

Introducing the Federal Motor Carrier Safety Administration's Accelerating the Adoption of Advanced Driver Assistance Systems (ADAS) Program "Tech-Celerate Now"

Program Description

The Federal Motor Carrier Safety Administration's (FMCSA) new initiative in partnership with the ITS Joint Program Office — entitled "Accelerating the Adoption of Advanced Driver Assistance Systems (ADAS)" and referred to under the project brand name "Tech-Celerate Now" — is focused on accelerating the adoption of ADAS by the trucking industry to reduce fatalities and prevent injuries and crashes. The ADAS technology performance areas addressed by "Tech-Celerate Now" include monitoring systems, warning systems, braking systems, and steering systems.

Many industry leaders are working together on the "Tech-Celerate Now" Program, under the leadership of the American Transportation Research Institute (ATRI), the American Trucking Associations (ATA), ATA's Technology & Maintenance Council (TMC), and the Owner-Operator Independent Drivers Association (OOIDA).



The "Tech-Celerate Now" Program will promote the FMCSA goals of accelerating ADAS adoption to reduce crashes — saving lives — and realizing substantial return-on-investment through initial safety values and long-term benefits. Among other key tasks, the program will survey trucking industry stakeholders to determine the level of ADAS deployment, serve as an industry resource on available ADAS technology, and provide technical information and video content to spur additional adoption aimed specifically at:

- *Fleet Executives and Fleet Managers* — Early investment in ADAS will reduce crashes/injuries and operator liability, increase driver productivity, reduce driver turnover, and improve driver satisfaction, without negatively impacting the profitability of fleet operations.
- *Fleet Safety Directors* — Proper specification, training and maintenance of ADAS will reduce crashes/injuries and operator liability and improve driver satisfaction without negatively impacting the profitability of fleet operations and maintenance.
- *Owner-Operators/Small Carriers* — Early adoption and use of ADAS will reduce crashes/injuries and operator liability and improve the driving experience without negatively impacting the profitability of owner-operator / small carrier operations.
- *Company Drivers* — Use of ADAS will reduce crashes/injuries and operator liability, and improve the driving experience for company drivers.
- *OEMs, Tier 1 Brake Suppliers, and ADAS Suppliers* — Standardization and consistent industry messaging will help vehicle manufacturers, major component providers and ADAS suppliers improve technology deployment, product performance and long-term acceptance.

For more information visit www.tech-celeratenow.org

What is ADAS?

There are four general performance categories of ADAS which have the potential to prevent fatalities, injuries, and crashes:

- braking systems,
- steering systems,
- warning systems, and;
- monitoring systems.

• **ADAS — Braking**

This performance category includes air disc brakes (ADB), automatic emergency braking (AEB), and adaptive cruise control (ACC) systems. AEB systems detect when a truck is in danger of striking the vehicle in front of it and braking automatically if needed. ADB are foundation brake systems that use calipers to squeeze pairs of pads against a disc or rotor (instead of using shoes to apply pressure against a drum in traditional drum brakes) to create friction needed to stop the vehicle. Other ADB benefits include greater apply/release timing. ACC assists with acceleration and/or braking to maintain a prescribed distance between it and the vehicle in front. Some systems can come to a stop and continue.



Automatic Emergency Braking

• **ADAS — Steering**

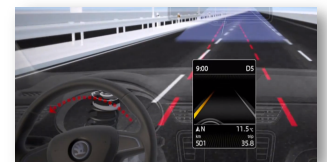
This performance category includes lane keep assist, lane centering, and adaptive steering control, all of which help drivers maintain proper vehicle control and traffic spacing.



Air Disc Brakes

• **ADAS — Warning**

This performance category includes lane departure, forward collision, and blind spot detection. These systems detect when the vehicle unintentionally moves or drifts out of its lane and warns the driver accordingly, and provide additional information to detect objects encroaching in the space surrounding the vehicle.



Lane Departure Warning

• **ADAS — Monitoring**

This performance category includes driver- and road-facing cameras and camera-based mirror systems. These systems use in-cab and vehicle surrounding cameras and sensors to monitor the driver's behavior and performance – enhancing the driver's field-of-view – and help employers provide driver feedback improving performance.



Driver- & Road-facing Cameras

*Want more information on the
Tech-Celerate Now Program?*

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