TRUCK PLATOONING UPDATE

Jennifer Sebesta
Program Coordinator
Transportation & Planning Services

John Sharp
Deputy Director/Division Director
Transportation & Planning Services

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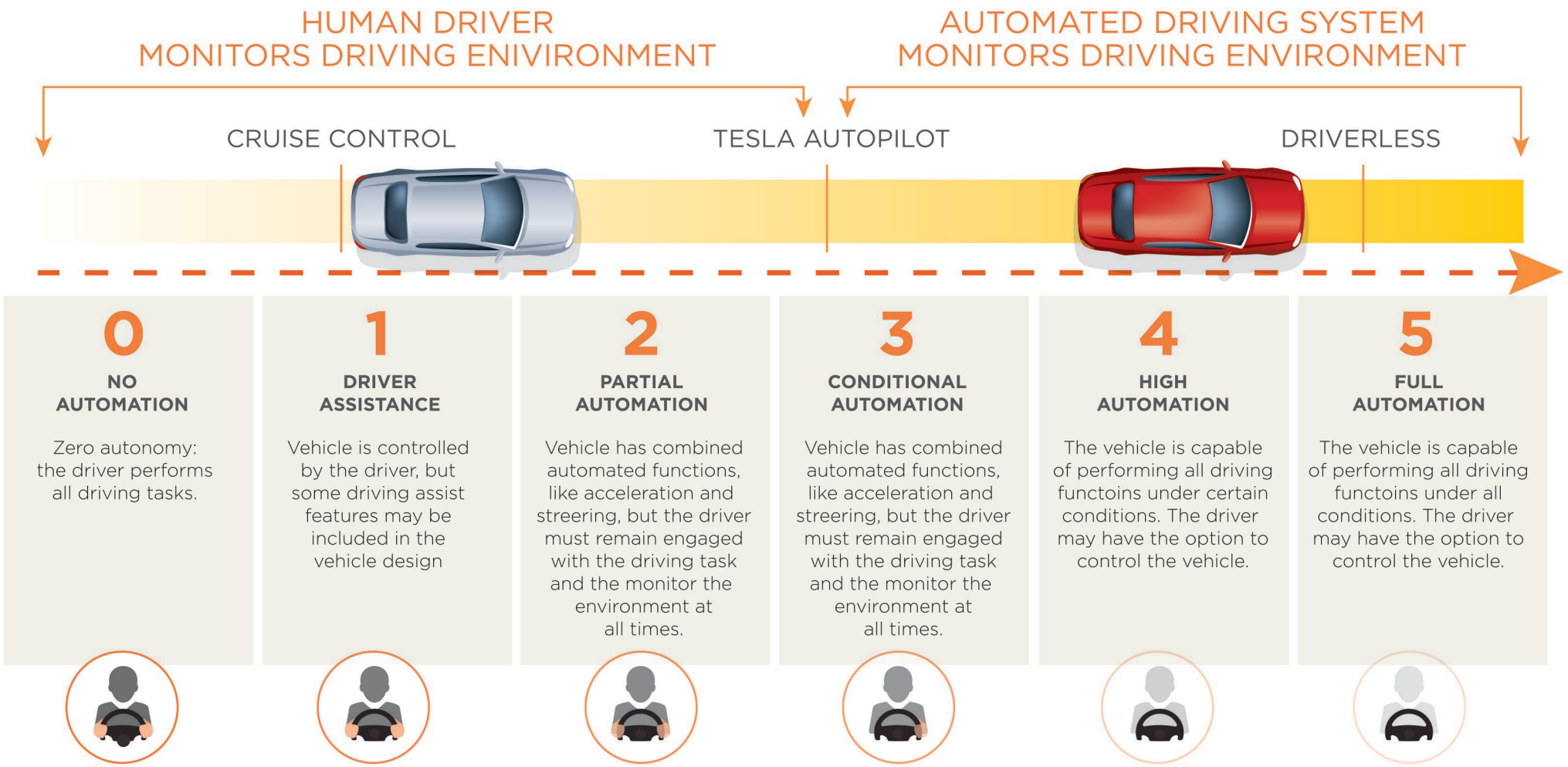
LEVEL OF AUTOMATION



FOR MORE INFORMATION VISIT: SAI International

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TRUCK PLATOONING

- **Cooperative Adaptive Cruise Control:** Connected vehicle technology enables the vehicle to continuously communicate and coordinate travel with other trucks to follow each other at close proximity

- **Level 1 – Driver assistance**
  - **Vehicle** controls coordinated speed and braking with the lead vehicles
  - **Driver** maintains steering control at all times (always ready to take full control)

- **Level 2 – Partially automated**
  - **Vehicle** handles all steering, braking, and acceleration tasks
  - **Driver** responsible for watching traffic and responding to system prompts

