

Industry Perspectives on Autonomous Trucks

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Institute**

ATRI

Trucking industry's NFP research organization

- Safety
- Mobility
- Economic Analysis
- Technology
- Environment

www.truckingresearch.org

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2020 Top Industry Issues

Commercial Drivers

1. Truck Parking
2. Driver Compensation
3. Detention / Delay
4. Hours-of-Service
5. Driver Training Standards
6. Automated Truck Technology
7. CSA
8. Driver Health & Wellness
9. Speed Limiters
10. ELD Mandate

Motor Carriers

1. Driver Shortage
2. Driver Retention
3. CSA
4. Insurance Cost / Availability
5. Tort Reform
6. Economy
7. Transportation Infrastructure / Congestion / Funding
8. Driver Distraction
9. Detention / Delay
10. Hours-of-Service

AT Challenges

- **ROIs**
 - ◆ **Driver costs still exist**
 - ◆ **No regulatory relief in sight**
- **Traffic Congestion**
- **E-Commerce**
- **Litigation / Insurance**
- **Lack of Jurisdiction Standards**
- **Weather**
- **Infrastructure**
- **DSRC vs 5G??**

ROI Issues...

- **Slim margins**
- **Non-driving obligations exist**
- **Expensive equipment**



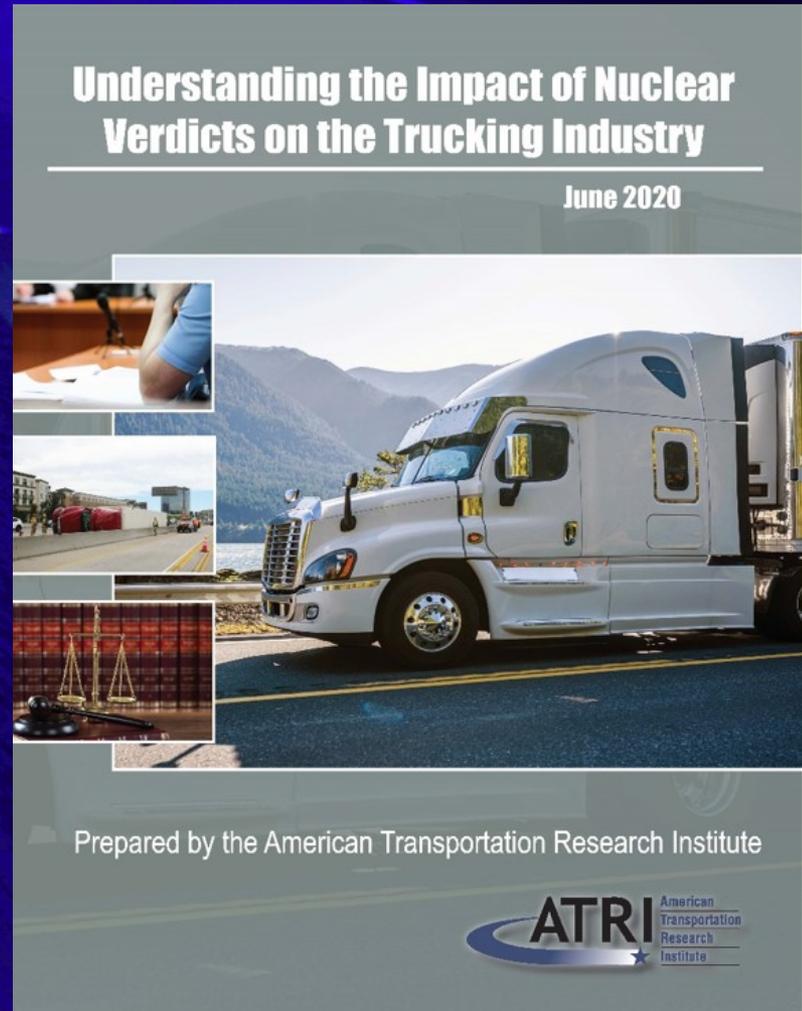
Traffic Congestion & Ecommerce...

