Autonomous Commercial Vehicle (ACV) Testing & Deployment 2018
(Target Date for Submission & Passage of Legislation)

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What is an autonomous vehicle?

A driverless vehicle that is capable of sensing its environment and navigating without human input.
Level 0: The full-time performance by the human driver of all aspects of the dynamic driving task, even when enhanced by warning or intervention systems.

Level 1: The driving mode-specific execution by a driver assistance system of either steering or acceleration/deceleration using information about the driving environment and with the expectation that the human driver perform all remaining aspects of the dynamic driving task.

Level 2: The driving mode-specific execution by one or more driver assistance systems of both steering and acceleration/deceleration using information about the driving environment and with the expectation that the human driver perform all remaining aspects of the dynamic driving task.

Level 3: The driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task with the expectation that the human driver will respond appropriately to a request to intervene.

Level 4: The driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene.

Level 5: The full-time performance by an automated driving system of all aspects of the dynamic driving task under all roadway and environmental conditions that can be managed by a human driver.
What are the ACV Automation Levels as Applied to Testing in Washington?

**Level 3:** The driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task with the expectation that the human driver will respond appropriately to a request to intervene.

**Level 4:** The driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene.

**Level 5:** The full-time performance by an automated driving system of all aspects of the dynamic driving task under all roadway and environmental conditions that can be managed by a human driver.
When will ACV’s be available?

Autonomous Trucks and Commercial Vehicles Will Be in Service Faster Than Many Predict; 12/8/2016

Uber-owned Otto to offer freight hauling services using autonomous trucks in 9/27/2016 “...according to comments from Otto co-founder Lior Ron, who told Reuters that Otto will enter the long-haul freight business in 2017.

Elon Musk revealed a teaser image during a TED Talk, on May 2, 2017, and followed up by announcing a September reveal for an autonomous truck in September 2017.
“To platoon trucks is to efficiently operate them on a highway in close proximity— one following after another at a pre-set distance via radar and wireless communication to form a virtual “road train.” This operational concept leverages electronic controls and the automatic processing of shared data via V2V systems to improve highway safety and decrease both truck fuel.”
California, Colorado, Florida, Michigan and Nevada, have all passed bills authorizing the testing of ACVs.

**Arizona:** In late August 2015, an [executive order](#) directing various agencies to “undertake any necessary steps to support the testing and operation of self-driving vehicles on public roads within Arizona.” Also ordered the enabling of pilot programs at selected universities and developed rules to be followed by the programs. The order established a Self-Driving Vehicle Oversight Committee within the governor’s office.

Florida International University (FIU) may get an on campus driverless shuttle. FIU also set to partner with the Miami Dade County Department of Transportation in testing autonomous commercial vehicles.
How Do We Make It Happen?
Who are the key actors in developing ACV Testing and Deployment Policy?

The key to our proposal is making use of the Utilities and Transportation Commission’s regulatory experience. UTC to be the tasked with forming an ACV Testing and Deployment Policy Committee (ACV-TDPC) whose members shall include but not be limited to:

• The Washington State Patrol
• The Washington State Department of Licensing
• The Washington Trucking Association
• Transportation Industry Professionals and
• Other persons and organizations the UTC feels are necessary
• The ACV-TDPC will be urged to consult with federal agencies such as the Department of Transportation, the National Highway Traffic Safety Administration and the Federal Motor Carrier Safety Administration.
How do we make it happen?

Who can apply for Testing and Deployment Authority for ACV’s?

- Manufacturers
- Motor Carriers for Hire and Private
- Authorized Vendors
How do we make it happen?
Creating ACV Testing and Deployment Policies

The ACV-TDPC will be guided by the following principles in creating standards and guidelines for ACV testing and deployment policies including, but not limited to the following:

• Taking all practical steps to ensure the safety of those who operate ACVs and those who are in the area where they are operated;

• Incorporating, where relevant, existing motor carrier laws and regulations;

• Selecting a state agency, agencies or private party to test ACV equipment and software prior to the granting permission to test and/or deploy;

• Requiring applicants provide proof of primary commercial auto liability insurance, all risk apparel, $5 million minimum or of self-insurance, $5 million minimum.

• Requiring applicants submit evidence of the ability to report accidents, comply with applicable laws and insure public safety through a safety action plan.
How do we make it happen? Deadlines, Review and Transition from Testing to Deployment

The ACV-TDPC In establishing standards and guidelines for ACV testing and deployment will:

• Make best efforts to complete the establishment of guidelines and standards within six months of the legislation’s passage

• Develop a plan to insure that established standards and guidelines are regularly reviewed and remain current with ACV technology.

• Make use of the information gathered in testing is used, where relevant in the creation of standards and guidelines for deployment.
Driverless Cars Could Reduce Traffic Fatalities by Up to 90%, Says Report

A new report has analyzed the impact of driverless cars on the incidence of fatal traffic accidents, and say that simply by taking human emotions and errors out of the equation, we could reduce deaths on the road by 90 percent. 10/1/15 Science Alert

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<th>INVOLVED VEHICLE TYPE</th>
<th>Total Vehicles in Collisions</th>
<th>Fatal Collisions</th>
<th>Serious Injury Collisions</th>
<th>Minor Injury Collisions</th>
<th>Property Damage Only Collisions</th>
<th>Unknown Injury Collision</th>
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Source: CLAS (WSDOT) and FARS (WTSC). See Appendix A for more information.
How It Would Work?

Otto applies for ACV motor carrier operation authority in Washington State

- Step One: Applicant to complete and submit application for common carrier of property
- Step Two: Submitted information to include: UBI number; legal name; USDOT number; safety and compliance fitness survey; proof of primary commercial auto liability insurance, all risk apparel, $5 million
- Step Three: Go through required testing; meet or surpass ACV testing standards
- Step Four: Issuance of permission to test or deploy