Fast Facts

for Connected and Automated Vehicle (CAV) Technology

Maryland's Vision for Connected and Automated Vehicles (CAV) is to uphold and enhance a **Safe, Efficient, and Equitable** transportation future by delivering collaborative and leading-edge CAV solutions. Maryland is open for business and eager to realize the life-saving and economic benefits of CAV technology, while ensuring safety for all. We are embracing CAV technology and innovation through continuing collaboration with partners interested in researching, testing, and implementing CAVs in Maryland.

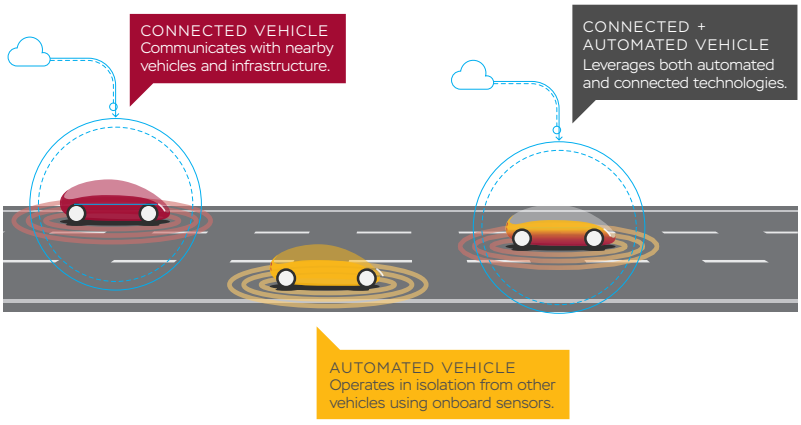
The Maryland Department of Transportation (MDOT) is preparing for this changing transportation landscape by partnering with federal, state, and local organizations, including the private sector, to ensure the safety of all roadway users as this technology moves forward.

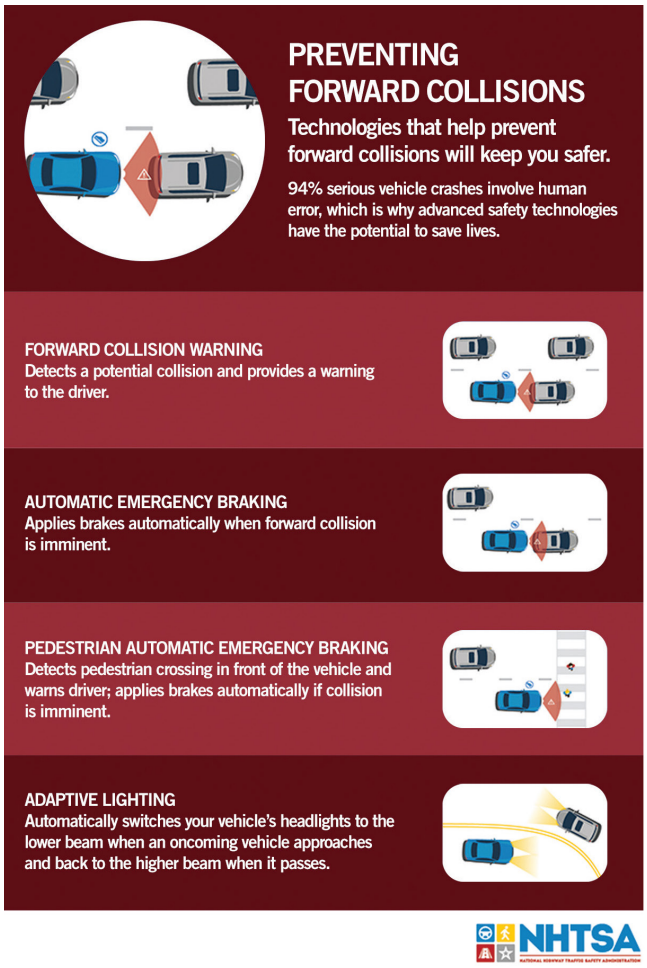
WHAT IS CAV TECHNOLOGY?

CAV technologies are emerging rapidly from research to reality.

CONNECTED VEHICLES
'talk' to infrastructure, other vehicles and/or pedestrians electronically

AUTOMATED VEHICLES
use technology for some (or eventually all) of the driving task in place of a human driver





Driver assistance technologies are already helping to save lives and prevent injuries. Many vehicles on the road today have collision intervention features helping to save lives and prevent injuries, and this technology may one day result in fully "self-driving" vehicles. Automatic Emergency Braking, Lane Keeping Assistance, Blind Spot Warning, and other advanced safety technologies help the vehicles understand surroundings and either warn the driver or act to avoid a crash.

