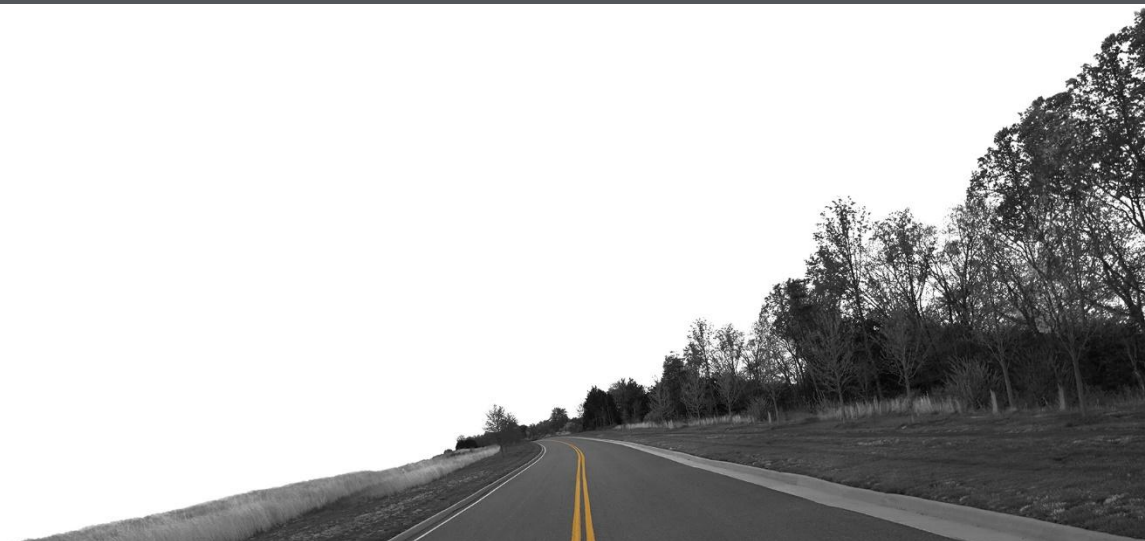
Reducing deaths and injuries from risky driving and big vehicles

Drive Smart Virginia meeting

March 10, 2026

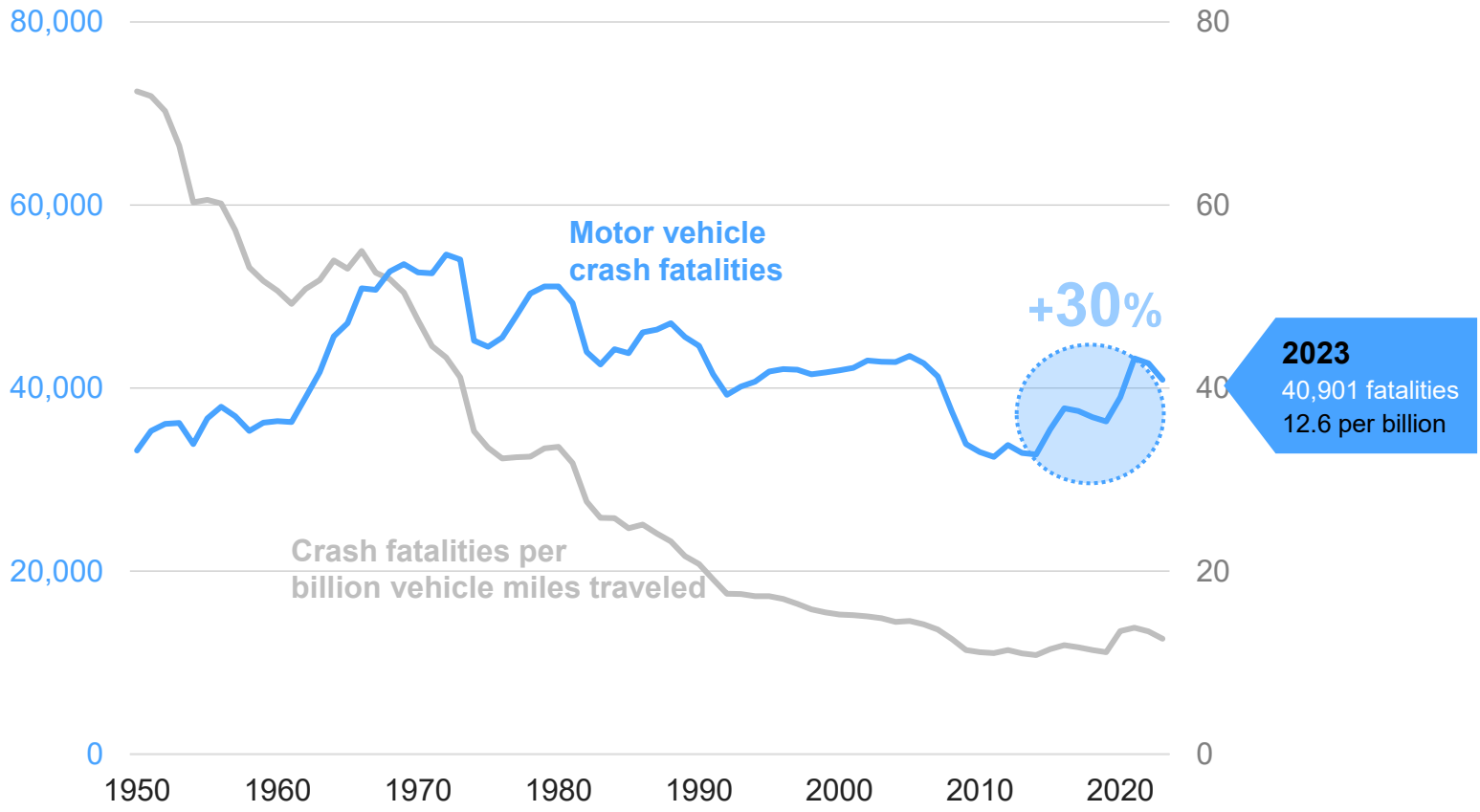
David G. Kidd, Ph.D.
Vice President, Vehicle Research



Motor vehicle crash fatality rates have **declined significantly** in the U.S. during the past 50+ years, **but…**

U.S. motor vehicle crash fatalities

1950-2023



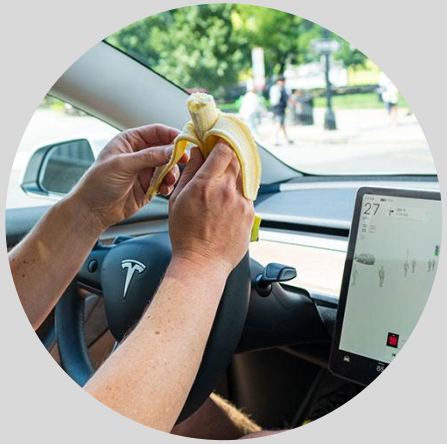
30x30 Changing the trajectory

Reduce roadway fatalities 30% by 2030

30 x 30

Reduce roadway fatalities 30% by 2030

Emphasis areas



Reducing risky behavior

Extending safety to everyone

Accelerating commercial vehicle safety

IIHS HLDI

Risky behaviors

2023 Fatalities

Fatalities with an **alcohol-impaired** driver

Fatalities in **speeding-related** crashes

Fatalities in **distraction-related** crashes

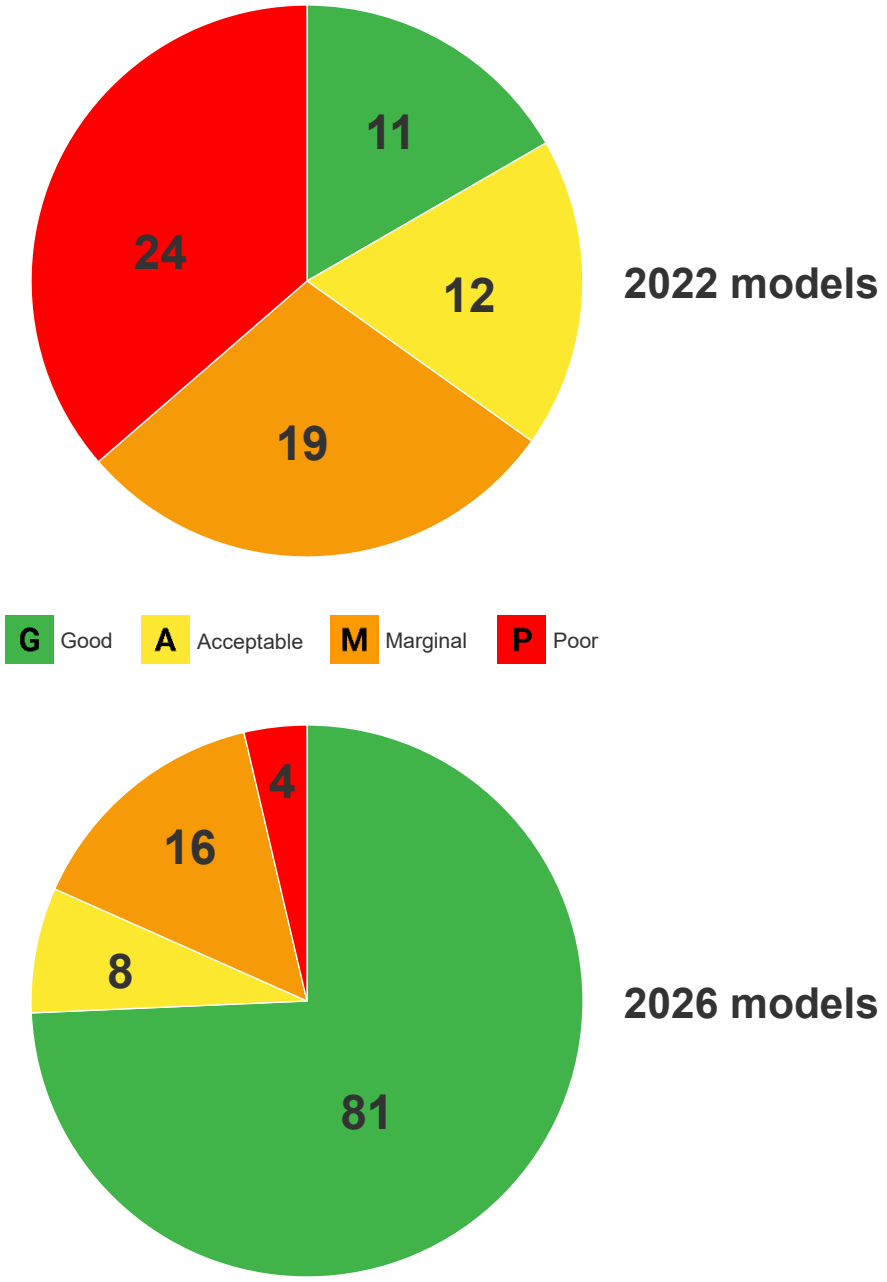
Fatally injured passenger vehicle drivers who were **unbelted**