- **Truck trip distances decreasing, moving to urban settings**
- **Low speeds reduce fuel economies**
- **Congestion raises all operational costs**
- **Crashes increase during rush hours**
- **Extremely problematic for Platooning**

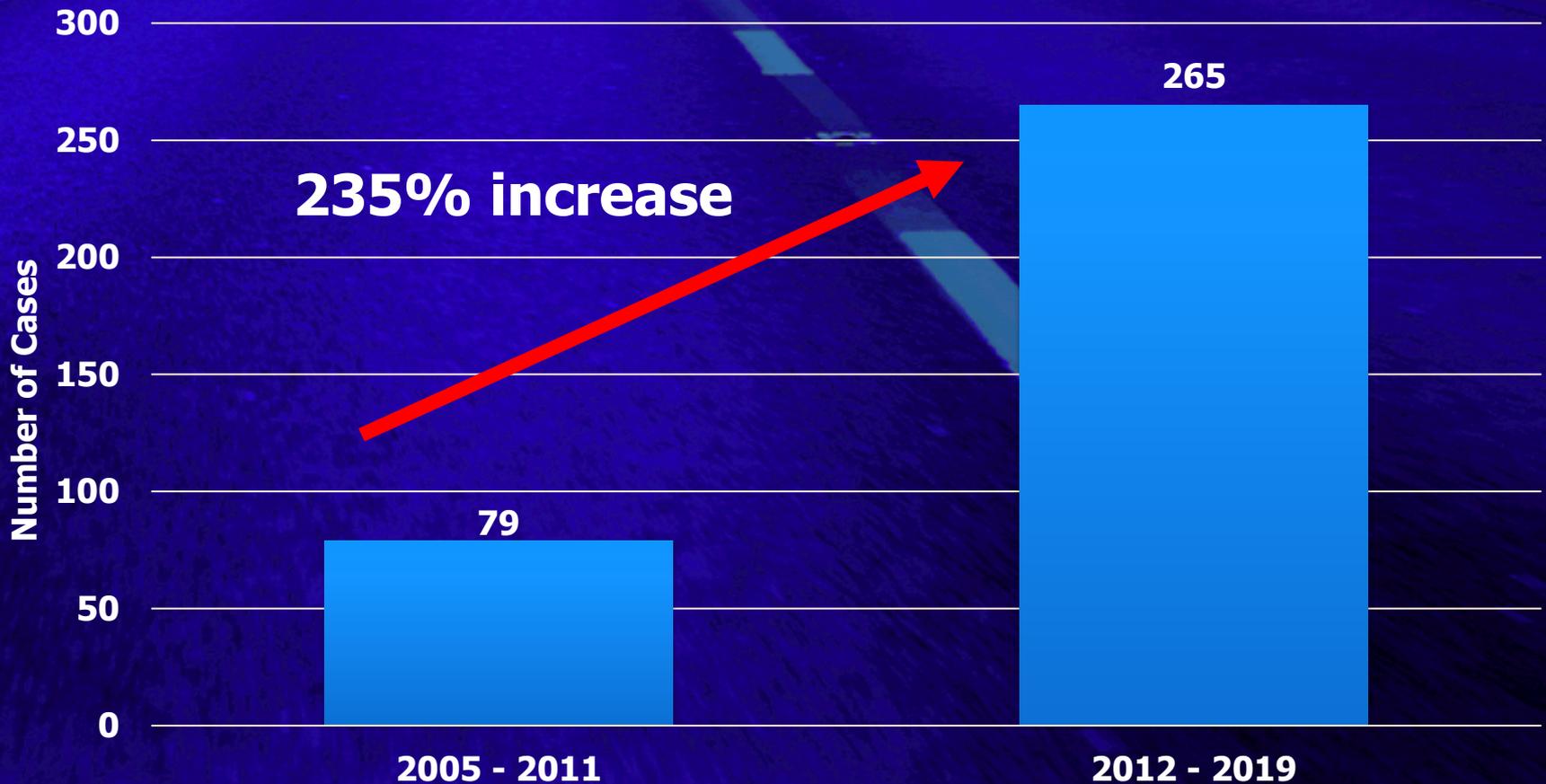


Nuclear Verdict Impacts

