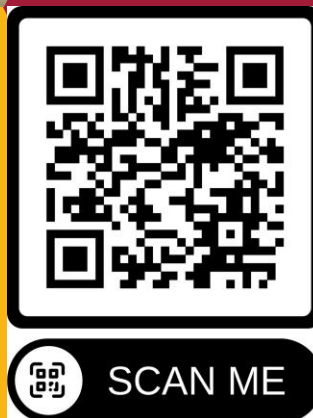




Maryland Connected & Automated Vehicle (MD CAV) Working Group

December 11, 2025

Annapolis, MD



Agenda

Public wi-fi

1. GUESTMGA network
2. UserID: guest
3. Password: mdga

MOTOR VEHICLE ADMINISTRATION

Chrissy Nizer

Administrator

Maryland Department of Transportation

Motor Vehicle Administration

Governor's Highway Safety Representative

Co-Chair of the Maryland Connected &
Automated Vehicles Working Group

cnizer@mdot.maryland.gov

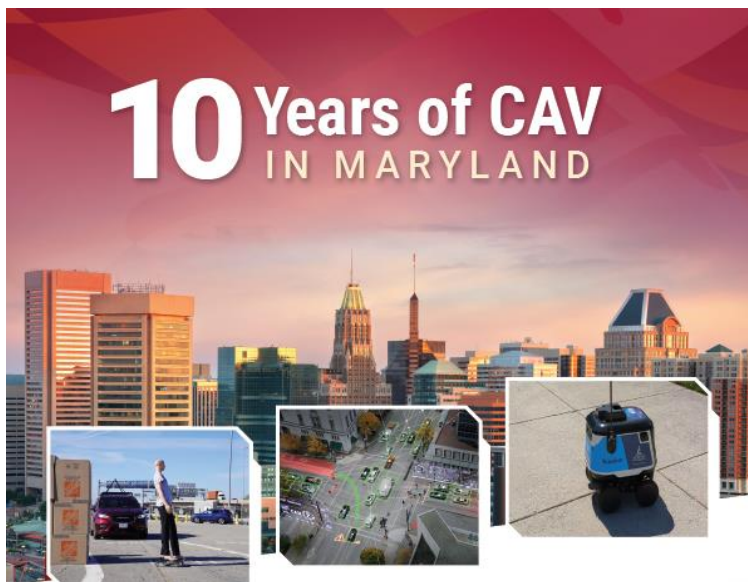


Agenda

- Welcome & Opening Remarks
- AV Policy in DC (DDOT)
- Waymo: The World's Most Experienced Driver
- Building Public Understanding and Trust in Autonomous Vehicle Technology (PAVE)
- Panel Discussion
- Waymo Demo Overview

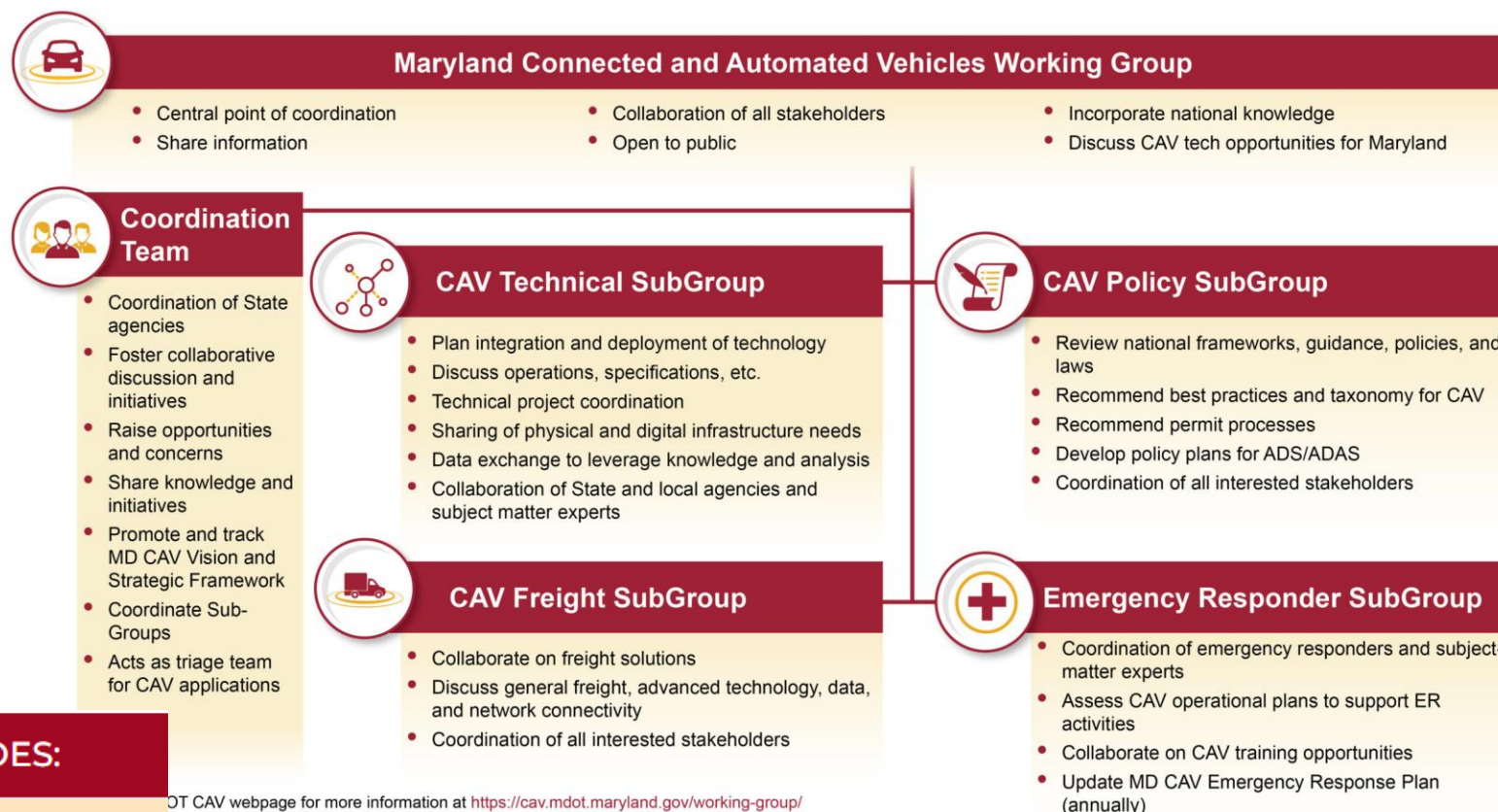


From 2015 to 2025 and Beyond!



CAV WORKING GROUP MEMBERSHIP INCLUDES:

- Law Enforcement
- Traffic Safety
- Planning
- Engineering
- Economic Development
- Regional, State, & Local Government
- Policy Makers
- Trucking Industry
- Private Industry
- Education
- And others





Maryland Connected & Automated Vehicles **UNIVERSITY PROGRAMS**



THANK YOU!

Thank you to all of our partners throughout the years.

To access a digital copy of the 10 Years of CAV Flyer, please use this QR code or go to:

<https://cav.mdot.maryland.gov/about-maryland-cav/>



Senator Sara Love

District 16

Montgomery County

Maryland General Assembly

sara.love@senate.maryland.gov

Current Assignments

2024 Judicial Proceedings Committee

2025 Joint Committee on the Chesapeake and Atlantic
Coastal Bays Critical Areas

2024 Vice Chair, Montgomery County Senate
Delegation

2024 Women Legislators of Maryland

2024 Maryland Legislative Latino Caucus



AV Policy in Washington, D.C.

Stephanie Dock, AICP

Innovation Branch Manager, Autonomous Vehicles Program Manager

District Department of Transportation

stephanie.dock@dc.gov

<https://ddot.dc.gov/>

Stephanie manages DDOT's Autonomous Vehicles Program and leads the team responsible for overseeing autonomous vehicle testing and sidewalk delivery robots, deploying drones (unmanned aerial systems) for agency purposes, and helping to guide the agency's investments and strategy around emerging technology pilots. Stephanie joined DDOT in 2012 as part of the Research Program and went on to lead that program before moving to her current role in 2022.