IIHS ratings to encourage better belt reminder systems

Belt reminders should:

- Notify when front-seat occupant is unbelted and vehicle is moving
- Remind long enough to motivate occupant to buckle up
- Be “loud and clear”
- Provide timely information about rear belt use
- Notify when rear-seat occupant unbuckles while vehicle is moving

Belt reminders have improved rapidly since IIHS began rating them



Risky behaviors

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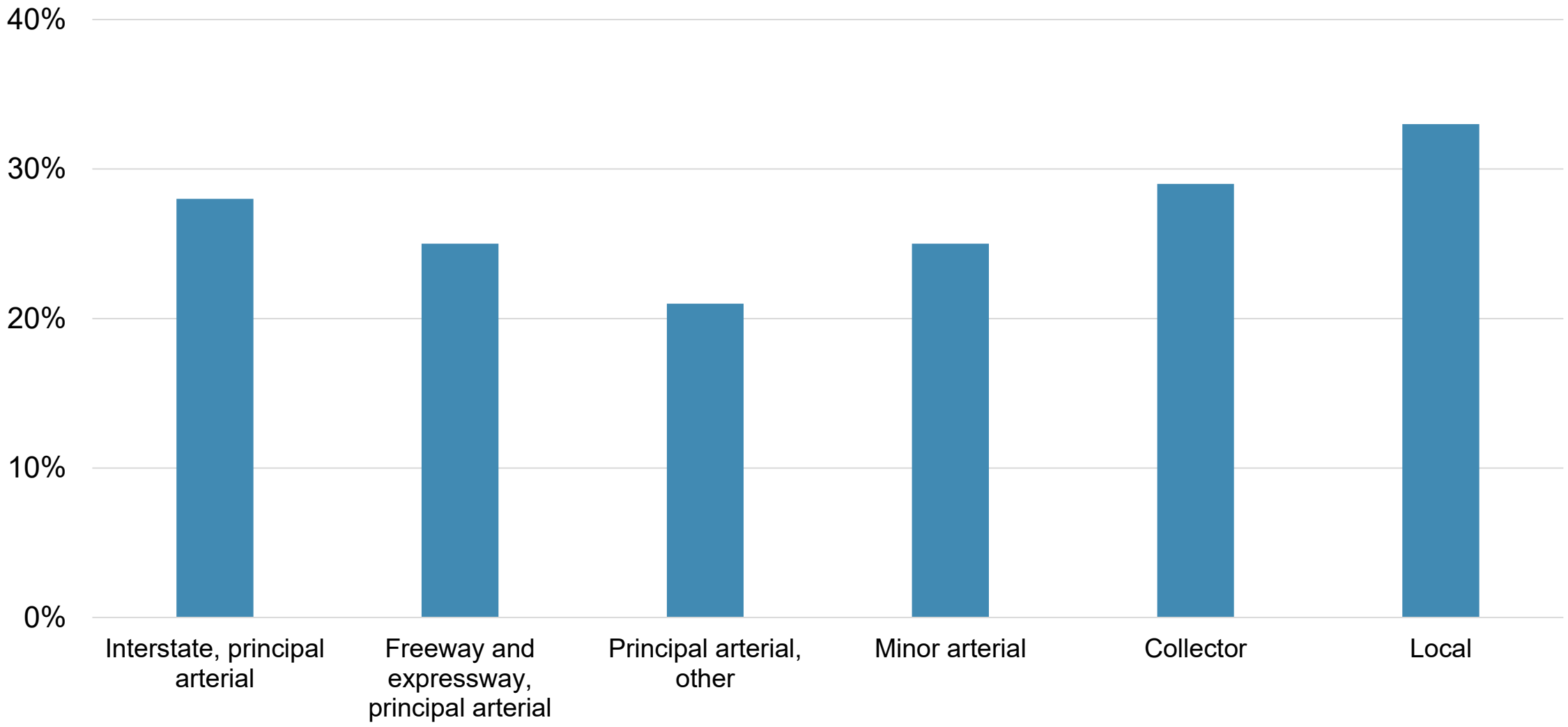
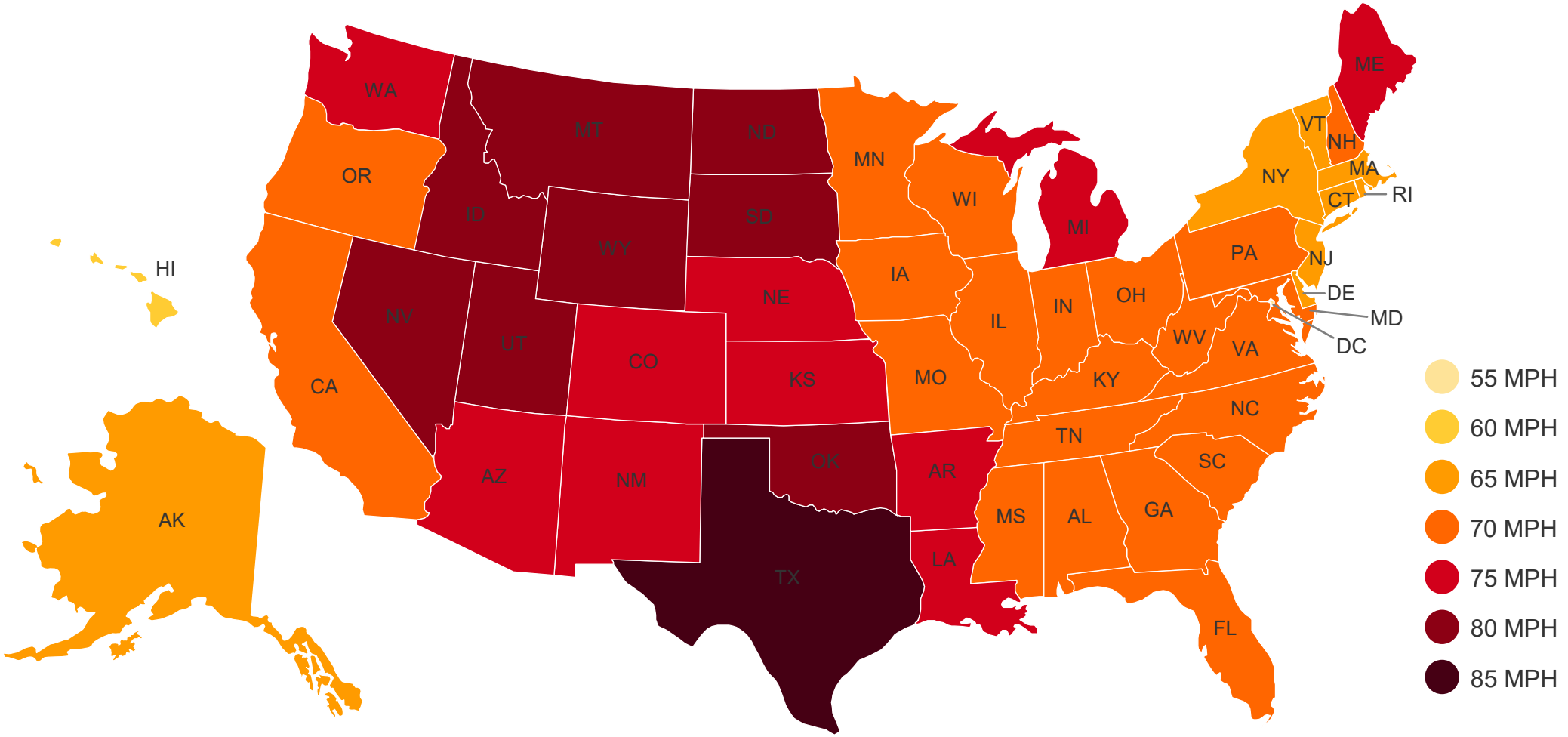
Speed-related crashes occur on all types of roads