Learn how driver assistance technologies currently available in vehicles are keeping us safe and secure on the road at nhtsa.gov/technology-innovation/automated-vehicles-safety . To better understand how to use these technologies, review your vehicle manual, ask your car dealership, or visit mycardoeswhat.org.

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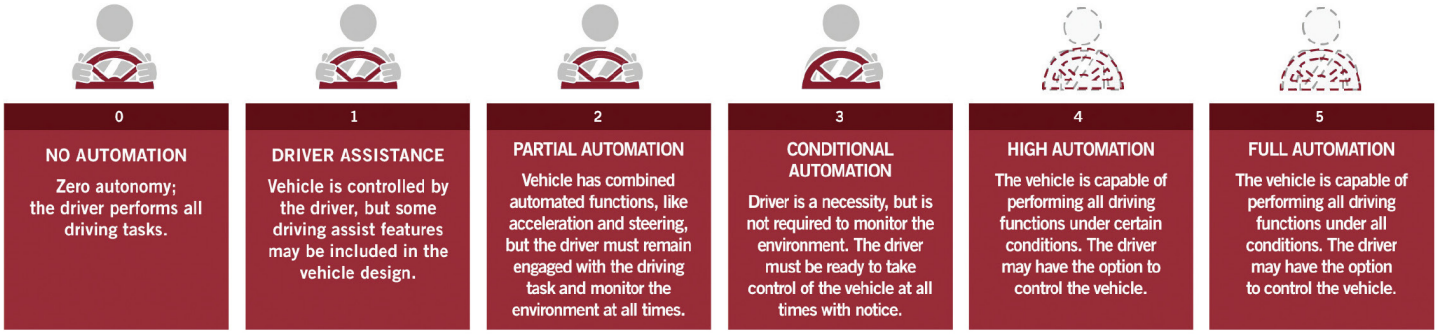
THE ROAD TO FULLY SELF-DRIVING VEHICLES?

The National Highway Traffic Safety Administration (NHTSA) has adopted the six-level classification based upon vehicle capabilities developed by the Society of Automotive Engineers.



Source: https://www.nhtsa.gov/technology-innovation/automated-vehicles

WHAT ARE THE BENEFITS OF CAV TECHNOLOGY?

Benefits may include:

- ✓ significant improvements in safety; fewer crashes and lives saved
- ✓ reduced delays; reduction in daily commute times
- ✓ reduced emissions due to more consistent speeds and less idling
- ✓ new mobility service options – helping you get from your home to your office, medical care or shopping, and providing additional travel options for the young, elderly, those with disabilities, and others who choose not to drive
- ✓ more efficient movement of freight – lowering the cost of goods to consumers.

Industry experts suggest that automated vehicles could be owned by individuals just like today's automobiles, or could one day be fleet owned and shared by multiple users. If this becomes a reality, parking could be reduced and/ or consolidated away from residential and business areas, providing an opportunity to modify urban landscapes. We are only just beginning to imagine the possibilities.

In exploring the potential of CAVs, the National Highway Traffic Safety Administration is focused on cybersecurity to ensure that these systems work as intended. (See nhtsa.gov/technology-innovation/vehicle-cybersecurity)

MARYLAND'S ROLE IN CAV TECHNOLOGY DEVELOPMENT

MDOT has been actively involved with CAV technology development for several years, engaging with groups on the federal, regional, and state level to address issues and ensure CAVs will be safe and reliable.

The Maryland Secretary of Transportation created the Connected and Automated Vehicles Working Group with a diverse cross section of members, including law enforcement, traffic safety, planners, engineers, economic development organizations, regional, state and local government agencies, policy makers, trucking industry representatives, private industry stakeholders, educational institutions, and others. This inclusive collaboration provides an opportunity to develop plans for CAV in our State, positioning Maryland to identify opportunities and be responsive to this emerging technology. Through the Working Group, MDOT now has a permit process in place for testing highly automated vehicles on Maryland roadways. This process opens the door to companies that want to test by providing interaction and sharing of appropriate information to encourage local development of CAV while helping to ensure safe use of CAV to benefit all users of Maryland's transportation network.

IMPACT ON MARYLAND ROADWAYS

There will be a transition period as the technology evolves, and human-driven vehicles begin sharing the road with automated vehicles. MDOT is focused on maintaining safety during this transition period.

Currently, companies are testing CAV technology and exploring many different roadway scenarios, including:

- connected vehicle platoons on highways with a wireless connection to allow vehicles to drive closer together at a constant speed
- automated ride-sharing vehicles on urban roadways
- automated parking valet systems
- CAV shuttles carrying passengers around airports, business parks, campus settings, shopping areas, or from parking locations to attractions.

For more information, please visit MDOT.maryland.gov/MarylandCAV

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CHANGING Maryland *for the Better*