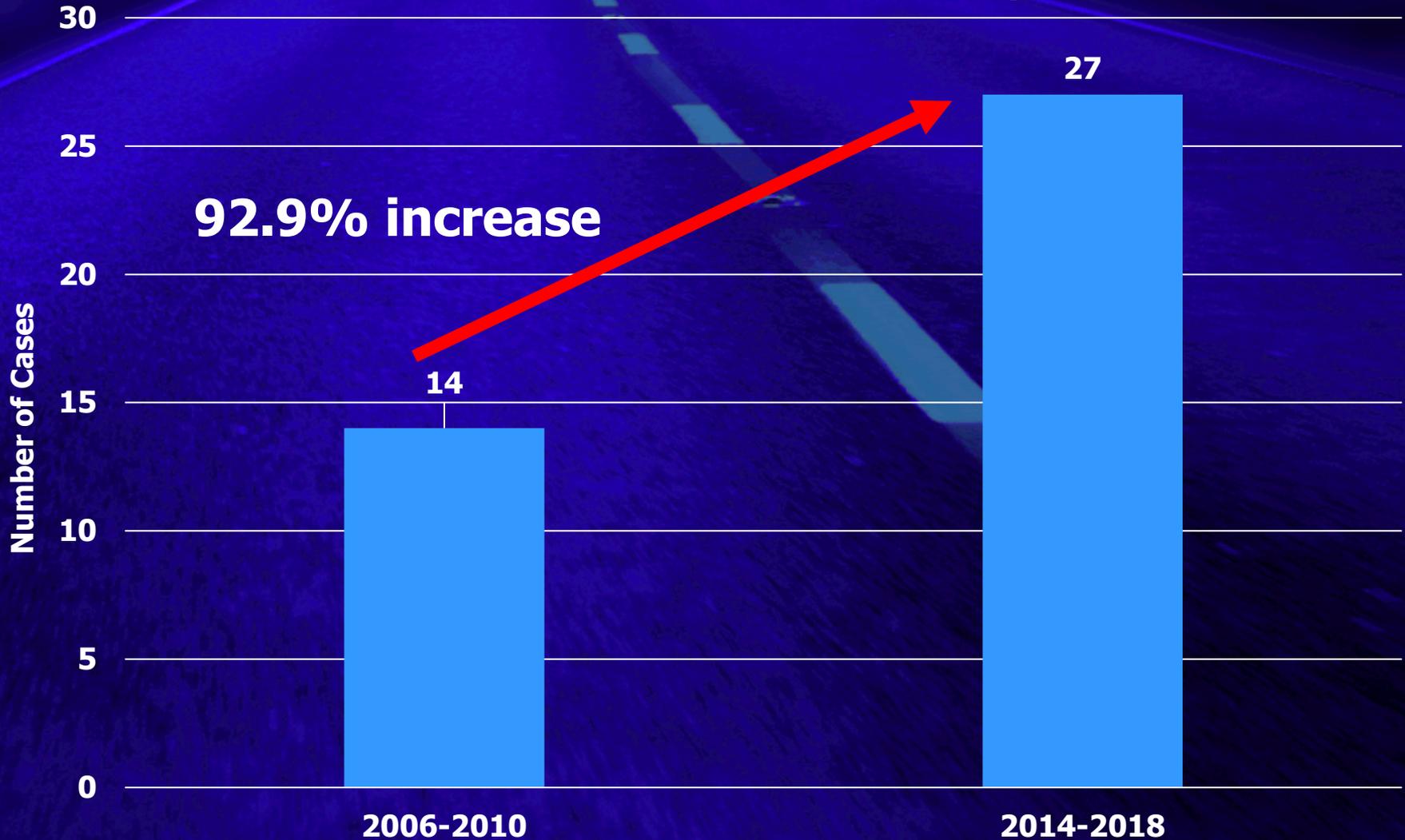
- Comprehensive analysis of 600+ cases spanning 15 years
- In-depth interviews with defense and plaintiff attorneys, as well as insurance industry and safety experts
- Detailed analysis of litigation financing
- Mitigation strategies from other industries