Percent of fatalities that were speeding-related by road class, 2018



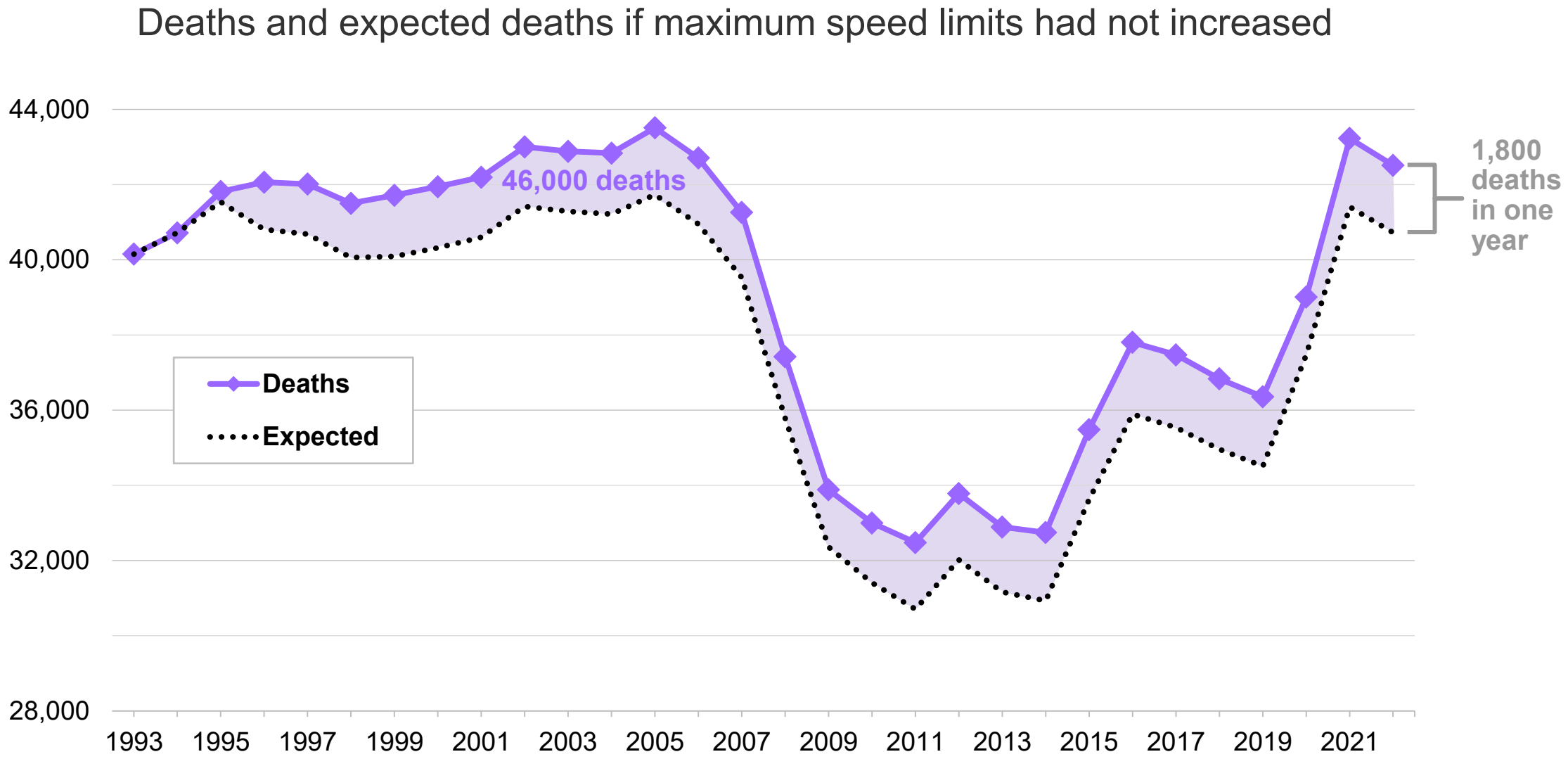
Eight states now have maximum speed limits of at least 80 mph

March 2026



IIHS HLDI

Increases in maximum speed limits cost 46,000 lives in 29 years



IIHS HLDI

Death and injury reductions for G vs. P ratings in IIHS tests

Original moderate overlap front

Fatality risk in head-on crashes involving like vehicles is

↓46%

Driver-side small overlap front

Fatality risk in frontal crashes is

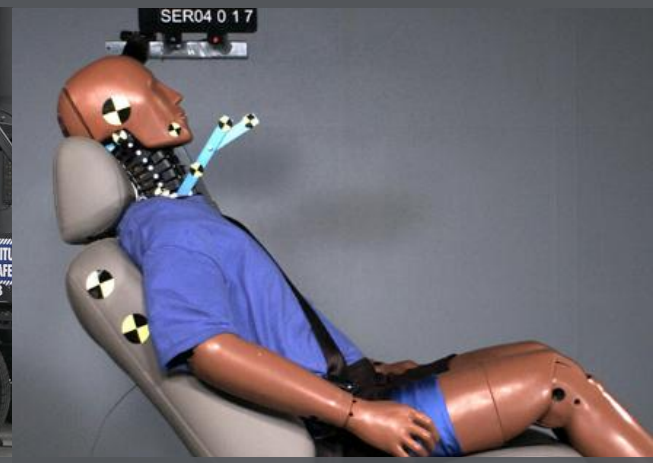
↓12%

Original side impact

Fatality risk in side-impact crashes is

↓70%

in addition to benefit of side airbag head protection



Head restraints/ whiplash mitigation

Neck injury risk in rear crashes is

↓15%

Risk of neck injury requiring 3+ months treatment is

↓35%

IIHS HLDI


Occupant compartment intact
IIHS Moderate Overlap
40 mph
Test No. CAL 3823
IIHS
HUMANETICS
40 mph
Occupant movement controlled
40 mph

Policy matters!

Higher limits lead
to faster speeds

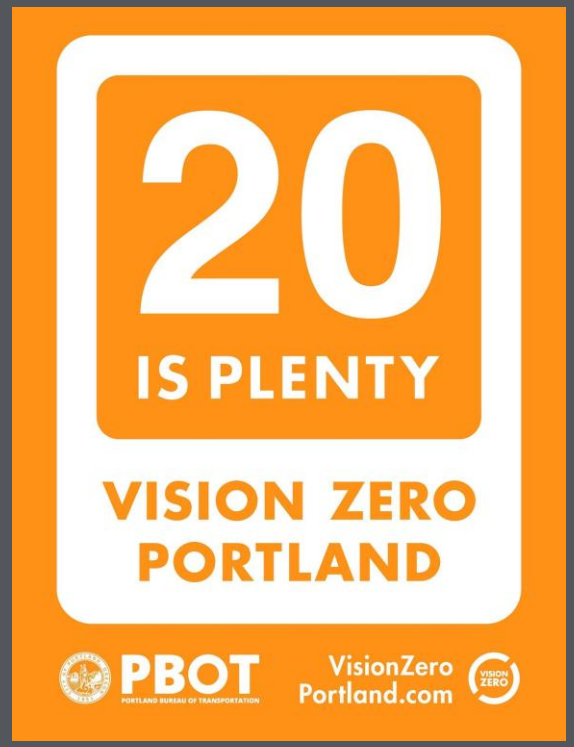
Faster speeds lead to
more crashes and injuries

