

Tech-Celerate Now

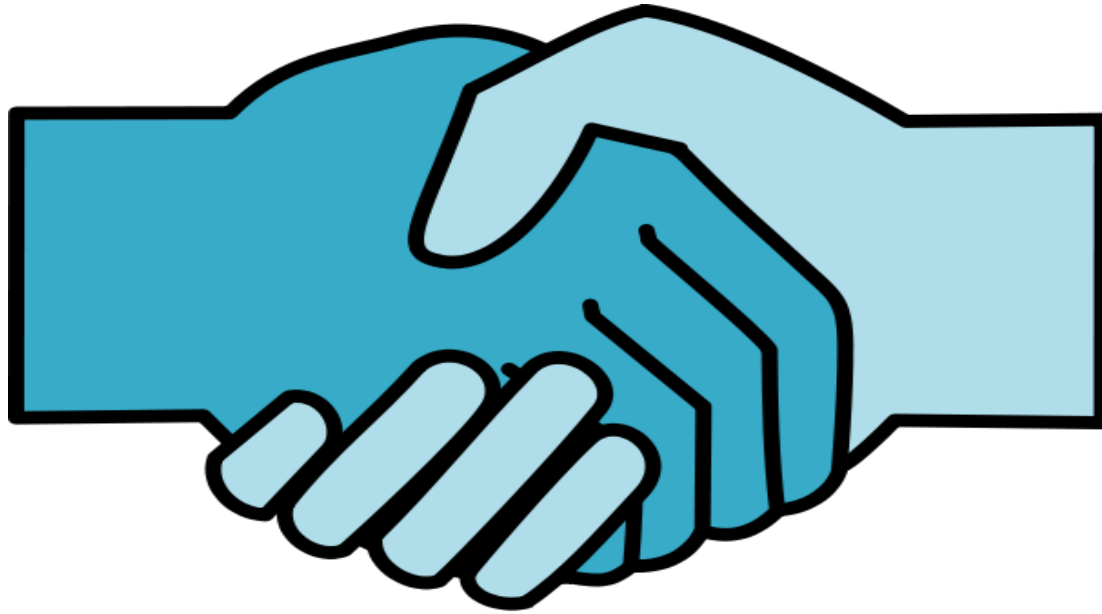
March 10, 2021



U.S. Department of Transportation
Federal Motor Carrier Safety Administration



Active Collaboration



Project Team



Project Overview

- **Goal**

- To accelerate the adoption of ADAS by the trucking industry to reduce fatalities and prevent injuries and crashes.

- **Objectives**

- Conduct a national outreach campaign to determine the technical and market barriers to nationwide adoption of ADAS.
- Development of outreach materials for fleets, to include training materials for drivers and maintenance personnel.
- Conduct data collection and analysis to evaluate the effectiveness of outreach efforts and deployment rates.

ADAS Technologies

ADAS – Braking

- Automatic emergency braking
- Air disc brakes
- Adaptive cruise control

ADAS – Steering

- Lane keep assist
- Lane centering
- Adaptive steering control

ADAS – Warning

- Lane departure
- Forward collision
- Blind spot detection

ADAS – Monitoring

- Driver-facing camera
- Road-facing camera
- Camera-based mirror systems

Originally Selected ADAS Technologies



Video-based On-Board
Safety Monitoring



Lane Departure Warning



Automatic Emergency
Braking



Air Disc Brakes

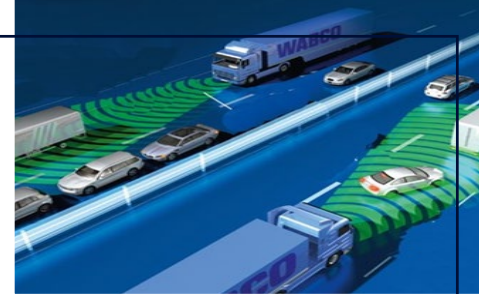
Additional ADAS Considerations



Adaptive Cruise Control



Blind Spot Warning



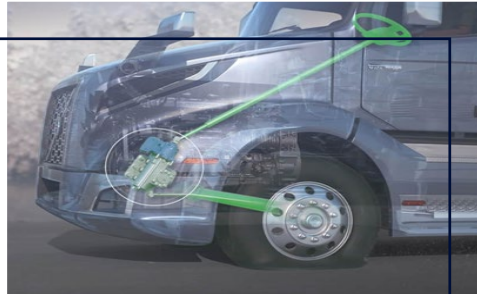
Collision Mitigation System



Active Turning Assist



Blind Spot Detection



Active Electric Steering



Lane Keep Assist



Camera Monitoring System

Estimated ADAS Societal Benefits*

ADAS	Annual Fatalities Avoided	Annual Injuries Avoided	Annual Crashes Avoided
Automatic Emergency Braking (AEB)	55	2,753	5,294
Air Disc Brakes (ADB)	37	1,447	2,411
Lane Departure Warning (LDW)	115	1,342	6,372
Video-based driver monitoring	293	17,733	63,000

*AAA Foundation for Traffic Safety

Approach

Two-year effort to accelerate the voluntary adoption of ADAS by trucking fleets:

- **2020 Objectives:**
 - Establish baseline adoption rates
 - Develop outreach and educational materials
- **2021 Objectives:**
 - Promote ADAS safety benefits, ROI, and O&M practices
 - Measure ADAS adoption rates in new truck sales
 - Quantify safety benefits, effectiveness of education/outreach
 - Summarize results in a report

Survey Respondents

726 Drivers

- Male, 45-64 yrs old, 11+ years of experience
- 88% For hire, 12% Private

Types of For-Hire Operation

Type of For-Hire	MC Exec	Truck Driver
Truckload	53.6%	76.8%
Less-than-Truckload	22.4%	6.6%
Specialized	11.2%	7.9%
Other	12.8%	8.7%

200 Motor Carrier Executives

- Male, 45-64 yrs old, 11+ years of experience
- 74% For hire, 26% Private

Length of Haul

Length of Haul (miles per trip)	Motor Carrier Executive	Truck Driver
Local (less than 100)	14.7%	7.9%
Regional (100-499)	57.1%	28.2%
Inter-regional (500-999)	22.1%	32.7%
Long-Haul (1,000+)	6.1%	31.3%

Survey Results and Outreach Launch

Survey Results—March 24 Webinar

- Technical and Market Barriers to ADAS Use
- Adoption Rates and Expected Safety Benefits
 - Wednesday, March 24 at 12 Noon Eastern Time
 - Register at www.tech-celeratenow.org

National Outreach Campaign Launch

- Upcoming online and in-person information sessions at industry conferences (TMC, ATA)
- ADAS Information Guides on Safety Benefits and ROI
- Four Tech-Celerate Now videos

Contact Information



<https://www.tech-celeratenow.org>

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