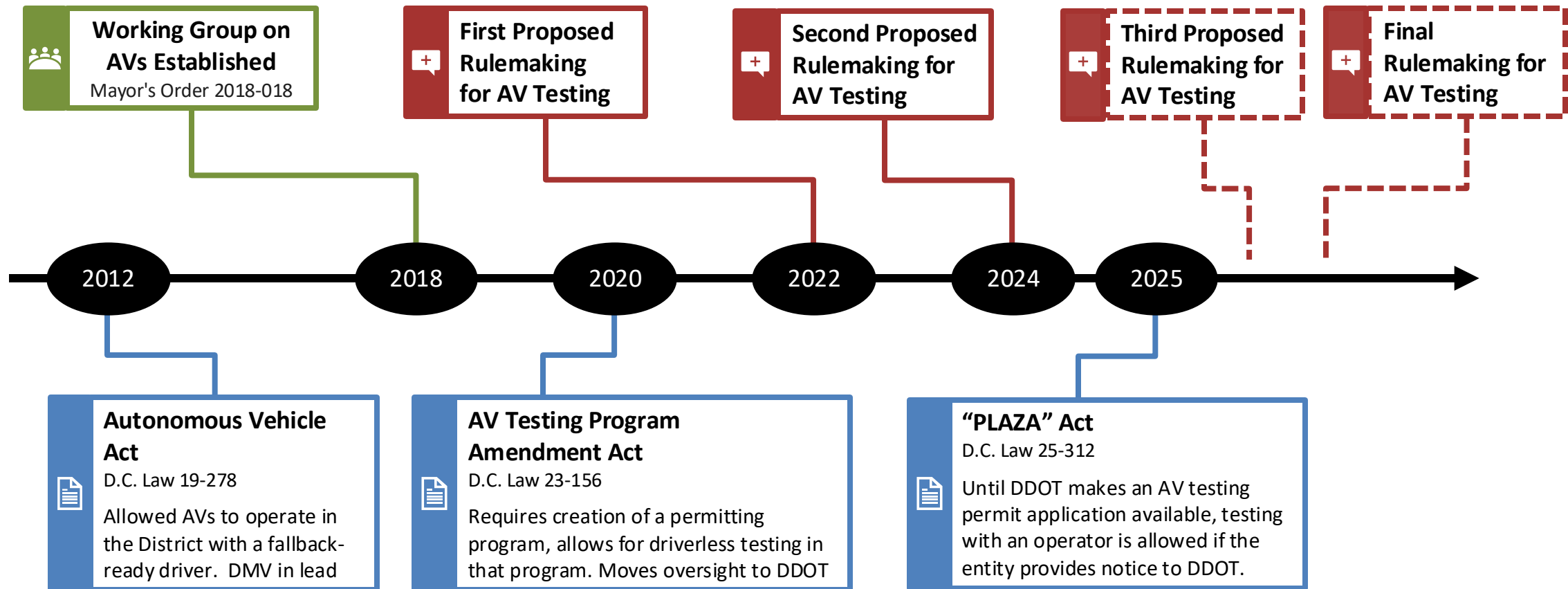
DISTRICT DEPARTMENT OF TRANSPORTATION

AV Policy in DC

Maryland Connected & Automated Working Group

December 11, 2025

What Exists: Timeline of Legislation & Regulation



Activity to Date

Ford/Argo: 2018-2022 in partnership with DC gov, sustained testing operations

Uber: 2020 for mapping, briefly

Optimus Ride: 2020-2021 in Navy Yard area – food delivery at first, then passenger service