U.S. cities are lowering speed limits

2014

2016

2017

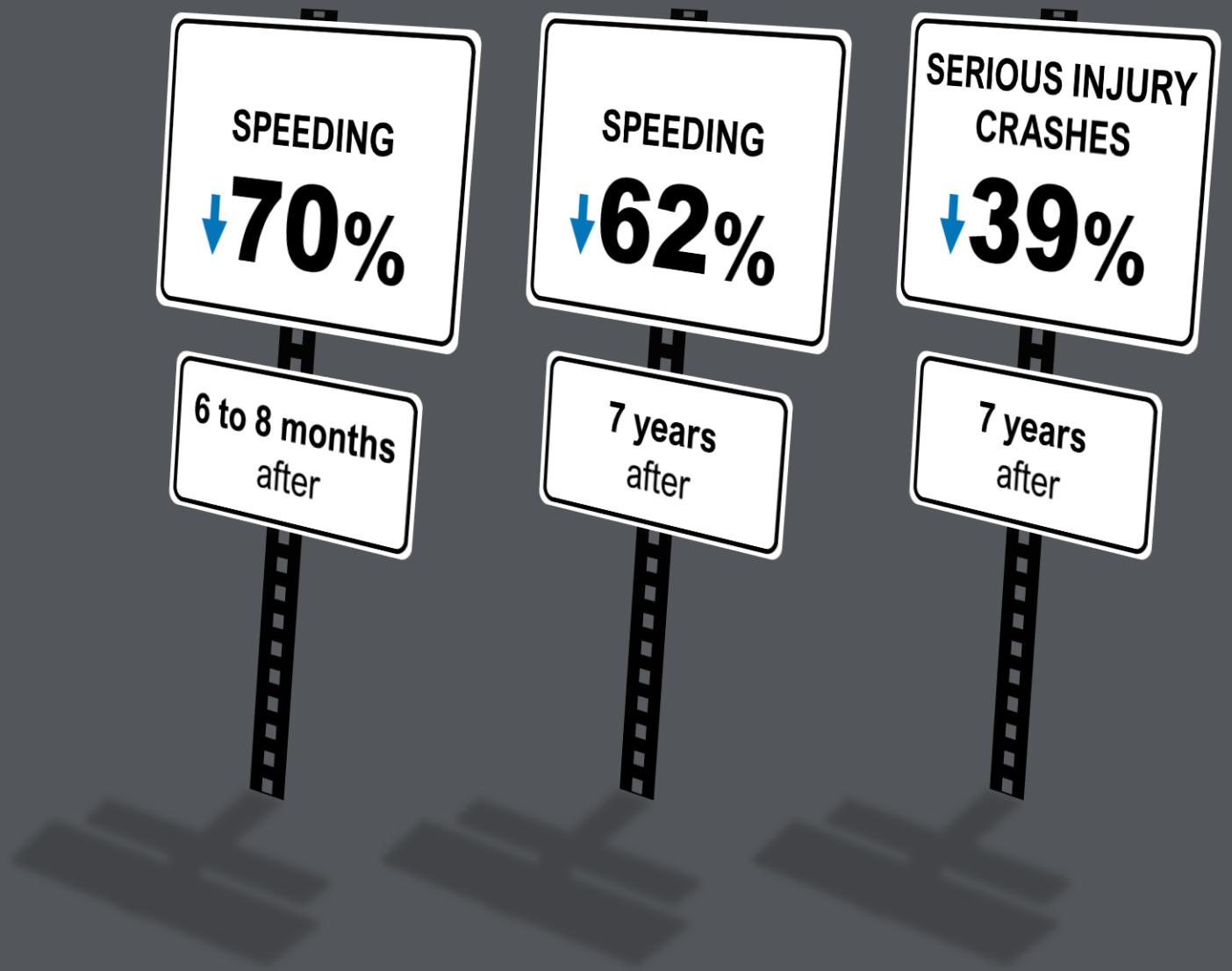


2018

IIHS HLDI

Montgomery County speed safety camera program

- Changes in legislation
- Smart implementation
- Community support



Intelligent Speed assistance

ISA is already here

Availability on 2025 models

Speed limit display

49.4% standard

16.3% optional

34.3% not available

Advisory warning

48.0% standard

16.4% optional

35.8% not available

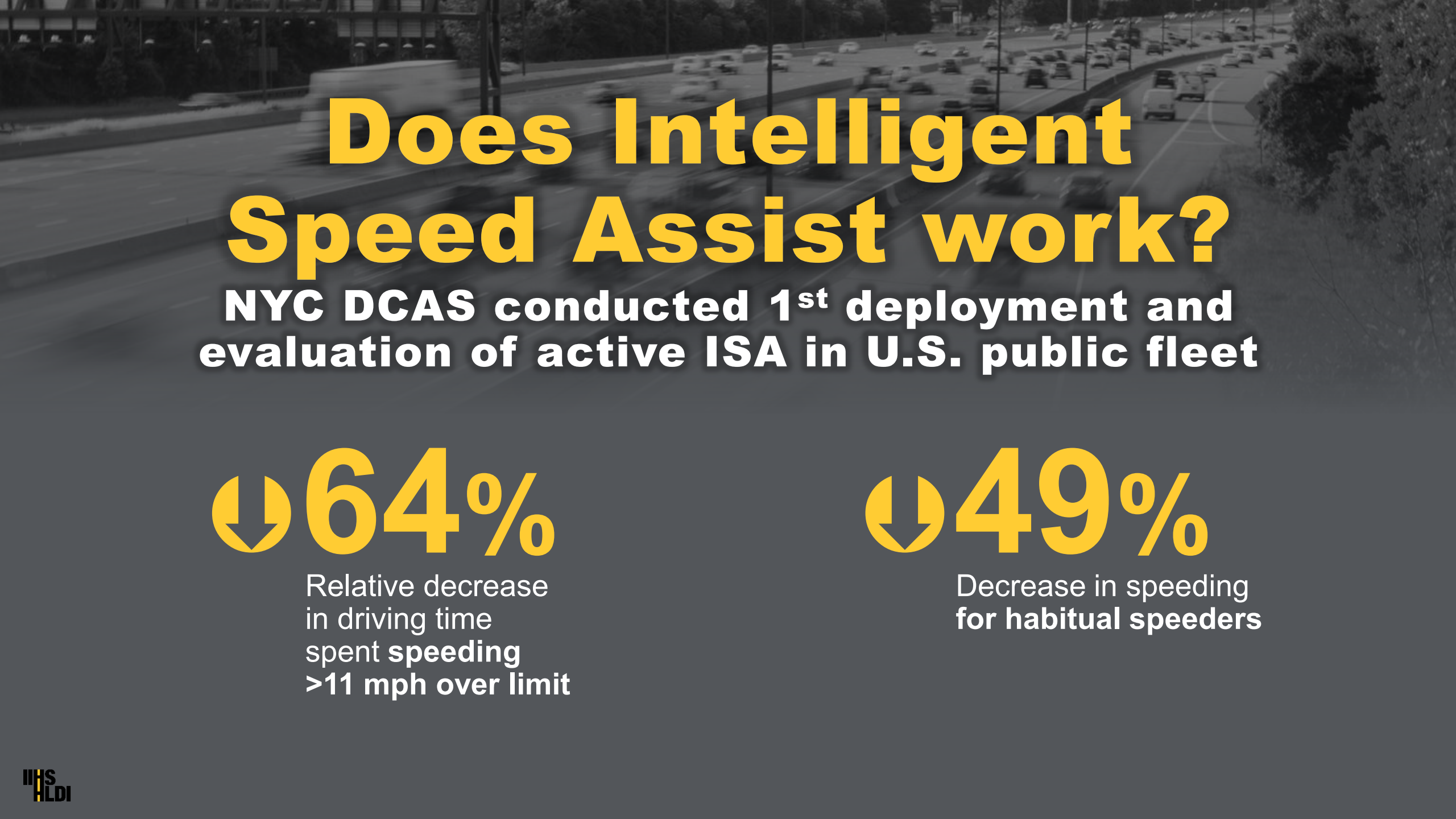
Intelligent ACC

21.2% standard

10.9% optional

67.6% not available

IIHS HLDI



Does Intelligent Speed Assist work?

NYC DCAS conducted 1st deployment and evaluation of active ISA in U.S. public fleet

64%

Relative decrease in driving time spent **speeding >11 mph over limit**

49%

Decrease in speeding **for habitual speeders**

IIHS HLDI

Risky behaviors

2023 Fatalities

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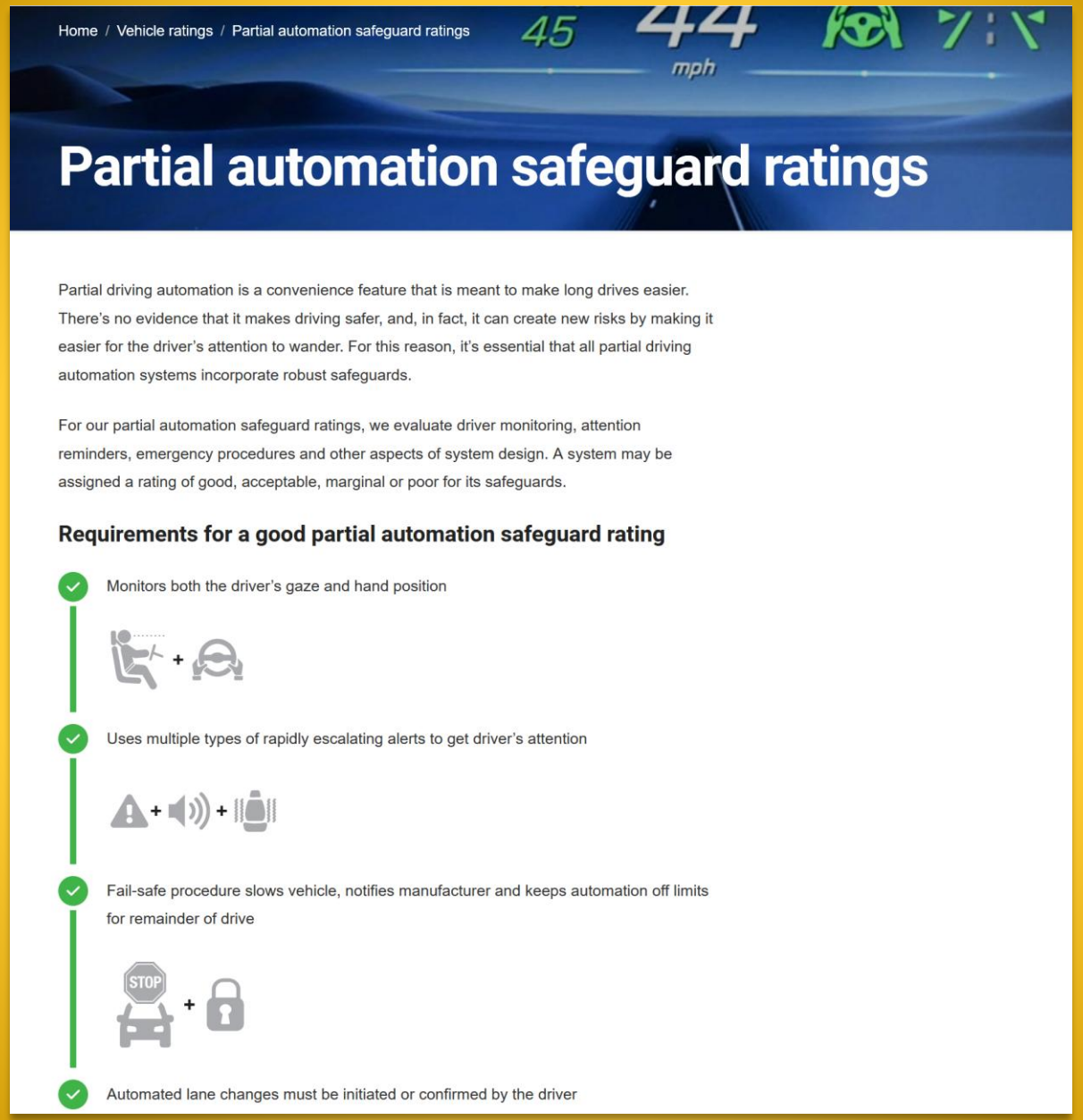
Fatally injured passenger vehicle drivers who were **unbelted**

First partial driving automation safeguard ratings show industry has work to do

IIHS news, March 2024

Only one of 14 partial driving automation systems evaluated earns an acceptable rating for its safeguards designed to prevent misuse and lapses of attention.