- **Driver-Centric not Driverless**

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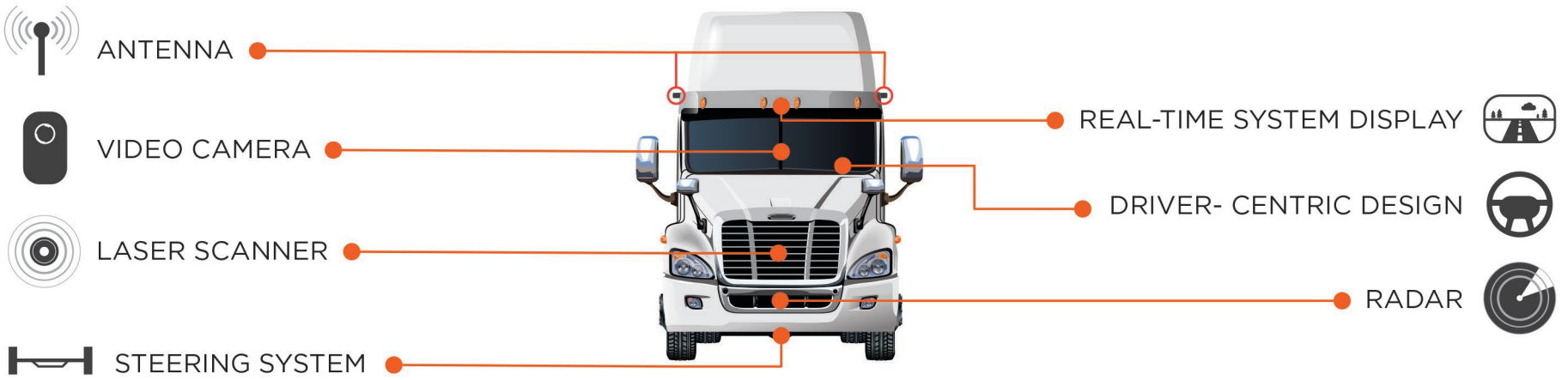
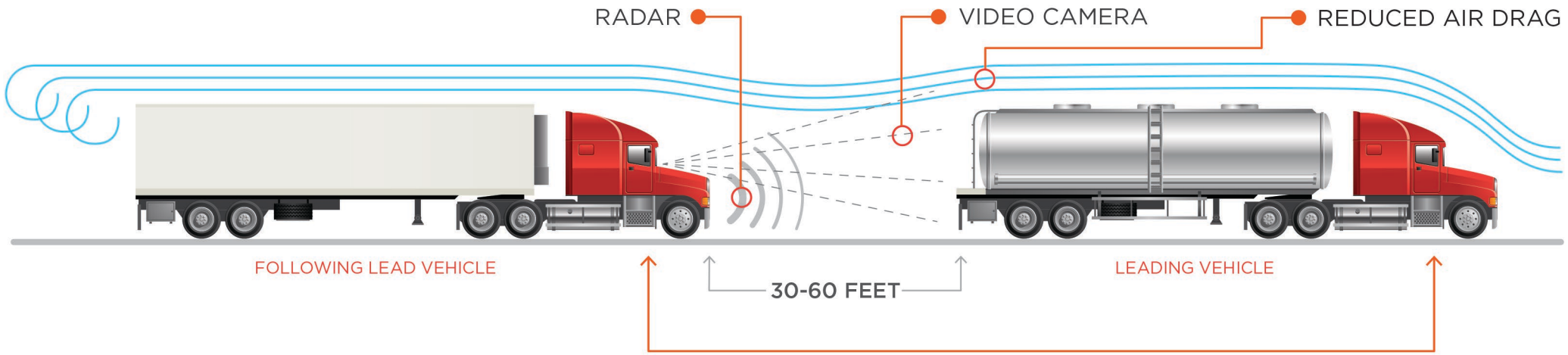
KEY COMPONENTS

https://www.youtube.com/watch?v=tLWGGponorA





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TRUCK PLATOONING BENEFITS

Fuel Consumption

- $70,000/year per truck in diesel fuel
- 20-39% of operating costs
- 43.7 billion gallons of fuel (2015)

Fuel Efficiency

- At 50-60 foot following distance:
  - 4-5% for lead truck
  - 10% for following truck
- 65% of long-haul miles could be platooned
  - Rural, divided, multi-lane interstates/highways
    (Texas A&M Transportation Institute)

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TRUCK PLATOONING BENEFITS

Truck-Related Crashes (2016)

- 4,317 people killed in crashes involving large trucks
- 72% were occupants of other vehicles
- 11% were nonoccupants (pedestrians, cyclists, first responders, roadway workers)

Safety Advances

- Technology: Radar, cameras, laser scanning
- Reaction time versus human driver alone
- Truck platooning can be restricted in severe weather or traffic conditions

