

# Maryland's Progress

December, 2021

in Connected and Automated Vehicle (CAV) Technology

## Key Focus Area Accomplishments

### PUBLIC EDUCATION & OUTREACH

### EARLY DEPLOYMENT & TESTING

- Maryland participated in the May 31<sup>st</sup> National Autonomous Vehicles Day social media campaign to educate the public on CAV technologies.



Click the number for more information

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- Maryland Department of Transportation (MDOT) and Maryland Department of Planning (MDP) held three [public workshops](#) with local jurisdictions about CAV, resources available, and what jurisdictions were looking for to help advance CAV across the state.
- MDOT joined the [Partners for Automated Vehicle Education's Public Sector Advisory Council](#).
- The annual Maryland Emerging Technology survey is now in its second year and tracking awareness at the local jurisdiction level of CAV across the state.
- Maryland Highway Safety Office Seminars recorded a [public webinar](#) on CAV efforts in Maryland related to pedestrian safety.
- Maryland Dept of Commerce hosted a booth at Association for Unmanned Vehicle Systems International (AUVSI) Conference
- Maryland is prioritizing public education by providing ADAS information to new drivers as part of the licensing system and working with national entities to bring ADAS education to driver education instructors.

- [Westminster's Autonomous Corridor](#) launched into planning this year.
- National Association of Counties hosted their annual meeting in National Harbor, Prince George's County, where about 200 national participants registered to ride the Local Motor's Olli low-speed AV shuttle and experience the Smart Tech Maryland style.
- Morgan State University built and is testing [autonomous wheelchair technology](#). They aim to pilot the technology at the Baltimore/Washington International Thurgood Marshall Airport as a demonstration of increased accessibility and quality of life improvement for people with disabilities.
- The Aberdeen Test Center (ATC) is expanding their automated vehicle technology capabilities through digital twinning environments. This capability is currently under development. ATC continues to work in collaboration with the US DOT CARMA program to test automated trucks.
- Nine (9) companies submitted expressions of interest in 2021 to formally state they are interested in CAV technology testing, research, and implementation in Maryland. This makes a total of 38 submittals since inception of the [EOI process](#) in mid-2017.



## Maryland CAV SubGroup Accomplishments

- Re-energized all SubGroups and restarted the policy SubGroup.
- Created a State Agency Coordination team group to discuss CAV efforts across agencies beyond just MDOT, including Planning, Insurance, IT, and more.
- SubGroups were the most popular venue to engage in CAV initiatives in Maryland, with significant collaboration occurring to discuss legislative actions (e.g., truck platooning and PDDs), generating guidance documents (roadside infrastructure), and other efforts. The SubGroups are the place to be to get things done!

Continue reading here!





## PLANNING & POLICY

- MDOT and MDP released the [CAV Toolkit for Local Jurisdictions](#) to help local jurisdictions understand the breadth of potential impacts of CAV.
- MDOT modeled Greenhouse Gas reductions assuming CAV adoption in the [MDOT Greenhouse Gas Reduction Act Plan](#) [pages 18-19].
- CAV has now been incorporated into recurring and long-range Maryland plans, including the [Freight Plan](#), State Agency Report, [Consolidated Transportation Plan](#), [Statewide Transit Plan](#) and [Strategic Highway Safety Plan](#).
- The Johns Hopkins [Institute for Assured Autonomy](#) launched a project aimed at shaping simulation tools, and ultimately public policy, to guide automated vehicle (AV) development for public benefit.
- Two legislative bills passed in 2021 and are now active as of October 1: [truck platooning](#) and [personal delivery devices \(PDD\)](#).
- Maryland AV Impacts Law Review by University of Baltimore was initiated and nearly complete.

## INFRASTRUCTURE

- Maryland now has over [40 connected vehicle roadside units](#) across three infrastructure owner operators (MDOT SHA, Montgomery County DOT, Prince George's DPW&T) broadcasting signal phase and timing, pedestrian warning, MAP messages, traveler and/or information messages over a mix of DSRC and LTE C-V2X radio technology.
- Successfully demonstrated infrastructure-based detection and messaging out warnings of pedestrians in the roadway for connected vehicle application use.
- Developed and launched a [statewide security credential management system](#) for any agency to register their RSU or OBU in an effort to increase trust and cybersecurity of connected vehicle data exchanges.
- Maryland has generated national dialogue with chief information officers on the needs for CAV and digital infrastructure, and has energized the preparation discussions within agencies' IT experts.

## WORKFORCE

- Two MDOT Transportation Business Units evaluated workforce impacts related to automated technologies and agency organizational structure.
- The University of Maryland created a minor in [Robotics and Autonomous Systems](#) under their School of Engineering related to autonomous robotics, including over the road, air and water.
- University System of Maryland at Southern Maryland [built and opened](#) the Southern Maryland Autonomous Research and Technology (SMART) Building with an emphasis on autonomous systems and robotics innovation.
- Promoted CAV to middle and high school students, with an [in-person demonstration](#) of the AASHTO TRAC CAV Module (created by Maryland!) at Patterson High School and inclusion of CAV in outreach through the Maryland Quality Initiative.



## Looking Towards 2022

- Events are being planned to increase public awareness and education of CAV technologies, including partnerships to sponsor CAV activities at events such as Fleet Week.
- Evaluating equity in CAV technology deployments and infrastructure.
- Evaluating feasible infrastructure projects to support automated freight vehicles.