RATING COMPONENT 1

DRIVER MONITORING

- Simultaneously monitor where the driver is looking and what the driver's hands are doing
  - Eye, head, and hand monitoring

Survey of

OVER 3,000 SUBARU OWNERS with DriverFocus

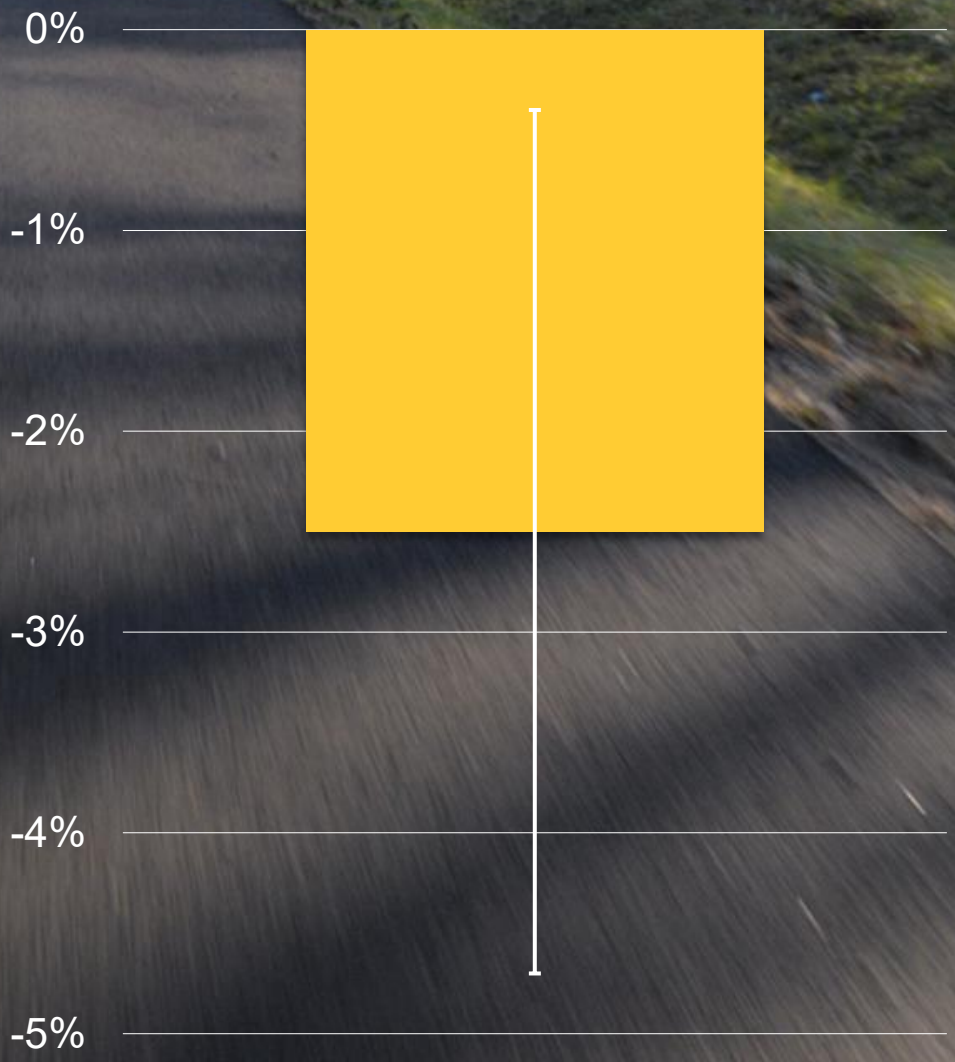
86% Keep system turned on most or every drive

70% Would want it on next vehicle

78% Agree it helps drivers pay attention

Subaru vehicles with DriverFocus have lower insurance claim frequency

Percent change in property damage liability claim frequency



Risky behaviors

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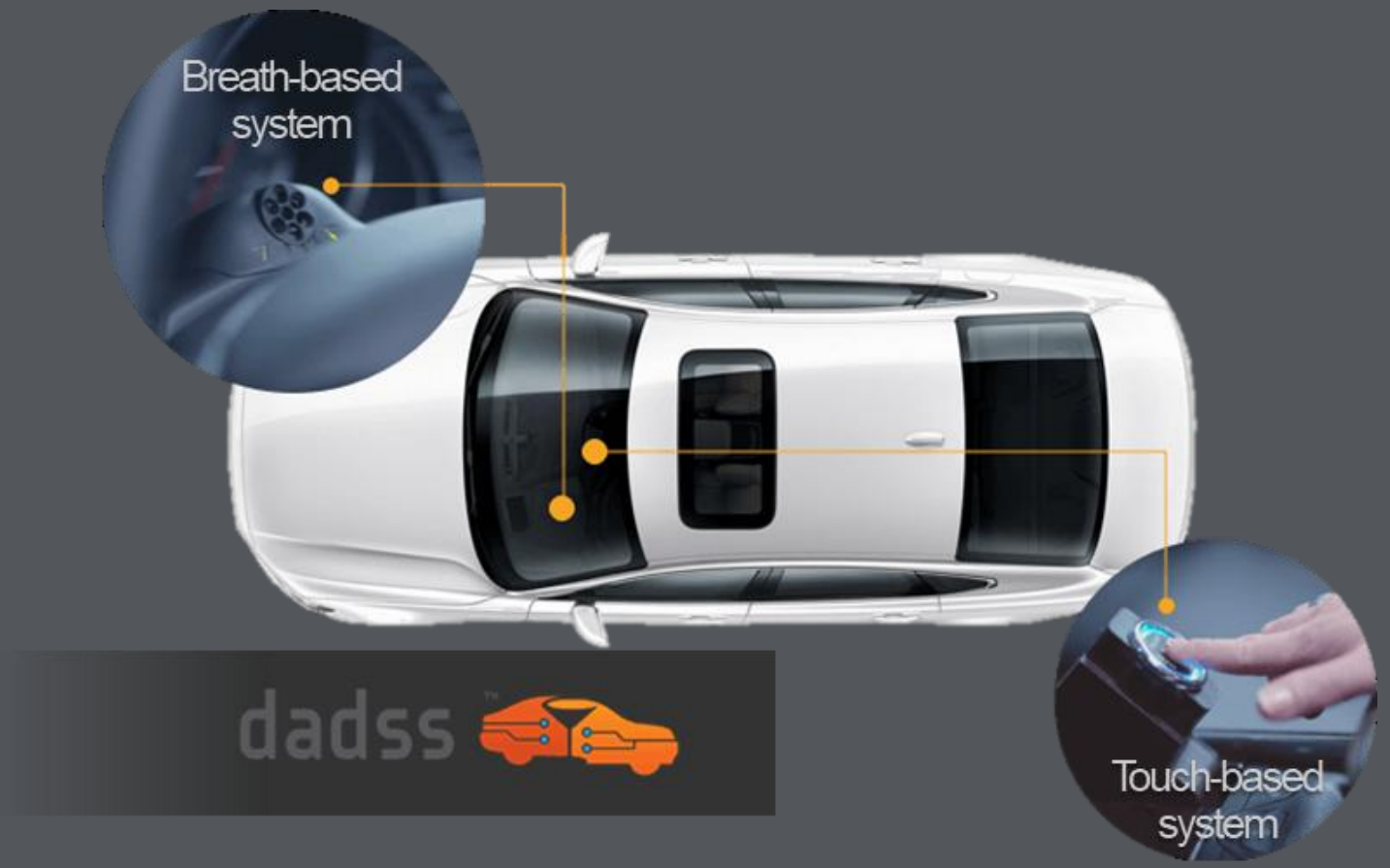
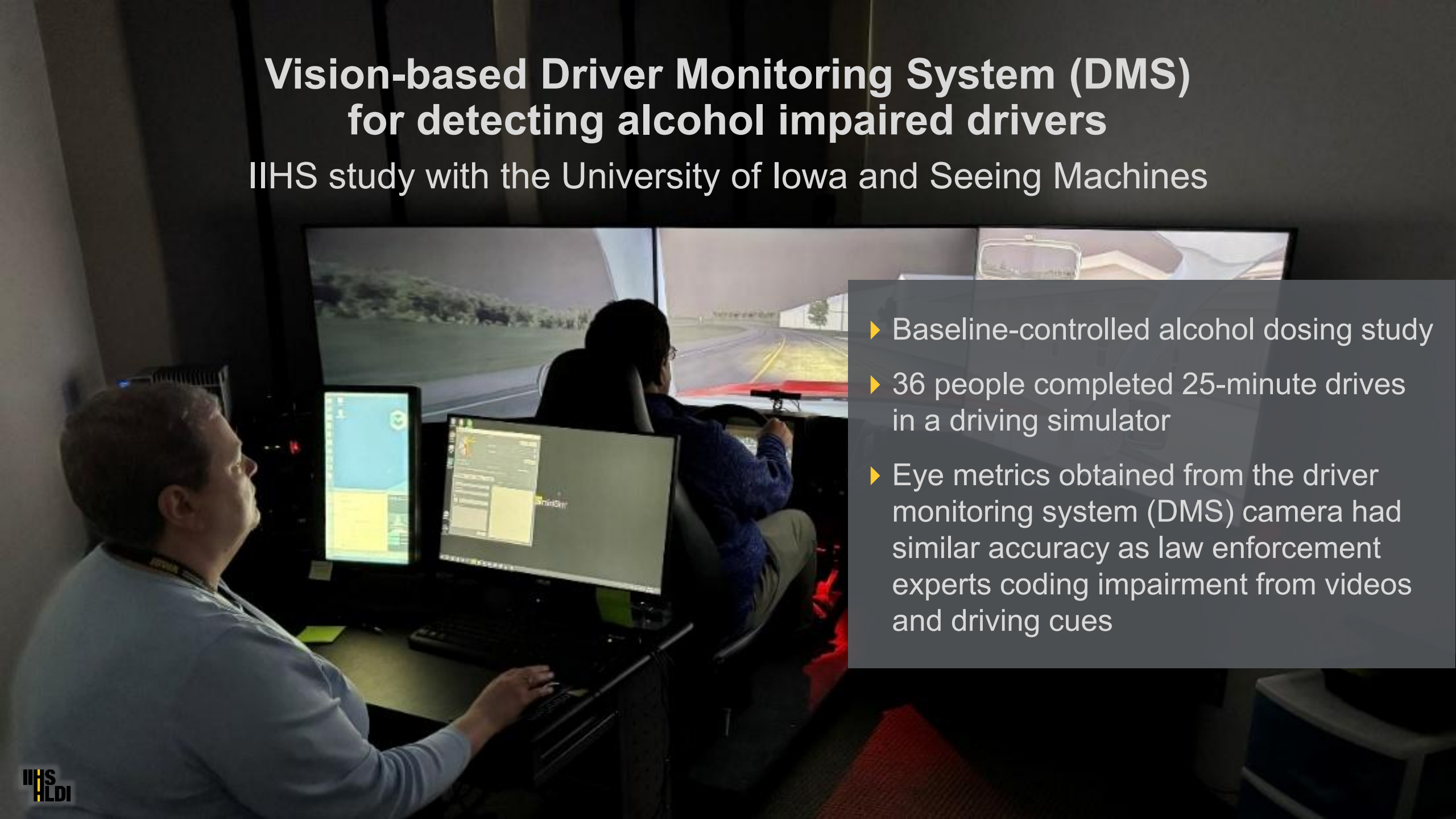
Advanced impaired driving prevention technology