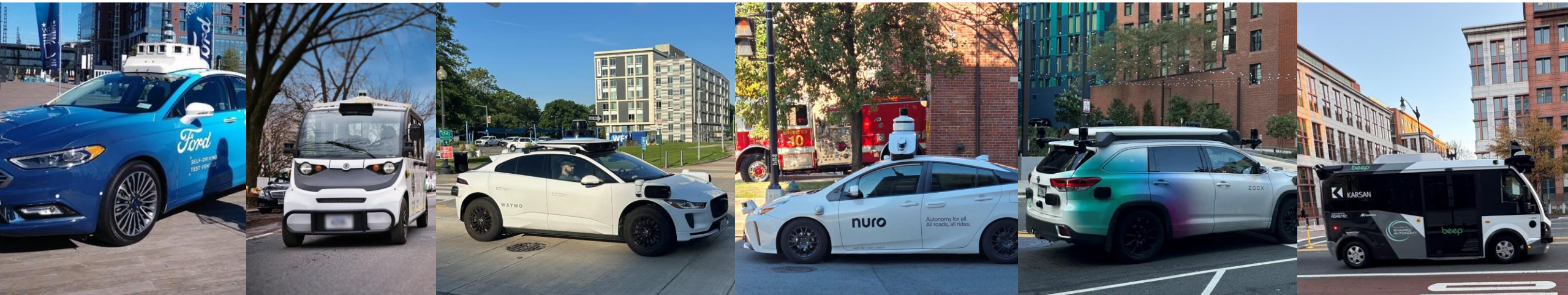
Cruise: 2023 for data collection

Nuro: 2024, 2025 for data collection

Waymo: 2024 “road trip,” 2025 returned indefinitely for mapping and testing

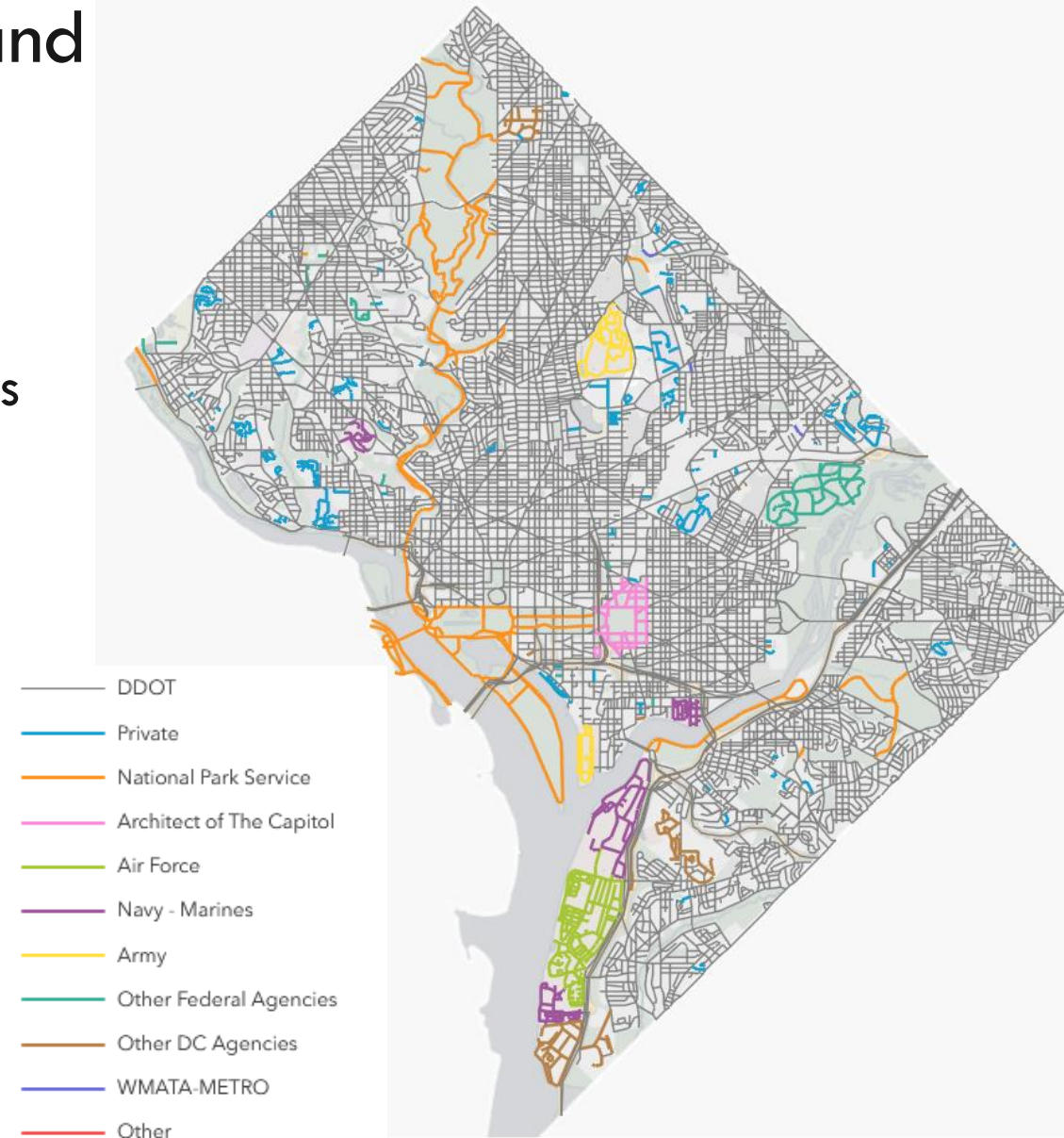
Zoox: 2025 for mapping and testing

Beep/Adastec: 2025 demonstration



What's Hard?: Unique Challenges and Considerations for DC

- High profile/visibility to federal government
- Unique heightened operational considerations
 - Security concerns
 - Special events
 - Unannounced motorcades
 - Data/Security/Espionage
 - Multiple overlapping enforcement agencies
- Central city to a tri-state region



Where DC Wants to Be: Autonomous Vehicles Principles Statement

Principles for AV deployment in the District:

- 1. Safety:** Reduce driver, passenger, and pedestrian injuries and fatalities, and protect consumer data
- 2. Equity:** Improve access across geographies and populations, improve accessibility (also consider built environment change impacts, job loss)
- 3. Efficiency:** reduce the inefficiencies and negative externalities of congestion, reduce costs, reduce pollution, improve movement
- 4. Sustainability:** improve environmental impacts, be financially sustainable, adapt to changes (including long term infrastructure needs)

The DC Government should embody the following attributes:

- *Adaptability*
- *Transparency and Privacy*
- *Comprehensiveness*
- *Alignment*

Where We're Headed

DDOT's Plans

- Testing Permits
 - For all L3-L5 vehicles
 - Data reporting (crashes + activity)
- AV Monitoring Zone Pilot
 - More systemic monitoring of how they are operating
- Deployment Report
 - Recommendations for legislation and regulation
 - Focus on policy levers to achieve our desired outcomes

Industry's Plans



March 25, 2025 Waymo announced they “will be ready for riders in the nation’s capital on the Waymo One app in 2026.”



Self.Driving@dc.gov

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Innovation Branch Manager
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202-359-6965

Steve Osborn
Program Analyst
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202-573-0867

District Department of Transportation

250 M St SE | Washington, DC 20003 | 202.673.6813

AV Policy in Washington, D.C.

Stephanie Dock, AICP

Innovation Branch Manager, Autonomous
Vehicles Program Manager

District Department of Transportation

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<https://ddot.dc.gov/>



Waymo: The World's Most Experienced Driver

Anthony Perez

Northeast Policy Manager

Waymo

Peranthony@waymo.com

<https://waymo.com/>

Anthony Perez serves as Northeast Policy Manager at Waymo, an autonomous driving technology company. In this role, he works directly with state and local policymakers across the Northeast region to help advance transportation policy, educate on the safety benefits of the technology, and advance consumer awareness and acceptance. Anthony was the Bronx Borough Commissioner at the New York City Department of Transportation (NYC DOT) where he served as the primary liaison to elected officials, community boards and the general public for all agency operations in the borough, including leading community outreach for street redesigns and other Vision Zero initiatives.



Say hello to Waymo

Anthony Perez

Northeast Policy Manager



WAYMO



OUR MISSION

Be the world's most trusted driver.



WAYMO

Every 26 seconds,

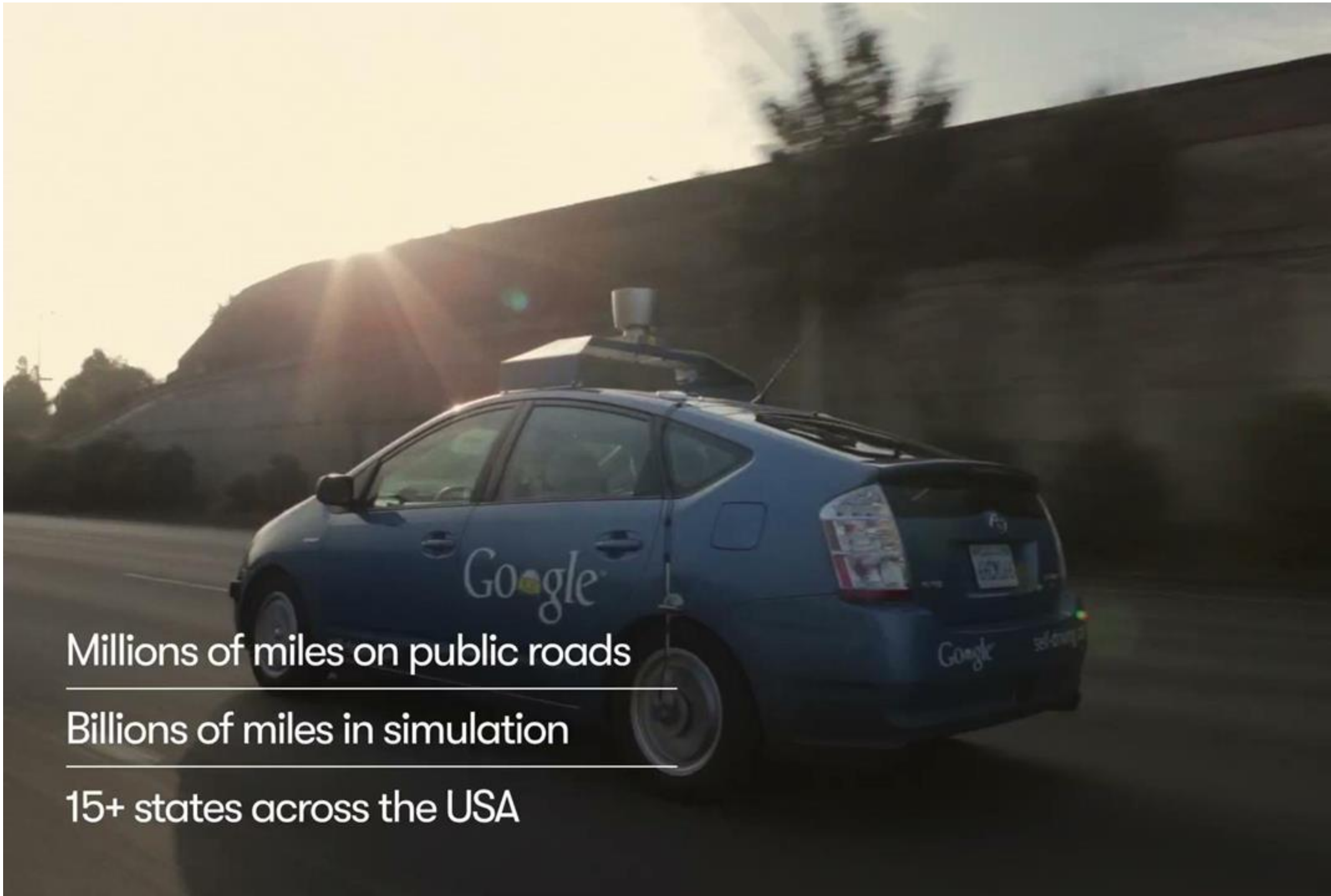


Our experience

Millions of miles on public roads

Billions of miles in simulation

15+ states across the USA



Our history



2009

The Google self-driving car project begins



2011

Began developing our hardware and sensor suite in-house



2013

Decided to focus on fully autonomous driving



2017

Ramp up fully autonomous rides within Waymo One



2021

Begin scaling the Waymo Driver to more cities

Serving riders in —

WAYMO

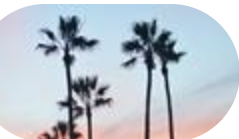
PHX



SE



LA



WAYMO | Uber

ATX



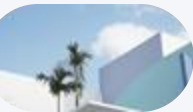
ATL



Coming soon —

WAYMO

MIA



D.C.