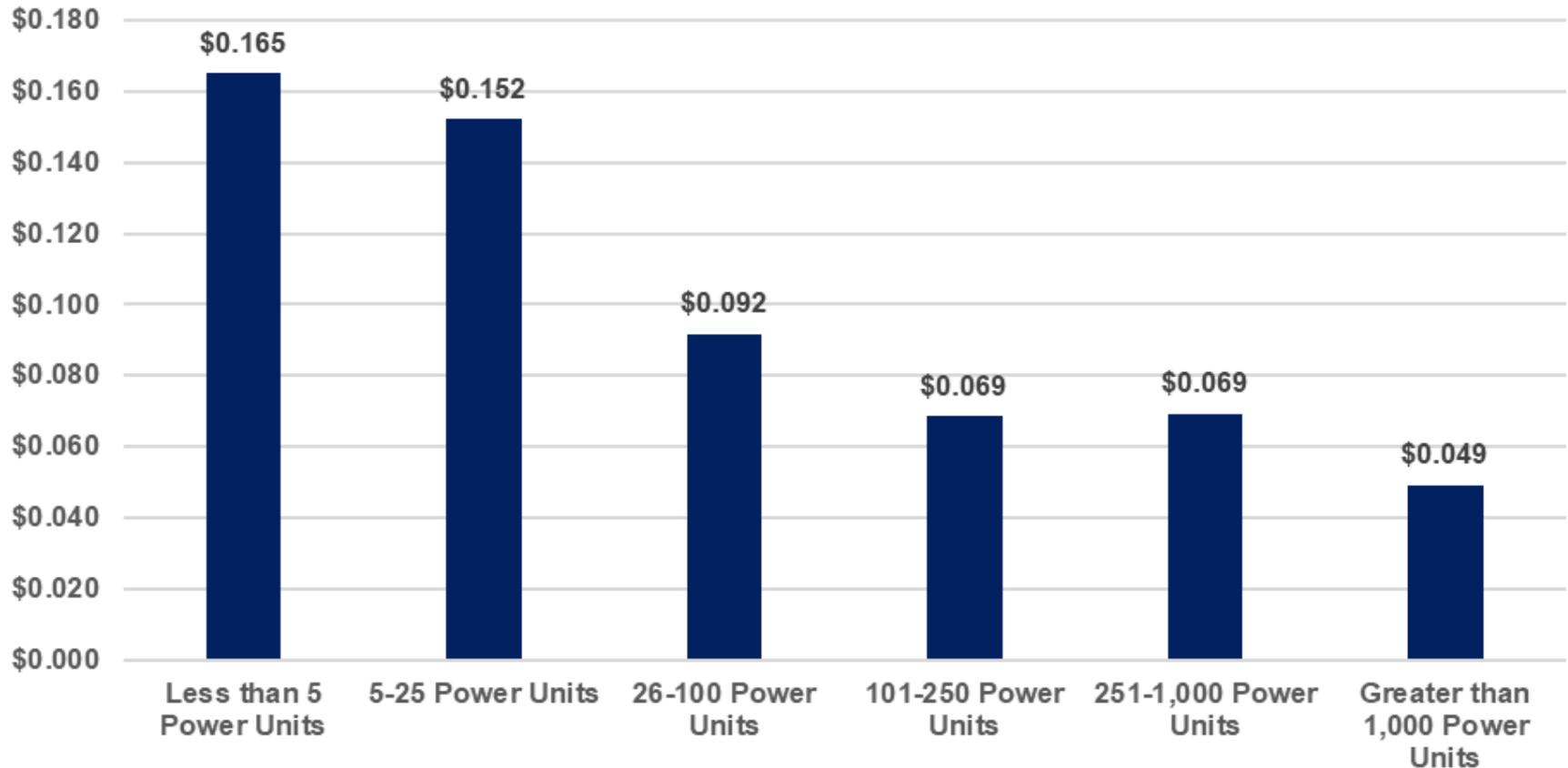
Cases with Verdicts \$1M+



Cases with Verdicts \$10M+

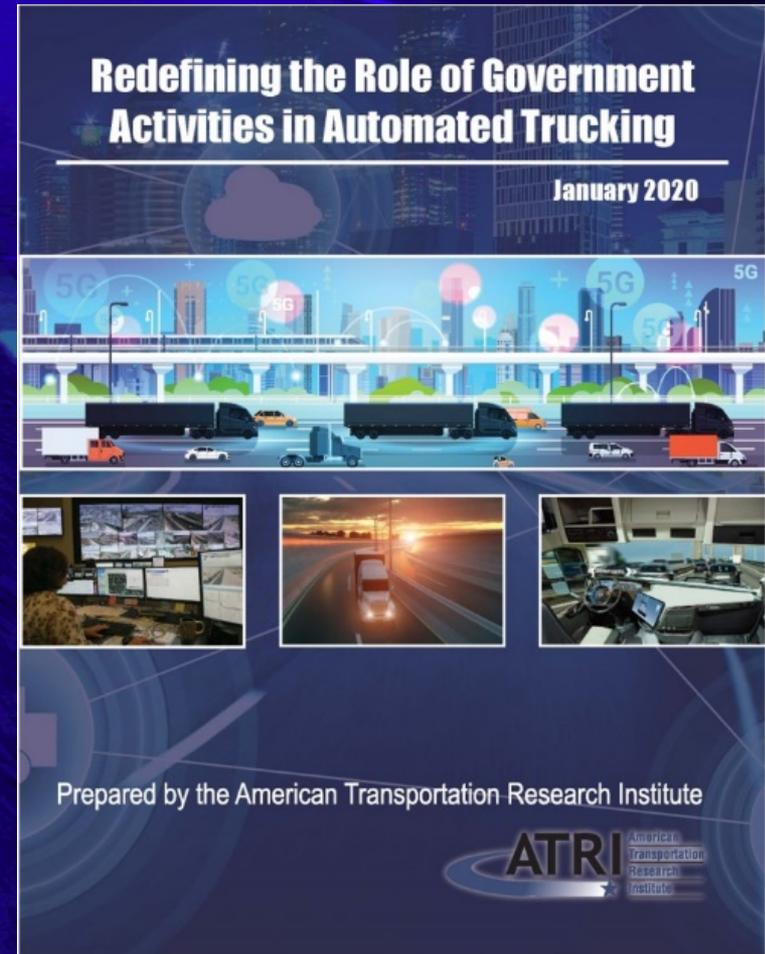


Insurance Cost Per Mile by Fleet Size



Autonomous Trucking

- Identifies positive / negative impacts from gov't policies, programs, regulations that target AT development and testing
- Proposes framework for developing AT standards