Vision-based Driver Monitoring System (DMS) for detecting alcohol impaired drivers

IIHS study with the University of Iowa and Seeing Machines



- Baseline-controlled alcohol dosing study
- 36 people completed 25-minute drives in a driving simulator
- Eye metrics obtained from the driver monitoring system (DMS) camera had similar accuracy as law enforcement experts coding impairment from videos and driving cues

New paradigm for *Top Safety Pick*

Focus on interventions
aimed at the biggest safety problems

IIHS TOP SAFETY *PICK*

Expected base level safety in every vehicle

- Crashworthiness
- Crash avoidance

IIHS TOP SAFETY *PICK+*

Technologies to promote safe driving

- Intelligent speed assistance
- Distraction mitigation
- Impairment detection

30 x 30

Reduce roadway fatalities 30% by 2030

Emphasis areas

Accelerating commercial vehicle safety

IIHS HLDI

16%

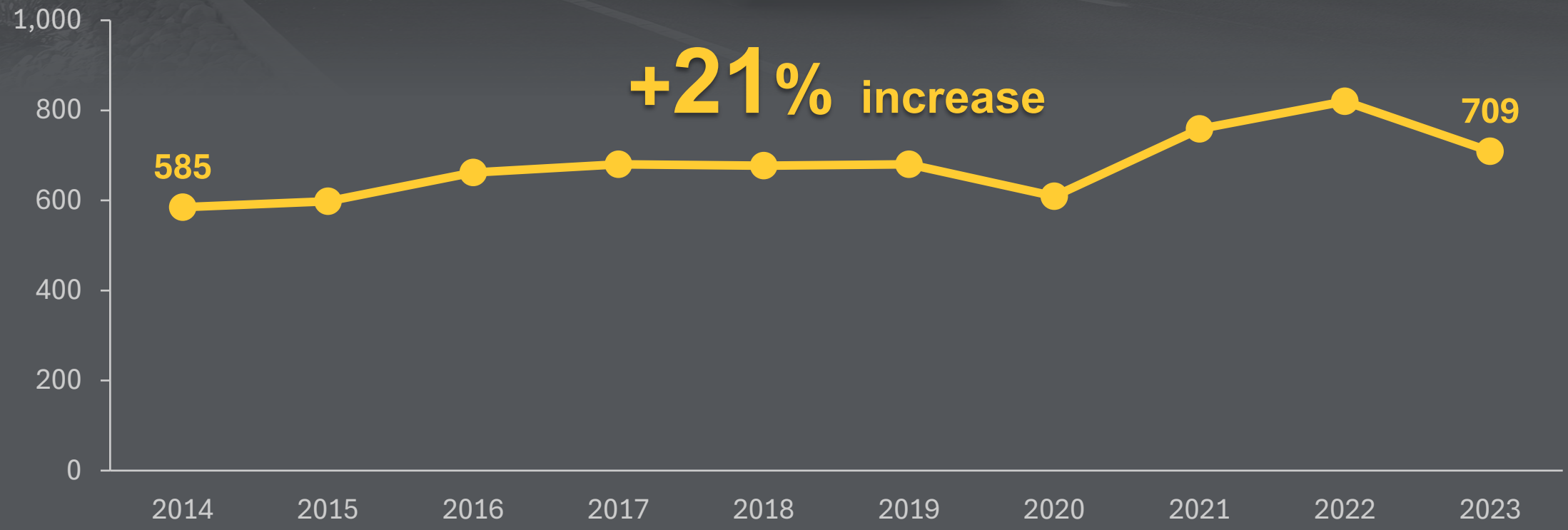
OF ALL FATAL CRASHES

involve cargo vans, medium- or heavy-duty vehicles

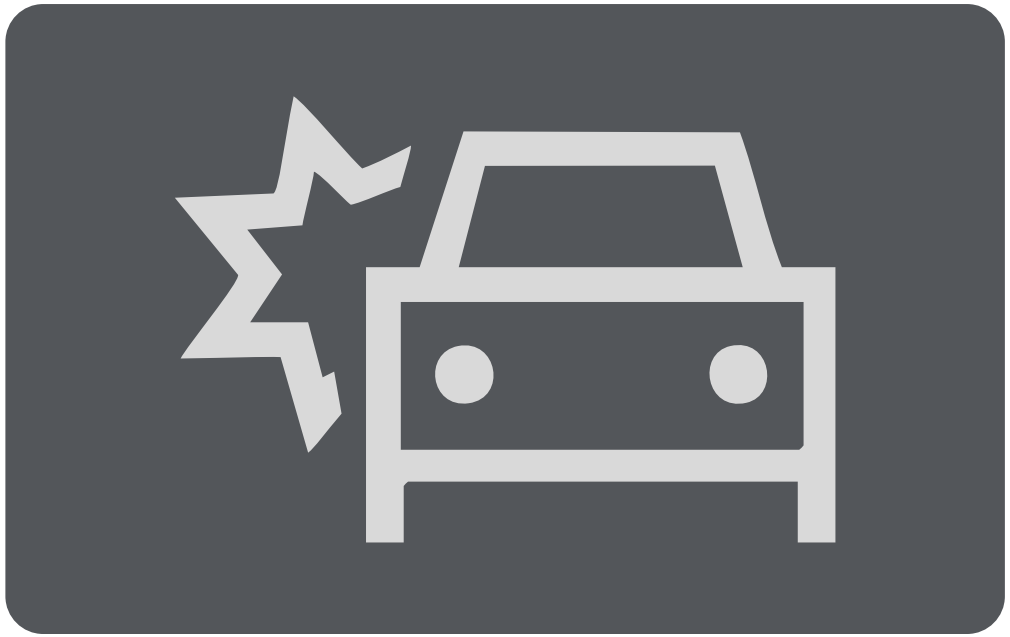
IIHS HLDI

Large truck occupant crash deaths

2014-23



Occupant protection falls short



Inconsistent regulation of safety features

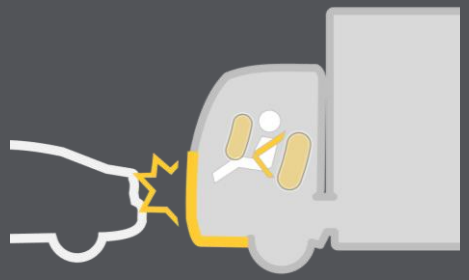
Occupant protection requirements for large trucks

LIGHT VEHICLE REQUIREMENTS THAT DO NOT APPLY TO MEDIUM- OR HEAVY-DUTY VEHICLES

FMVSS 201

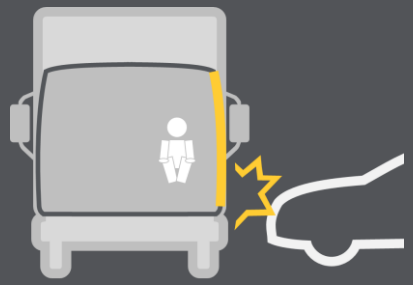
Head injury risk from striking interior surfaces

FMVSS 208



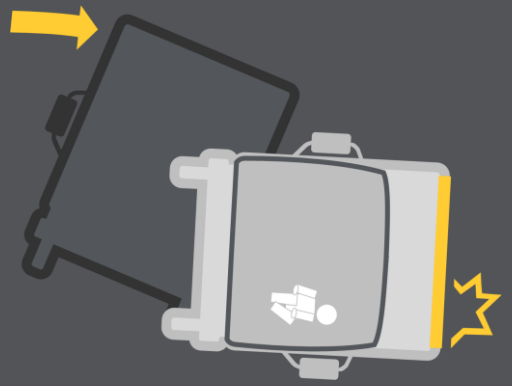
Front crash protection, seat belts and airbags