DAL



DEN



SEA



LDN



SAN



LV



DET



TPA



NOLA



MSP



ORL



HOU



SAT



STL



PHL



PIT



BAL



WAYMO | lyft

NASH



WAYMO | BART | GO

TYO



WAYMO

Ride with Waymo



STEP 01

Download the Waymo app

Download our ride-hailing app and create an account to get started.



STEP 02

Tell us where you want to go

Choose your destination and we'll select the safest spots to pick you up and drop you off.



STEP 03

Hop in the vehicle

Up to four passengers can ride at a time. We'll let you know when your car is ready. Use the app or enable bluetooth to unlock the door and buckle up.



STEP 04





Enjoy the ride!

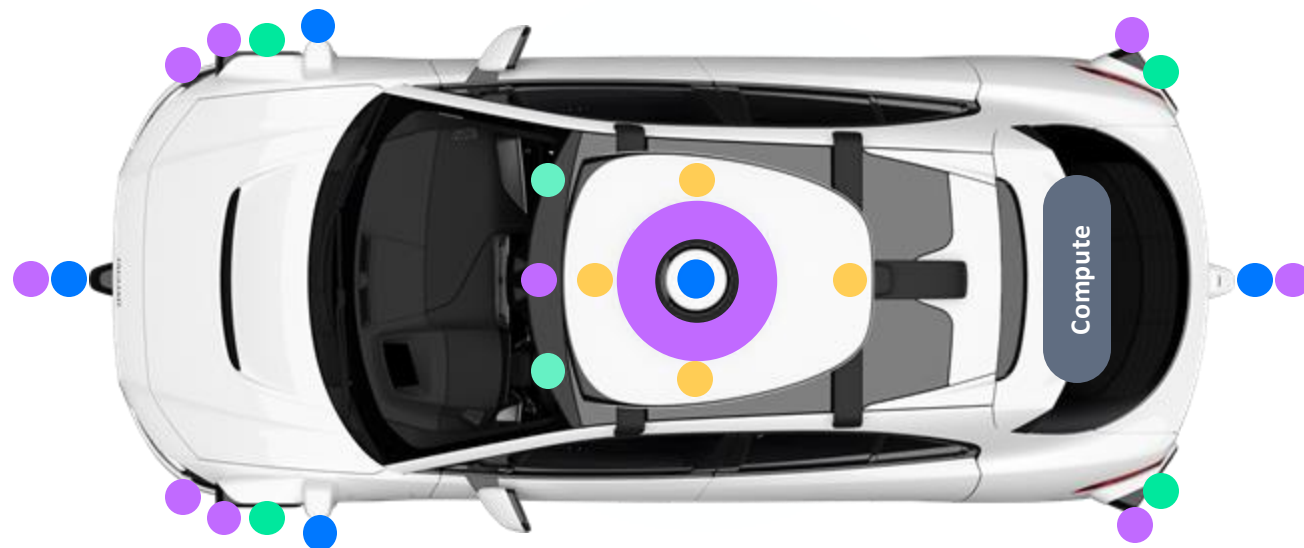
Hit "Start Ride" and follow along with what the Waymo Driver sees and the route it's taking on the passenger screen.

WAYMO

Hardware

The Waymo Driver

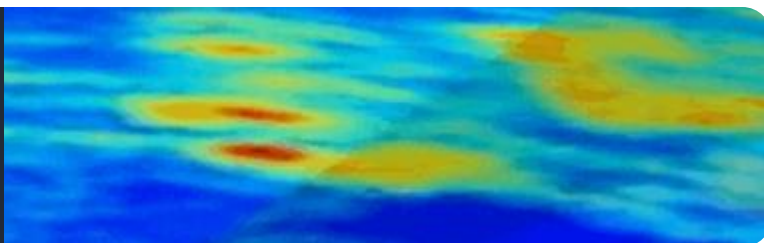
-  Lidar system
-  Radar system
-  Vision system
-  Microphone system