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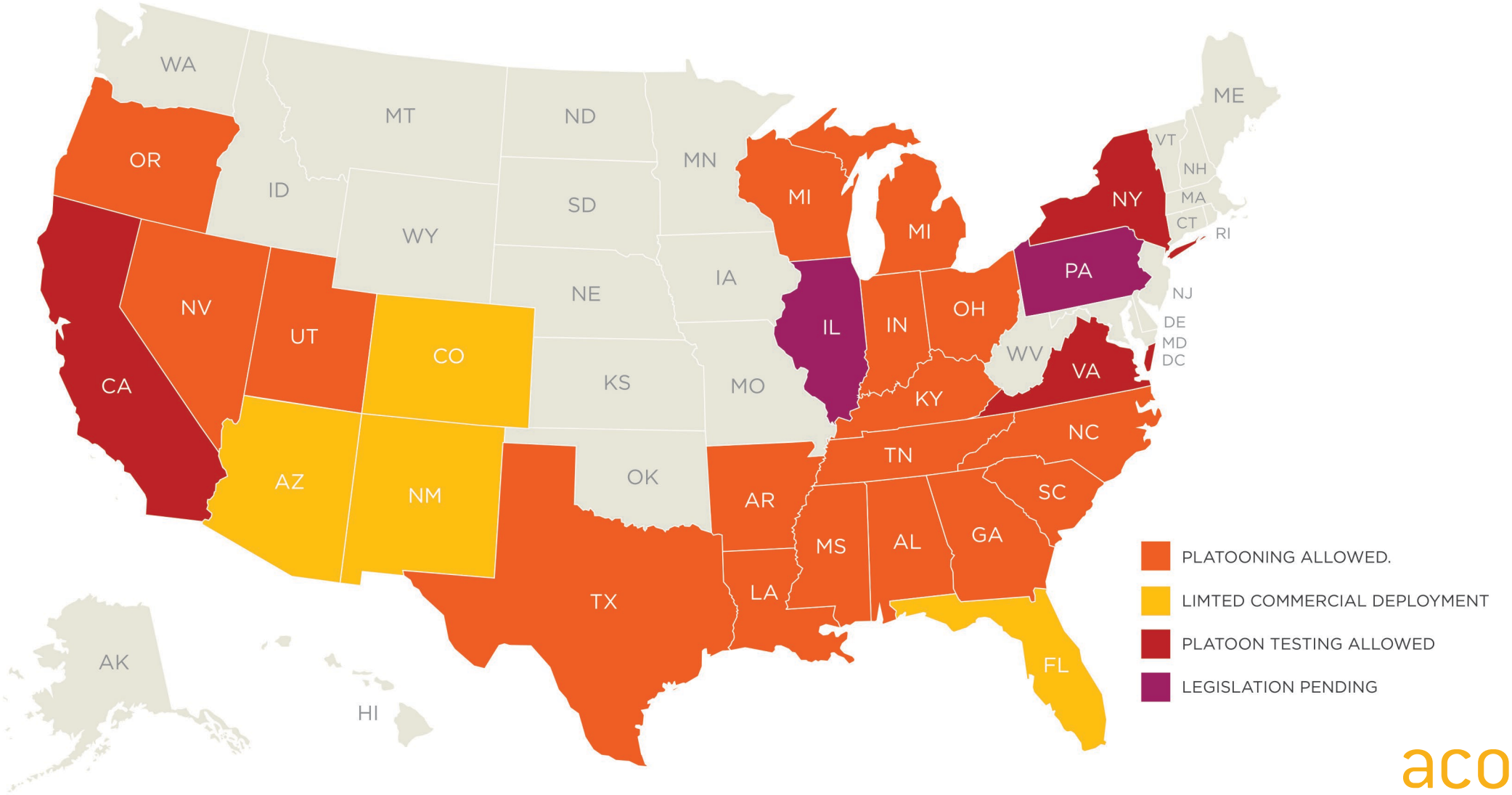
ENABLING LEGISLATION PROGRESS



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TRUCK PLATOONING IN OKLAHOMA

- Many states have following too closely (FTC) statutes (motor vehicle codes), including Oklahoma
- States working on possible agreements for multistate testing
  - I-10 corridor California, Arizona, New Mexico, and Texas
  - I-40 corridor Tennessee, Arkansas, and Oklahoma
- Driving Oklahoma Working Group
- Senate Interim Study 18-12 – Study on Truck Platooning

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SOURCES

- https://www.bts.gov/product/freight-facts-and-figures
- https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812451

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QUESTIONS?

Jennifer Sebesta
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ASSOCIATION OF
CENTRAL OKLAHOMA
GOVERNMENTS

acogok.org

Office: 405.234.2264

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