FMVSS 214



Side crash protection and door strength

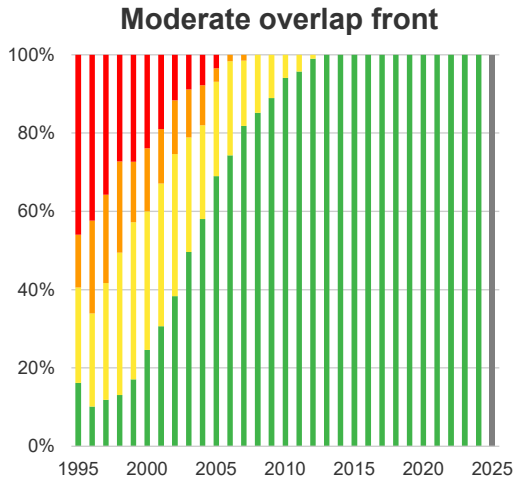
FMVSS 216a

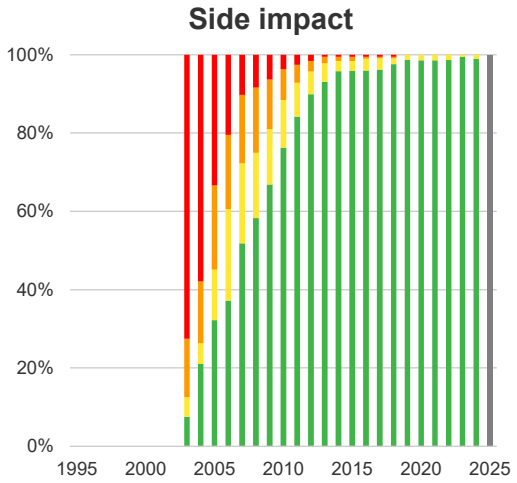


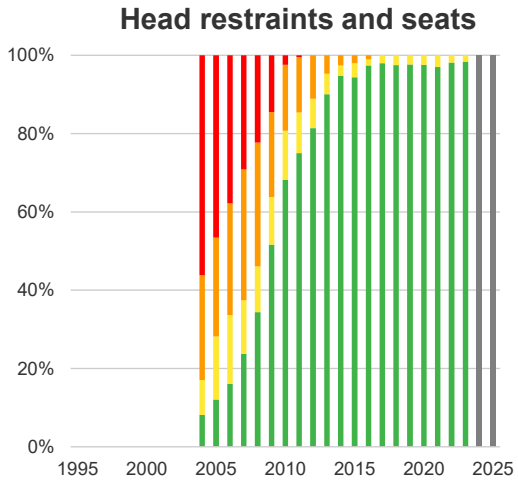
Roof crush resistance

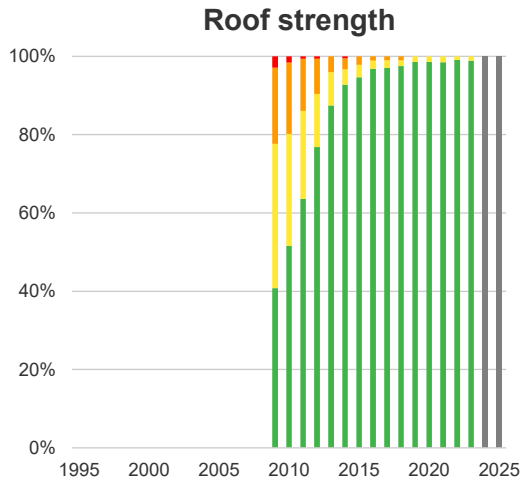
Crashworthiness ratings by model year

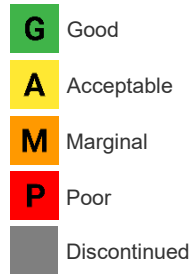
Improvements beginning in 1995

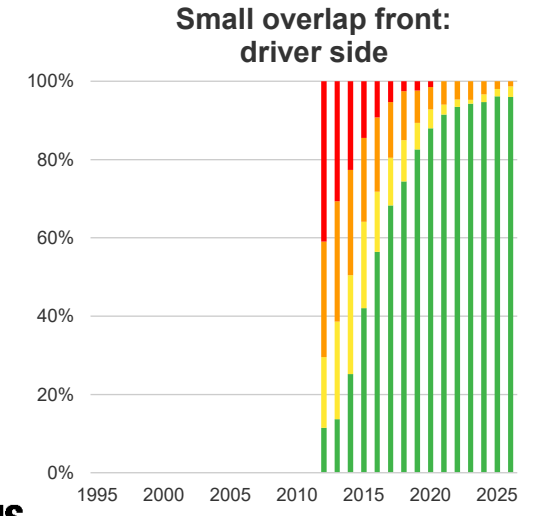


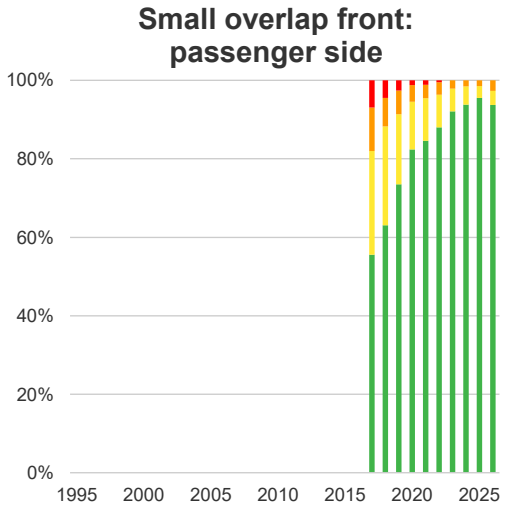


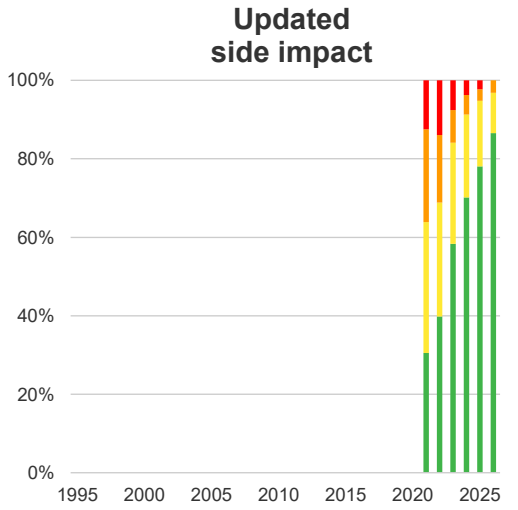


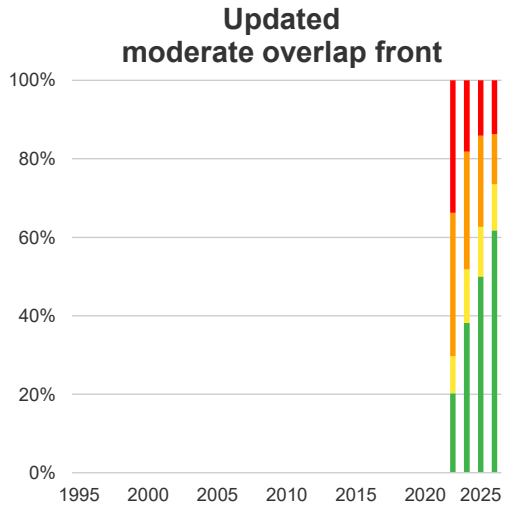












IIHS HLDI

Immediate opportunities to enhance occupant protection in trucks

Percent of drivers killed in crashes who were unrestrained

By vehicle type, FARS 2023

Light/
passenger

44%

50%

28%

Using lap and shoulder belts reduces the risk of dying in a crash

Car occupants

↓45%
Fatal injury
in front seat

↓50%
Moderate-to-critical
injury in front seat

↓58%
Fatal injury
in rear center seat

SUV, van, pickup occupants

↓60%
Fatal injury
in front seat

↓65%
Moderate-to-critical
injury in front seat

↓75%
Fatal injury
in rear center seat

IIHS HLDI

Percent of drivers killed in rollover crashes who were unrestrained

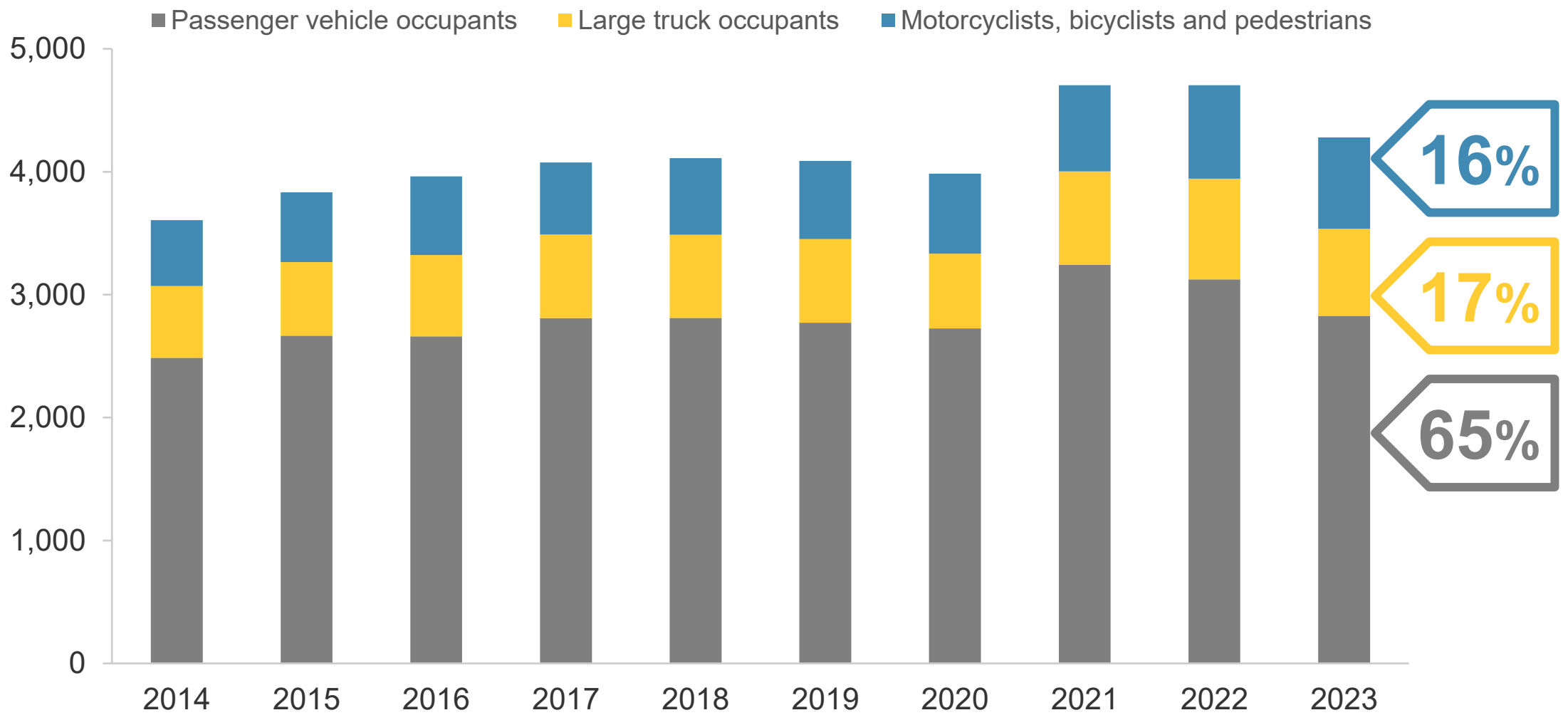
FARS 2023

61% medium duty unrestrained

33% heavy duty unrestrained

Occupant protection outside of the truck

Deaths in crashes involving large trucks, 2014-23



Truck rear underride guard ratings

2011

Released first results

2017

IIHS TOUGHGUARD

Only **1** awardee

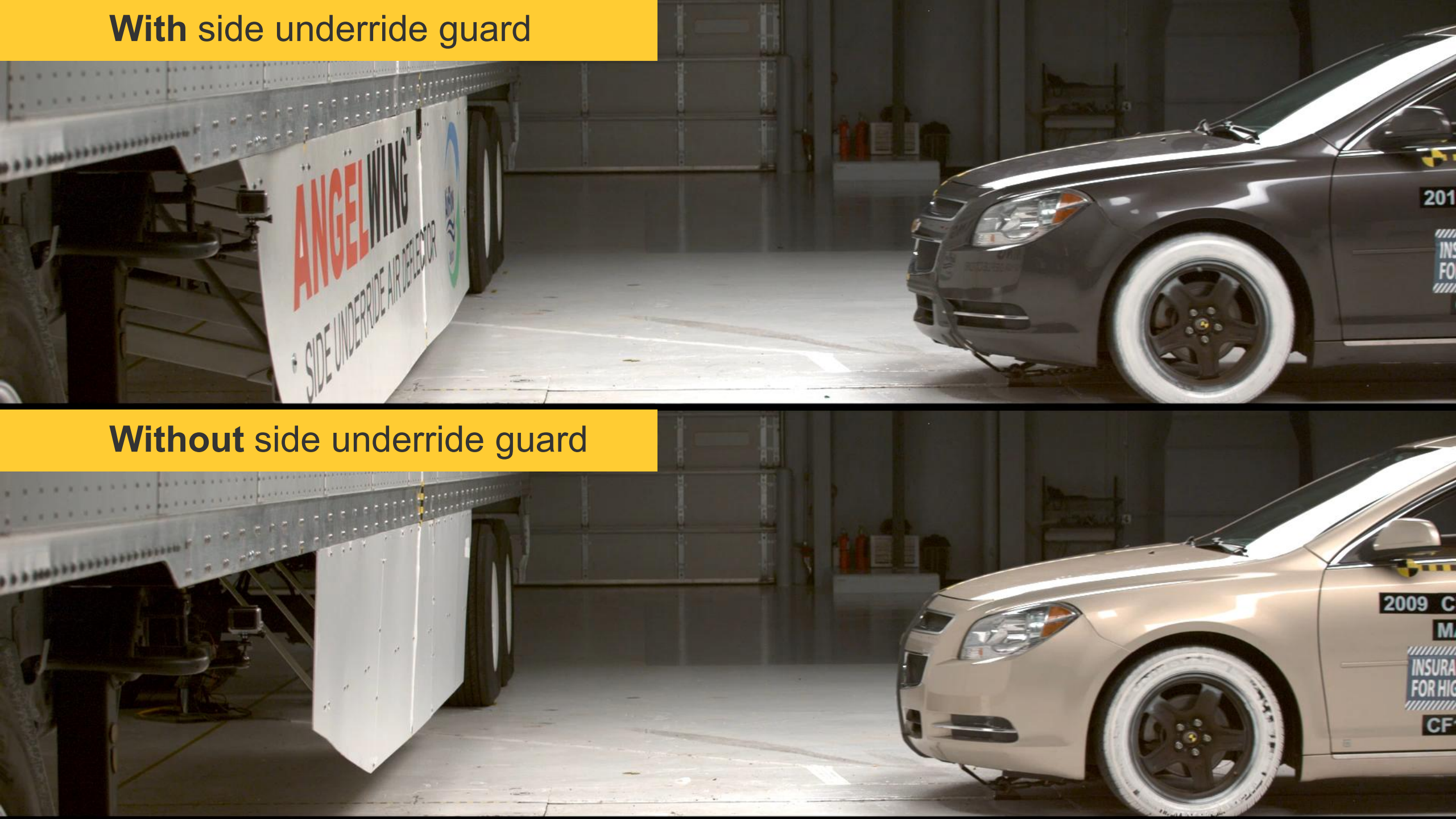
2024

9 awardees

99% dry van trailers

>⅔ of all trailers

IIHS HLDI

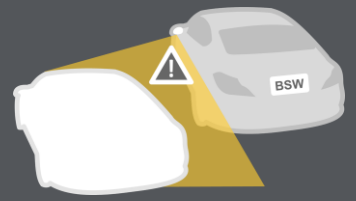

With side underride guard
ANGELWING