LIDAR



RADAR



CAMERA

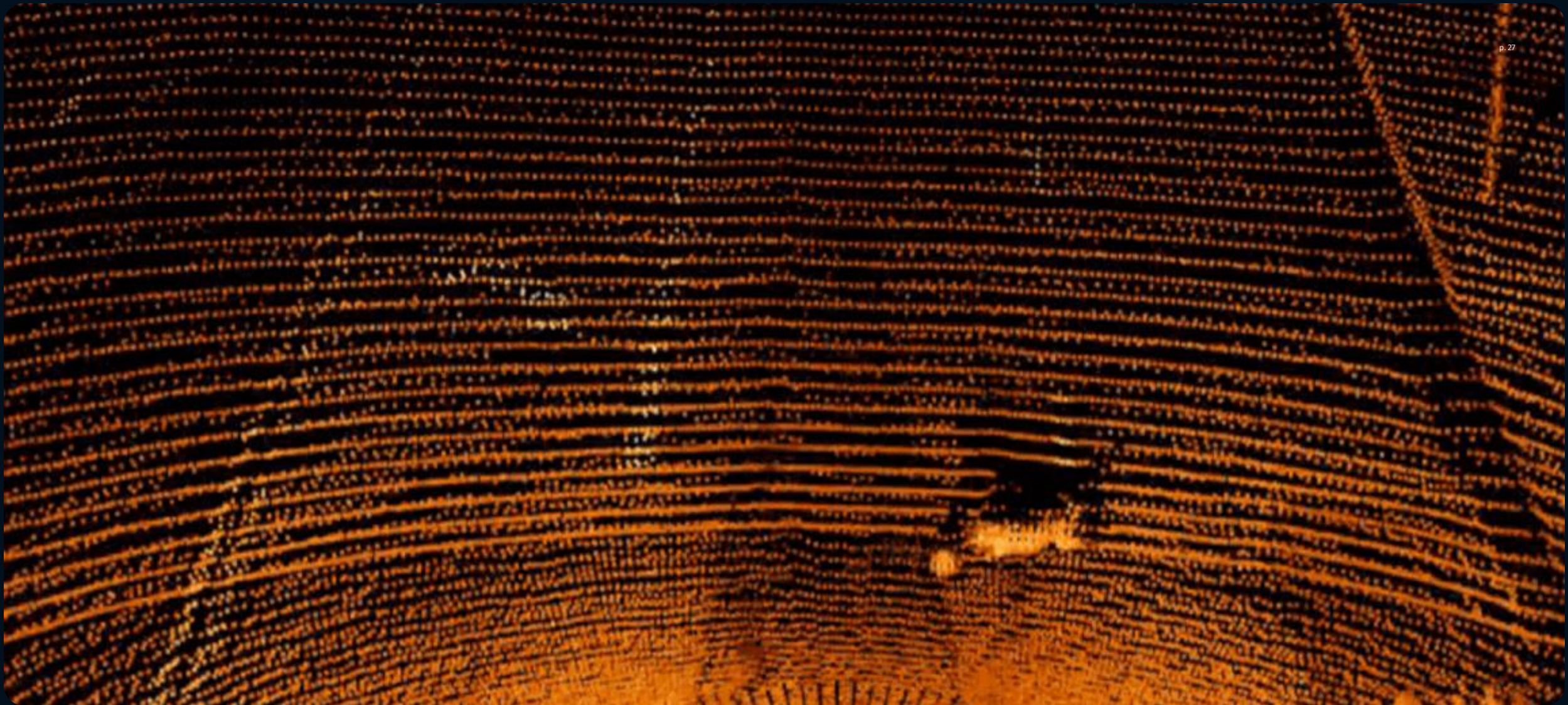




Waymo Vision System



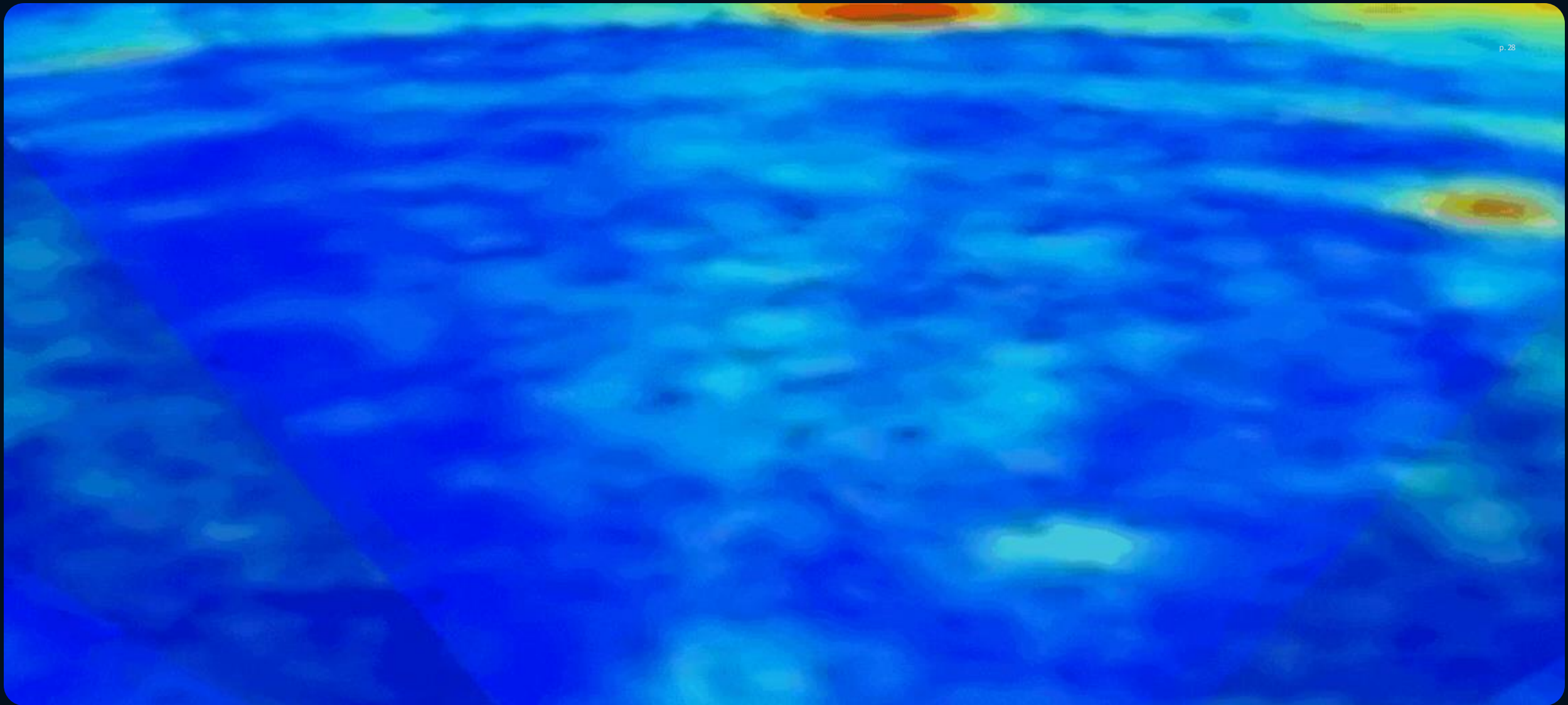
WAYMO



Lidar



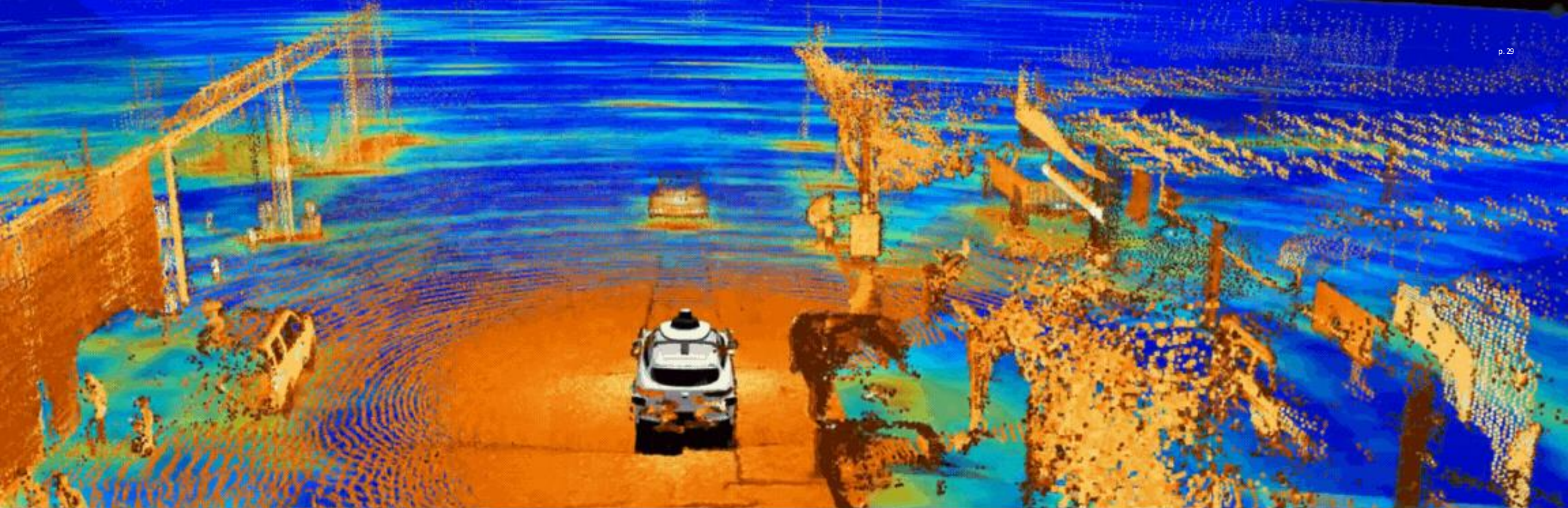
WAYMO



Radar

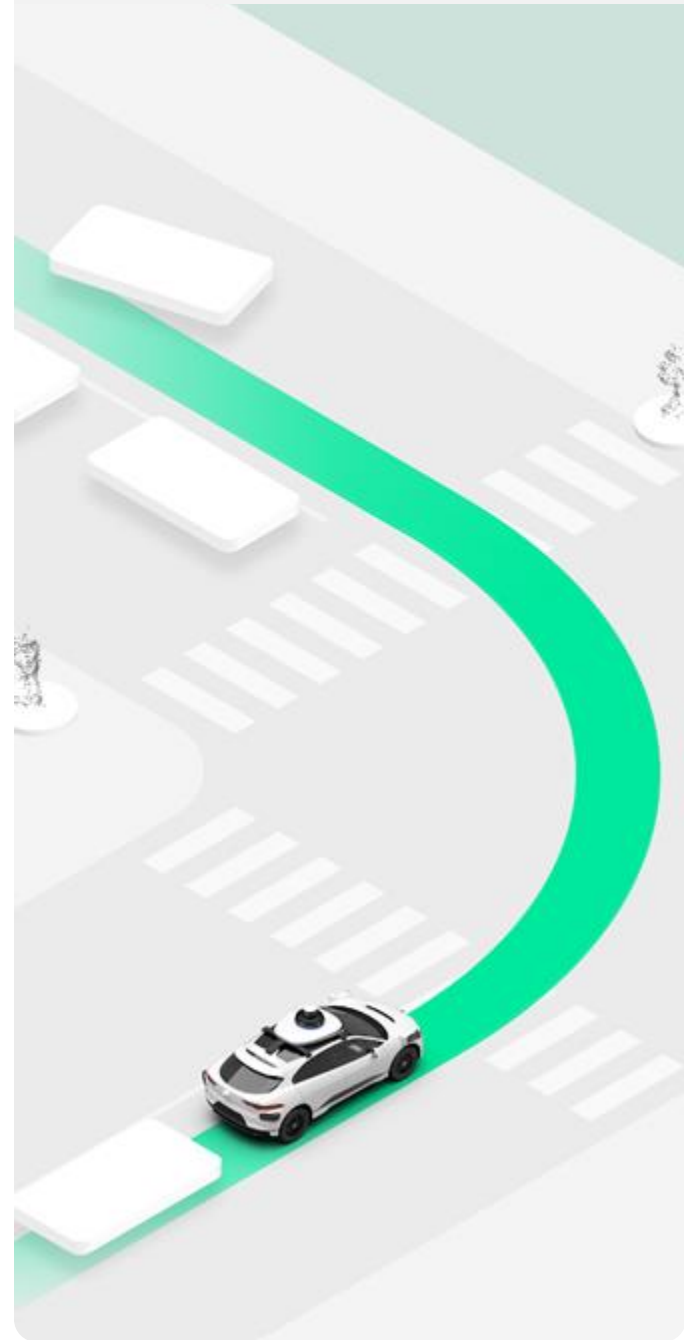


WAYMO



WAYMO

WHERE SHOULD I GO



WHERE AM I



Waymo AI in action

WHAT WILL HAPPEN NEXT



WHAT'S AROUND ME



WAYMO



Autonomously navigating the ordinary and the extraordinary

CROWDS



FALLING SKATERS



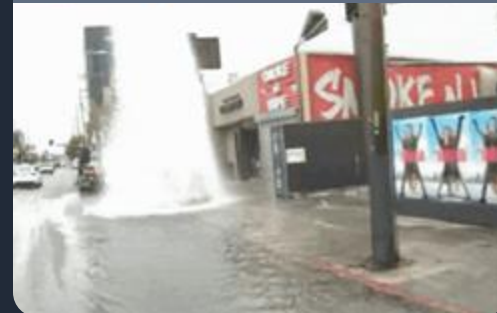
RED LIGHT RUNNERS



OFF-LEASH DOG



FLOOD



FALLING TREES



CYCLISTS



CAR CRASHES



FIRST RESPONDERS



PEOPLE EXITING MOVING CARS



TODDLERS ON THE RUN



OCCLUDED PEDS



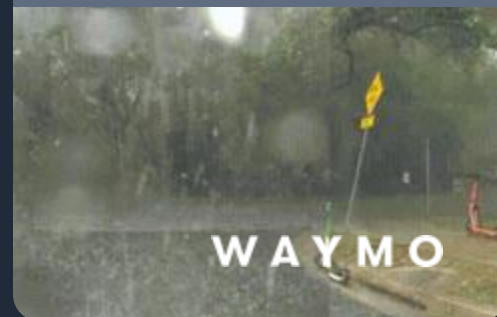
BOUNCE HOUSE



ROAD DEBRIS



HAIL



WAYMO

The next-generation Waymo Driver —



Building an all-season driver



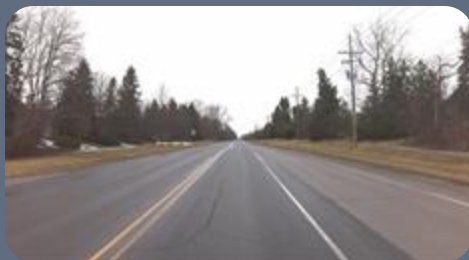
Snowfall to cancel school

Any snow 1" 3" 6" 12" 24"

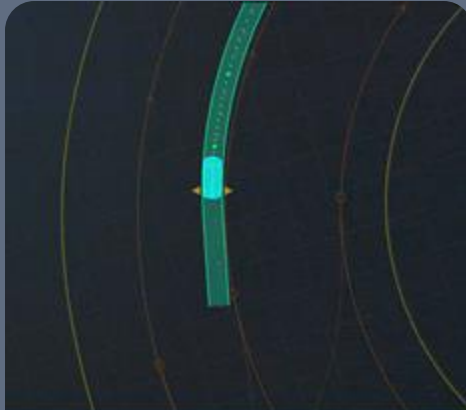
WAYMO

Solving for Snow

→ DEFINE



→ DESIGN



→ VALIDATE



→ DEPLOY



>20,000

First responders trained

SINCE APRIL 2021

>150 agencies

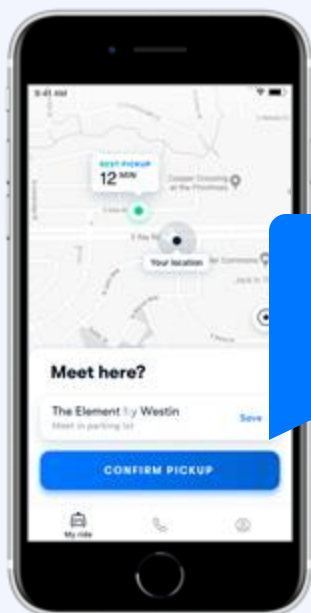
>375 training sessions in 2024

>30 conferences in 2023-2024

National committees and panels — guiding standardization

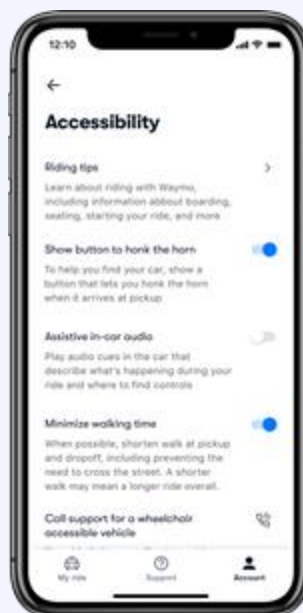


Designing the Waymo app for accessibility

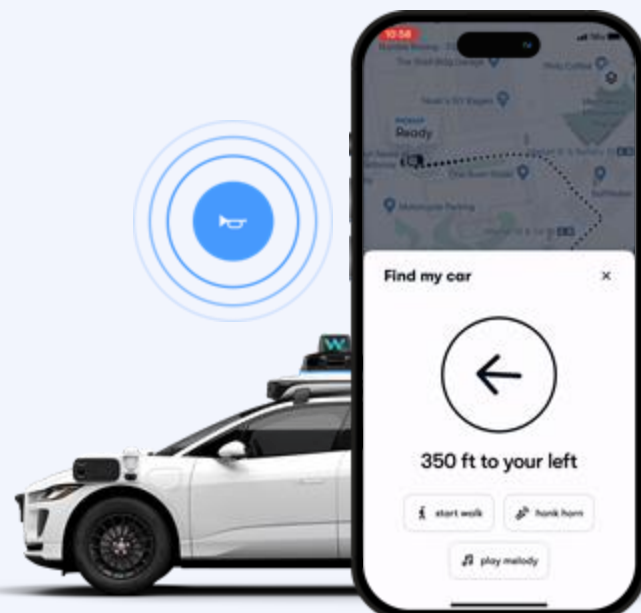


“Confirm pickup button”

Screen reader support



