

# Identifying and Addressing Emerging CMV Trends through Research

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# EMERGING RISKS AND PROMISING SOLUTIONS

- Emerging challenges
  - Rising crash rates
  - Technological advancements
  - Integrating advancements into fleets
- Developing solutions
  - Focus on CMVs and light vehicles
  - ADAS and ADS
  - Identifying tools and resources

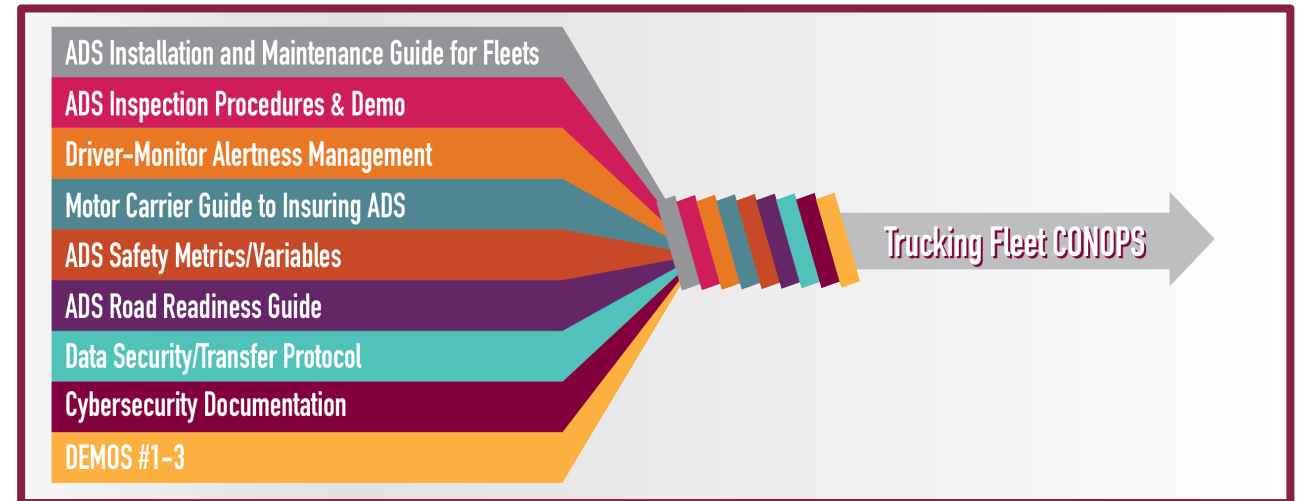


# OPPORTUNITIES TO ACCELERATE ADOPTION OF ADAS

- ADAS technologies intended to assist the driver to prevent an emergency or during an emergency situation
- Encourage use of *ADAS – Warning*
- Insight into why fleets remove ADAS from standard packages
- Better understand real-world efficacy of *ADAS – Steering*
- Disseminate ROI data
- Industry outreach and technology demonstrations
- Support ADAS adoption in markets where adoption is lagging

# TRUCKING FLEET CONOPS FOR MANAGING MIXED FLEETS

- ADS technology development moving rapidly
- Stakeholders may not have a clear picture on how ADS can fit into their daily operations
- Progress of technology is outpacing the ability of fleets, and other stakeholders, to plan for ADS deployment