Advanced Driver Assistance Systems



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





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

Project Recommended ADAS Performance Buckets

Active Braking Systems

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

Active Steering Systems

- Lane keep assist
- Lane centering
- Adaptive steering control

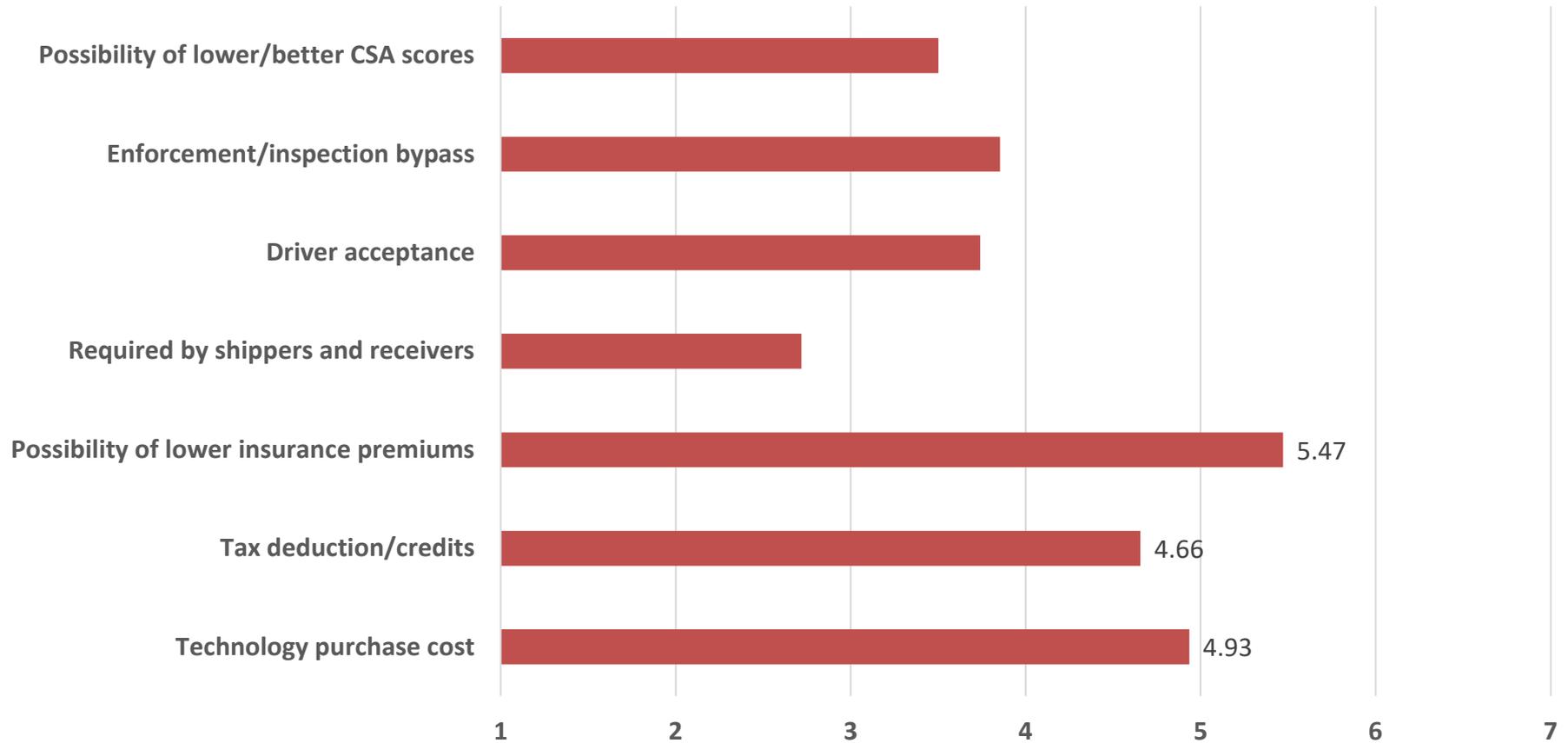
Active Warning Systems

- Lane departure
- Forward collision
- Blind spot detection