Minimizing walking time



Adaptive app navigation

Taking care of the
first and last mile,
with the flexibility
to cover everything
in between



WAYMO

A trusted airport connection



Serving

PHX



SJC



Working to serve

SFO

WAYMO

THROUGH JUNE 2025

96M rider-only (RO) miles driven

[MORE ON WAYMO.COM/SAFETY](https://waymo.com/safety)

Compared to an average human driver over the same distance in our operating cities, the Waymo Driver had:

OVERALL CRASH REDUCTION



91%

Fewer serious injury or worse crashes



79%

Fewer airbag deployment crashes



80%

Fewer injury-causing crashes

Bringing Waymo to more places



WAYMO

Join the
journey



WAYMO



Thank you.



Waymo: The World's Most Experienced Driver

Anthony Perez

Northeast Policy Manager

Waymo

Peranthony@waymo.com

<https://waymo.com/>



Building Public Understanding and Trust in Autonomous Vehicle Technology

Tara Andringa

Executive Director

Partners for Automated Vehicle Education (PAVE)

tara.andringa@pavecampaign.org

<https://pavecampaign.org/>

Tara Andringa is the Executive Director of PAVE and has over 25 years of experience in communications, outreach, public policy, and automotive policy. At PAVE, she leads all operations of the organization, including curriculum development, strategic planning, messaging and mission alignment, personnel management, stakeholder relationships, budgeting, external outreach, and collaboration with the Board of Directors.