# Investigating the Human Factors associated with ADAS and ADS

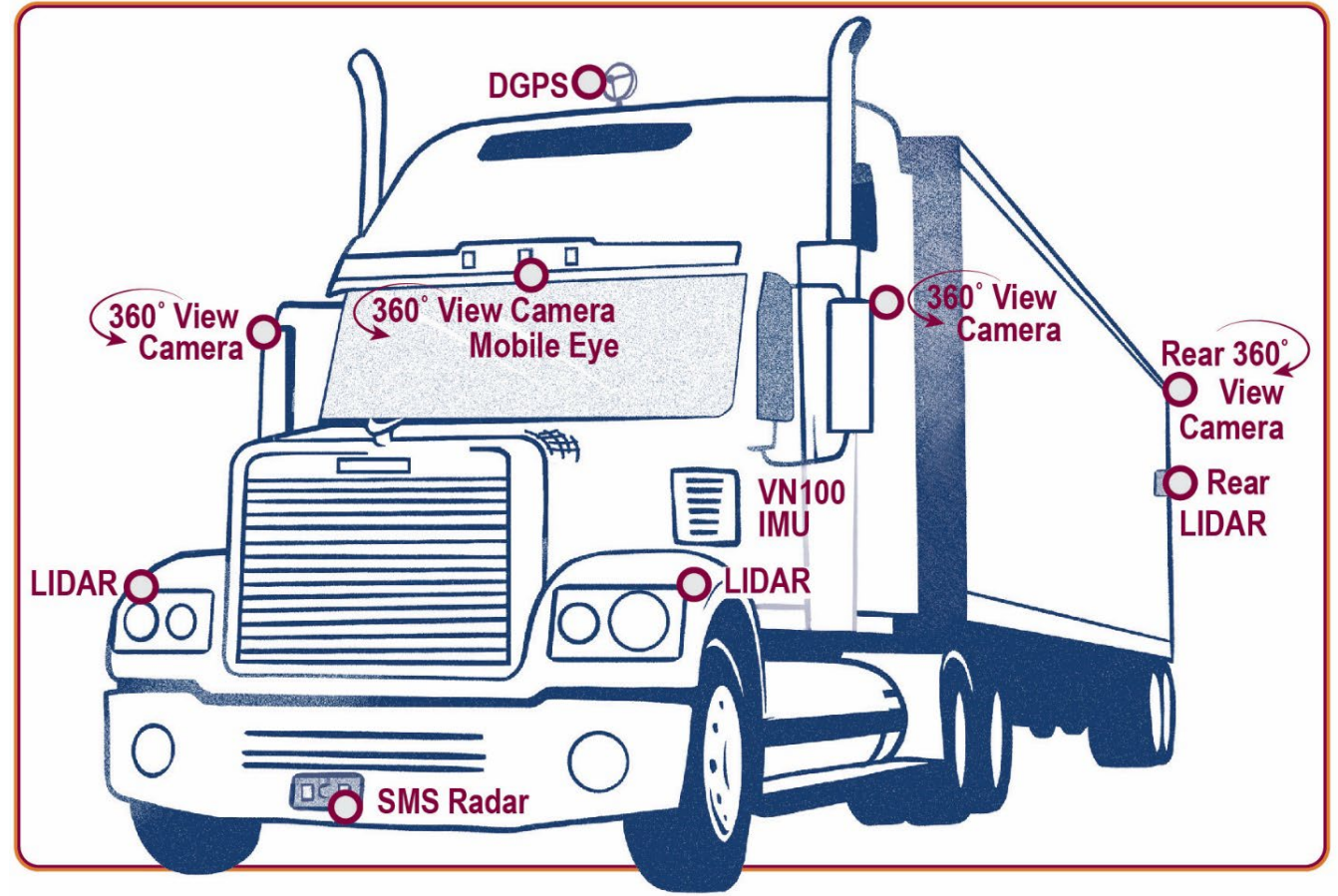
- Limited research into the human factors associated with safety of heavy vehicle ADAS and ADS
- Conducting a series of studies to investigate inattention and fatigue in L2, L3, and L4 CMVs
- Study 1: Identify effect of secondary tasks on readiness to assume control in L2 and L3 vehicles
  - Develop training to mitigate negative effects
- Study 2: Investigate effects of human-ADS teaming on the development of driver fatigue



# ADS ON-ROAD EVALUATION METHODS FOR HEAVY TRUCKS

Design, prototype, and test a means for assessing driving performance of Class 8 trucks during on-road operations

- 1) Develop a Ground Truth Trip Recorder (GTTR), a 'bolt-on' perception system for heavy trucks
  - Collect and record continuous data
- 2) Assess and parse sample scenarios
- 3) Apply driving performance metrics





**THANK  
YOU**

**FUTURE  
DISCUSSIONS**

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