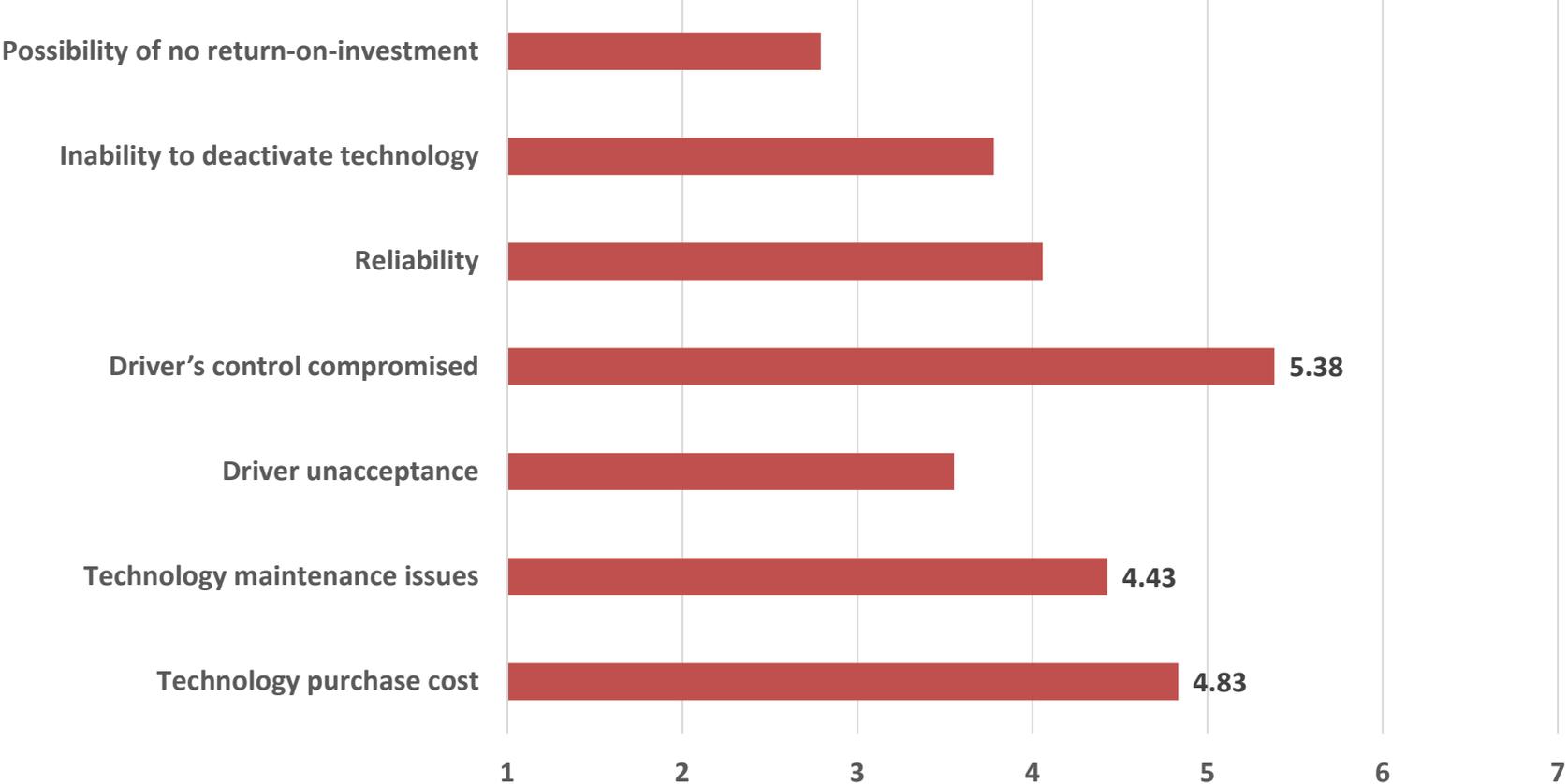
Camera Monitoring Systems

- In-cab facing driver training
- Forward facing event recording
- Side rear-view for mirrors

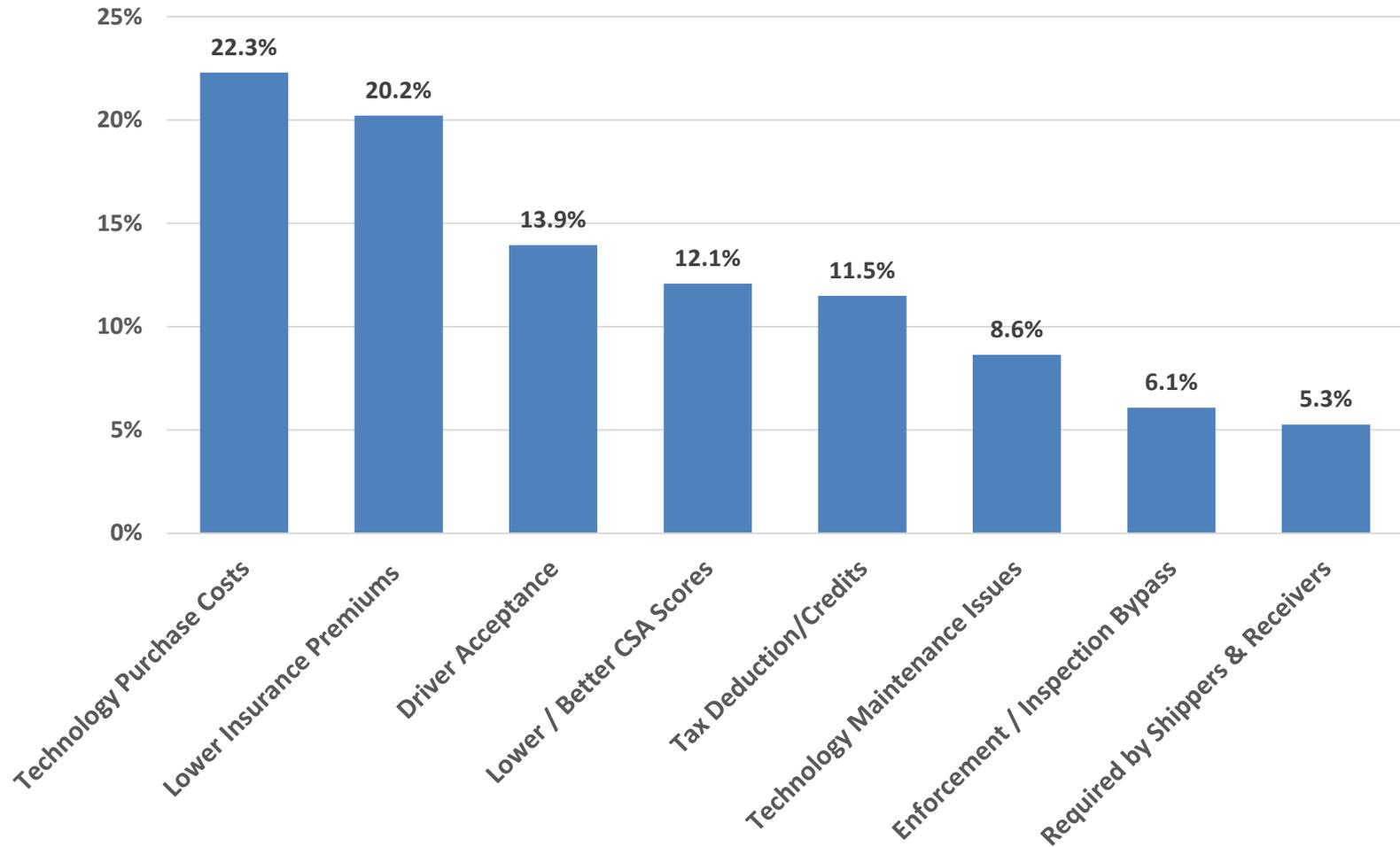
Most Influential Factors in Deciding to Purchase ADAS