Building Public Understanding & Trust in Autonomous Vehicle Technology

Maryland CAV Working Group | Dec 2025

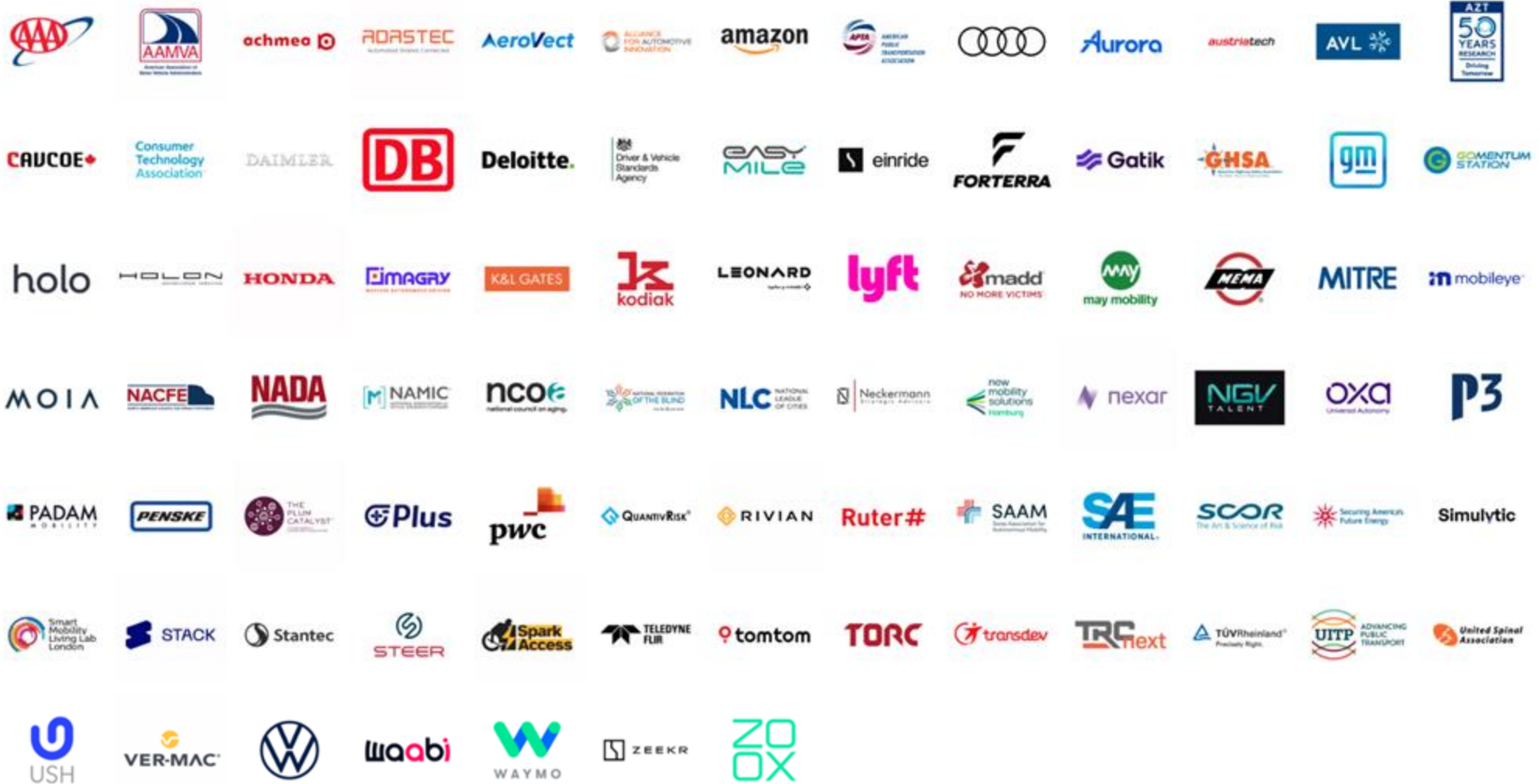
Tara Andringa
Executive Director, PAVE

About PAVE

- PAVE is a 501(c)(3) **nonprofit coalition** that launched in 2019
- Our work seeks to **educate the public** on automated vehicle technology and the potential benefits
- PAVE's **membership** includes international corporations, start-ups, consumer advocates, and nonprofits. We also have **advisory councils** of academic and public sector partners.



Our Members



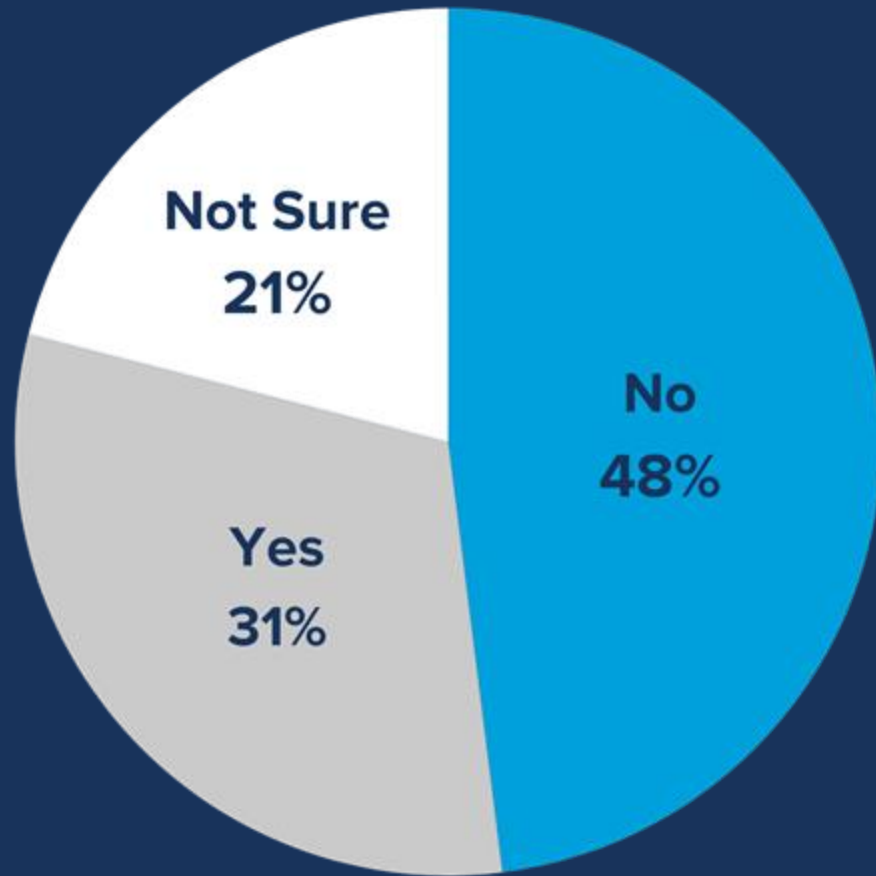
Belief #1

Autonomous vehicles have the potential to **significantly improve** our transportation ecosystem

Belief #2

Public acceptance is essential for autonomous vehicles 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 education & 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

Public Confusion



- For several years, PAVE teamed with MIT and JD Power to conduct annual Mobility Confidence Index surveys
- **65%** of consumers **inaccurately** defined fully autonomous, self-driving vehicles

The Case for Public Education

- The “Click it or Ticket” campaign united the public and private sectors in a joint highway safety campaign that focused on simple, specific behavior change
- The campaign drove seatbelt laws and boosted usage to 90%



How We Educate



Award-winning
series of educational
virtual panels



PAVEcast podcast
covering broad
AV-related topics



Demonstration
events for the
public



“AV Academy”
workshops for the
public sector



Town Halls and
public listening
sessions



AV Industry
conferences: panels
and speakers



Free online
AV resource
library



STEM educational
initiatives for K-12
students

Clearing the Confusion

- PAVE partnered with 5 other organizations in an effort to standardize naming conventions for ADAS technologies
- The project developed language that was simple, specific, and based on system functionality
- It was not intended to replace automakers' proprietary systems, but help consumers assess and understand vehicle capabilities