SIDE UNDERRIDE AIR DEFLECTOR
Without side underride guard

Crash risk reductions from crash avoidance technologies in passenger vehicles

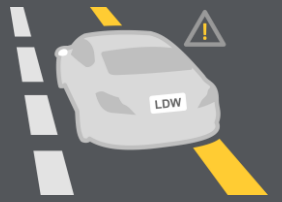
↓50%
Automatic emergency braking (AEB)

↓27%
AEB + pedestrian detection

↓14%
Blind spot warning

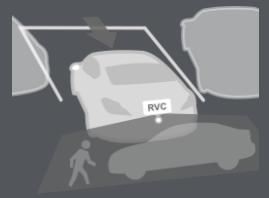


↓11%
Lane departure warning



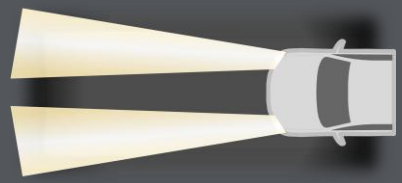
↓78%
Rear AEB + rear camera + parking sensors

↓17%
Rear cameras

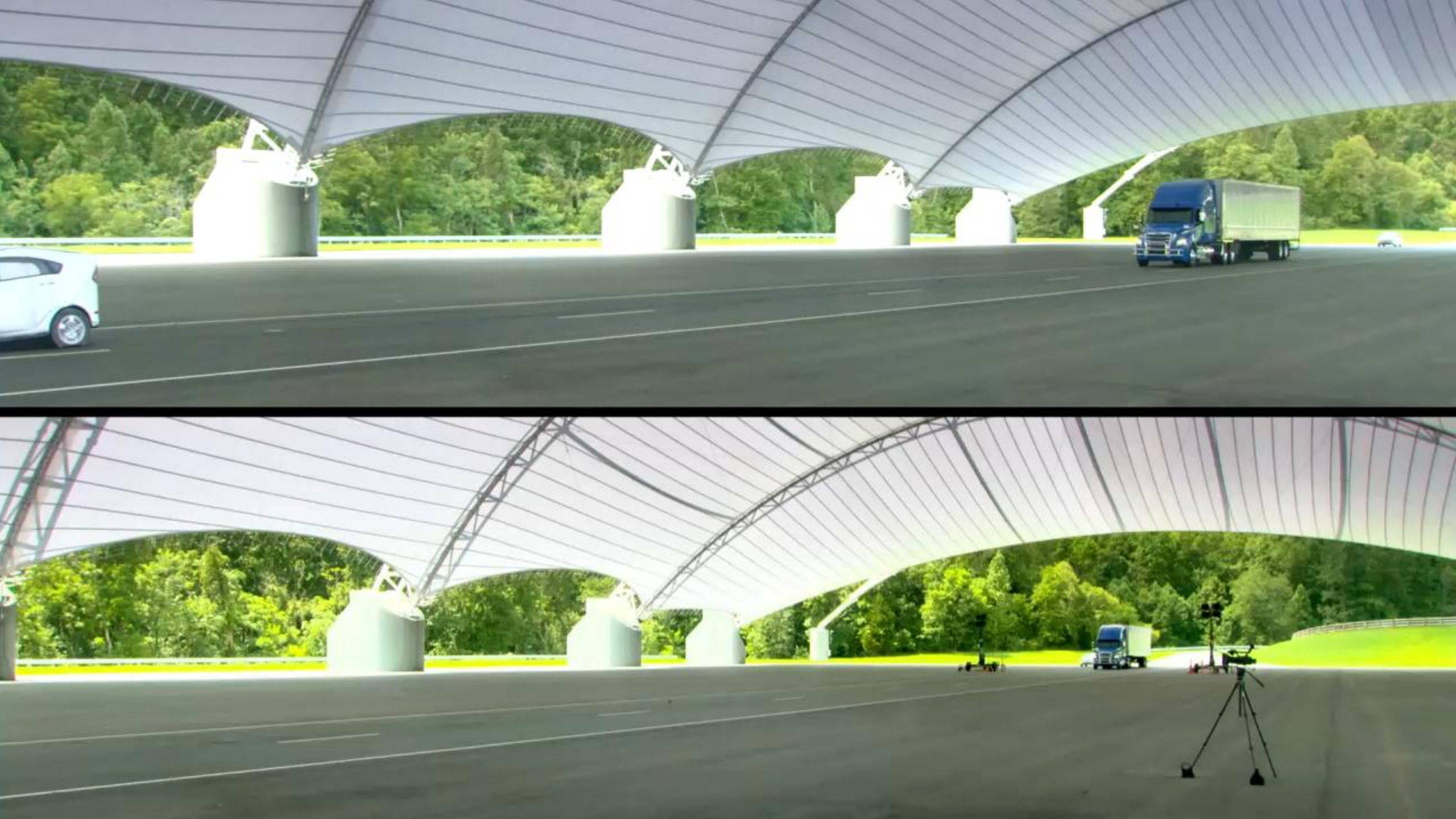


↓22%
Rear cross-traffic alert

↓12-29%
Good- vs. poor-rated headlights single-vehicle nighttime crashes



IIHS HLDI



Safe truck occupants

Seat belt reminders

Intelligent speed assist

Front and side airbags
and restraint features

Protecting others


AEB vehicle-to-vehicle


AEB for pedestrians


Headlights

Rear AEB


IIHS is evaluating ADAS
and other safety features
in cargo vans
Results expected spring 2026

IIHS is evaluating ADAS and other safety features in class 3 pickups

Results expected winter 2026 / 2027

IIHS plans to evaluate ADAS and other safety features in class 4-6 trucks

Results expected 2028

Reduce roadway fatalities 30% by 2030

Systems thinking to save lives today!

- Accelerate today's **proven interventions**
- Invest in tomorrow's **long-term solutions**
- Build community support via **messaging**
- Leverage the power of **partnerships**
- Influence policy through **one voice**

Insurance Institute for Highway Safety
Highway Loss Data Institute

iihs.org

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/company/iihs-hldi
@iihs_autosafety

30x30
Reduce roadway fatalities 30% by 2030

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