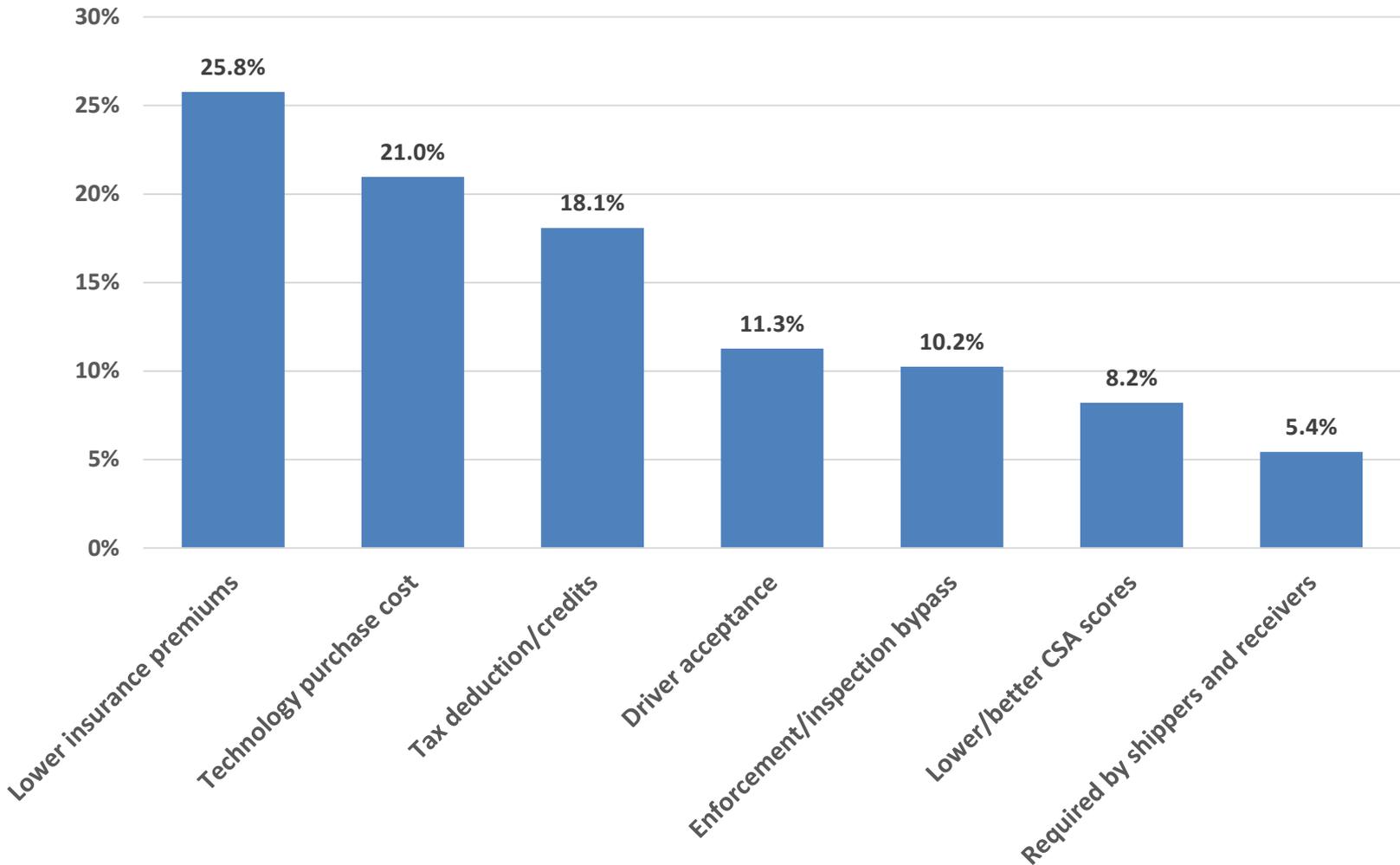
Most Influence Factors in Deciding Not to Purchase ADAS



Carriers: Top Ranked Issues Impacting Adoption Benefits



Drivers: Top Ranked Issues Impacting Adoption Benefits



Questions?

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