CLEARING THE CONFUSION:

Common Naming for
Advanced Driver Assistance
Systems



Who's Driving? PSA



- In 2024, PAVE released a PSA titled "Who's Driving?" with the Alliance for Automotive Innovation
- The PSA delivers the critical message that all vehicles sold today – even those with sophisticated ADAS technology – require an attentive driver behind the wheel.
- More info and resources to share can be found at whoisdriving.org

Texas State Fair

- PAVE, TxDOT and PAVE members Aurora, Plus, and Torc hosted an “AV Trucking Weekend” at the Texas State Fair in October 2024
- The large exhibit included 3 autonomous trucks, hands-on exhibits, and educational programming discussing what autonomous trucks could mean for Texas
- We collected public feedback via one-on-one discussions and through an online survey



Louisiana DOTD CAV Innovation Day



- In April 2025, we partnered with Stantec to host a CAV Innovation Day at LADOTD
- We held programming throughout the day and hosted 15 exhibitors showcasing CAV technologies
- Event was open to academia, industry, and the public sector
- Feedback was positive; attendees expressed interest in more experiential elements at future events

Georgia AV Academy

- In June 2025, we partnered with the Alliance for Automotive Innovation to host a one-day “AV Academy” workshop for Georgia public sector officials.
- We held programming on AV basics, workforce development, regulation, first responder interaction, and more.
- Attendees gave positive feedback and suggested more collaborative activities throughout the day



Key Takeaways



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



Thank you!

Learn more about PAVE:
pavecampaign.org

Get in touch:
tara.andringa@pavecampaign.org

Building Public Understanding and Trust in Autonomous Vehicle Technology

Tara Andringa

Executive Director

Partners for Automated Vehicle Education (PAVE)

tara.andringa@pavecampaign.org

<https://pavecampaign.org/>



Short Break



Agenda



Public wi-fi
GUESTMGA network
UserID: guest
Password: mdga



Panel Moderator

John Gilstrap

Assistant Secretary of Commerce

Maryland Department of Commerce

john.gilstrap@maryland.gov

<https://commerce.maryland.gov/>

John Gilstrap has more than 20 years of experience in operations, strategic planning, and leadership, with extensive experience in policy, research and analysis, economic development, and AI innovation.

He currently manages the Dept. of Commerce assets in several industries, including Quantum/AI, Aerospace technology, Life Sciences, Manufacturing, and Agriculture, as part of the Innovation & Growth Division.



Panel Q&A

John Gilstrap

Maryland Department of Commerce
john.gilstrap@maryland.gov

Stephanie Dock, AICP

District Department of Transportation
stephanie.dock@dc.gov

Anthony Perez

Waymo
Peranthony@waymo.com

Tara Andringa

Partners for Automated Vehicle Education (PAVE)
tara.andringa@pavecampaign.org







Waymo Demo Overview

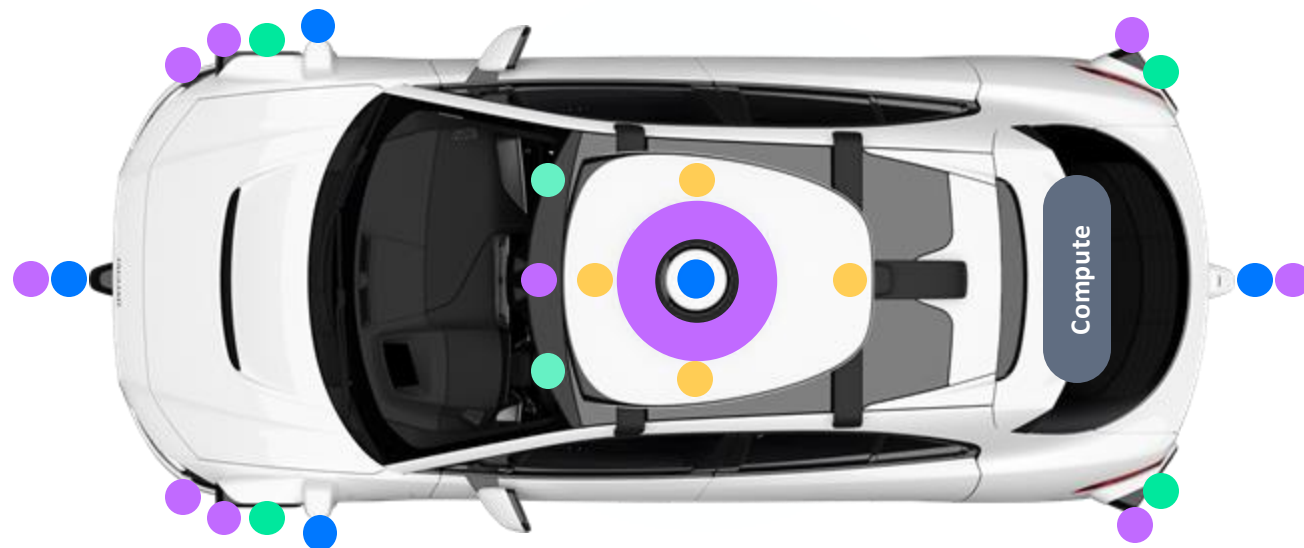
Anthony Perez



Hardware

The Waymo Driver

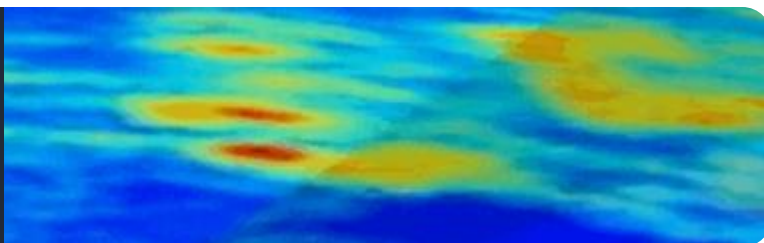
-  Lidar system
-  Radar system
-  Vision system
-  Microphone system



LIDAR



RADAR



CAMERA

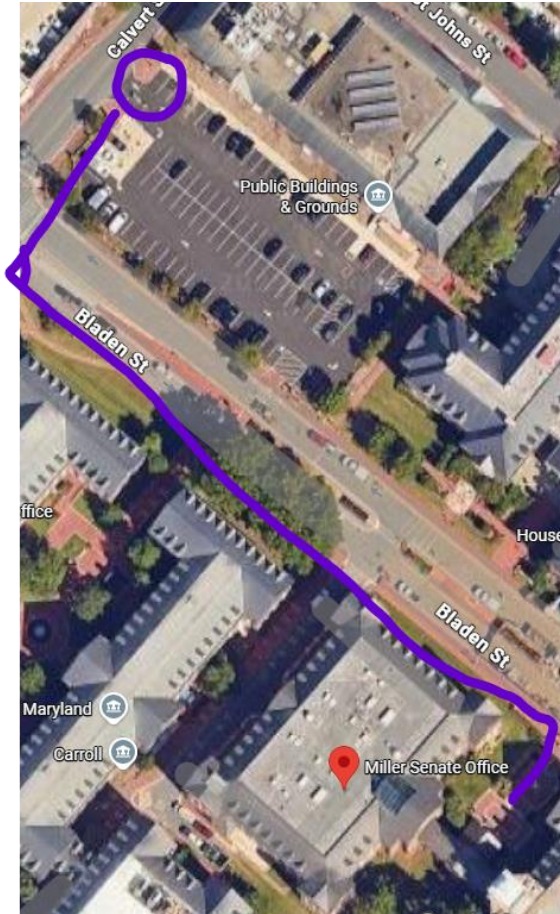


Closing Remarks & Networking Opportunity

Join us for networking at
Rams Head Tavern after you
check out the Waymo Car!



Demonstration Location



Thank you for attending today's CAV Working Group and celebrating 10 years of CAV with us! Download your copy of "10 Years of CAV in Maryland" here.



Questions? Email
CAVMaryland@mdot.maryland.gov