.



In the fall of 2021, seven companies from PAVE's freight & trucking working group created a video entitled "Driver Stories" to highlight the use of AV technology that is transforming freight and trucking – through the voice of the drivers who are working to make the technology a reality.

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Board of Directors

PAVE's diverse Board of Directors includes leaders across AV stakeholders, representing the automotive and tech industries, advocacy groups, insurers, and consumer organizations.

“Through an active online presence, public events, policymaker workshops and other educational activities, PAVE is working to provide the learning foundation to help everyone participate in the conversation about the future of transportation, and to do so without unjustified hype or misperceptions.”

Brad Stertz
PAVE Chairman
Director of Government
Relations, Audi of America



Organizations represented on PAVE's 2021 Board:

AAA
Audi of America
Aurora
CARMERA
Consumer Technology Association
Cruise
Ford
INRIX
Intel/Mobileye
Liberty Mutual
Luminar
Motional
NADA
National Council on Aging
National Federation of the Blind
National Safety Council
Perceptive Automata
Plus
Securing America's Future Energy (SAFE)
STEER
Toyota
United Spinal
Velodyne
Waymo
Zoox

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PAVE Committees

PAVE's committees are all member-led, and the committees' work drives the messaging and direction of the organization. The committees include the Communications Committee, the Events Committee, and the Policymaker Committee.

PAVE's advisory councils include representation from

23

states

30

colleges and universities

4

countries

Advisory Councils

PAVE maintains two advisory councils, an Academic Advisory Council and a Public Sector Advisory Council, that provide insight from leaders in these spaces who believe in the coalition's mission to educate the public about AVs and their potential societal effects. The councils include a diverse array of experts from many backgrounds, geographic locations, and fields of study.

Advisory Council leadership



Dr. Jeffrey Michael
Johns Hopkins University
PAVE Academic Advisory Council Chair



Ashley Nysten
Colorado DOT
PAVE Public Sector Advisory Council Chair

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pavecampaign.org