



INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

HIGHWAY LOSS
DATA INSTITUTE

Technology and Highway Safety

www.iihs.org

Vehicle Safety Outlook – The Next Ten Years
Dearborn, MI • January 31, 2012

Adrian K. Lund, Ph.D.

The Insurance Institute for Highway Safety,

founded in 1959, is an independent, nonprofit, scientific, and educational organization dedicated to reducing the losses — deaths, injuries, and property damage — from crashes on the nation's highways.

The Highway Loss Data Institute,

founded in 1972, shares and supports this mission through scientific studies of insurance data representing the human and economic losses resulting from the ownership and operation of different types of vehicles and by publishing insurance loss results by vehicle make and model.

Both organizations are wholly supported by auto insurers.



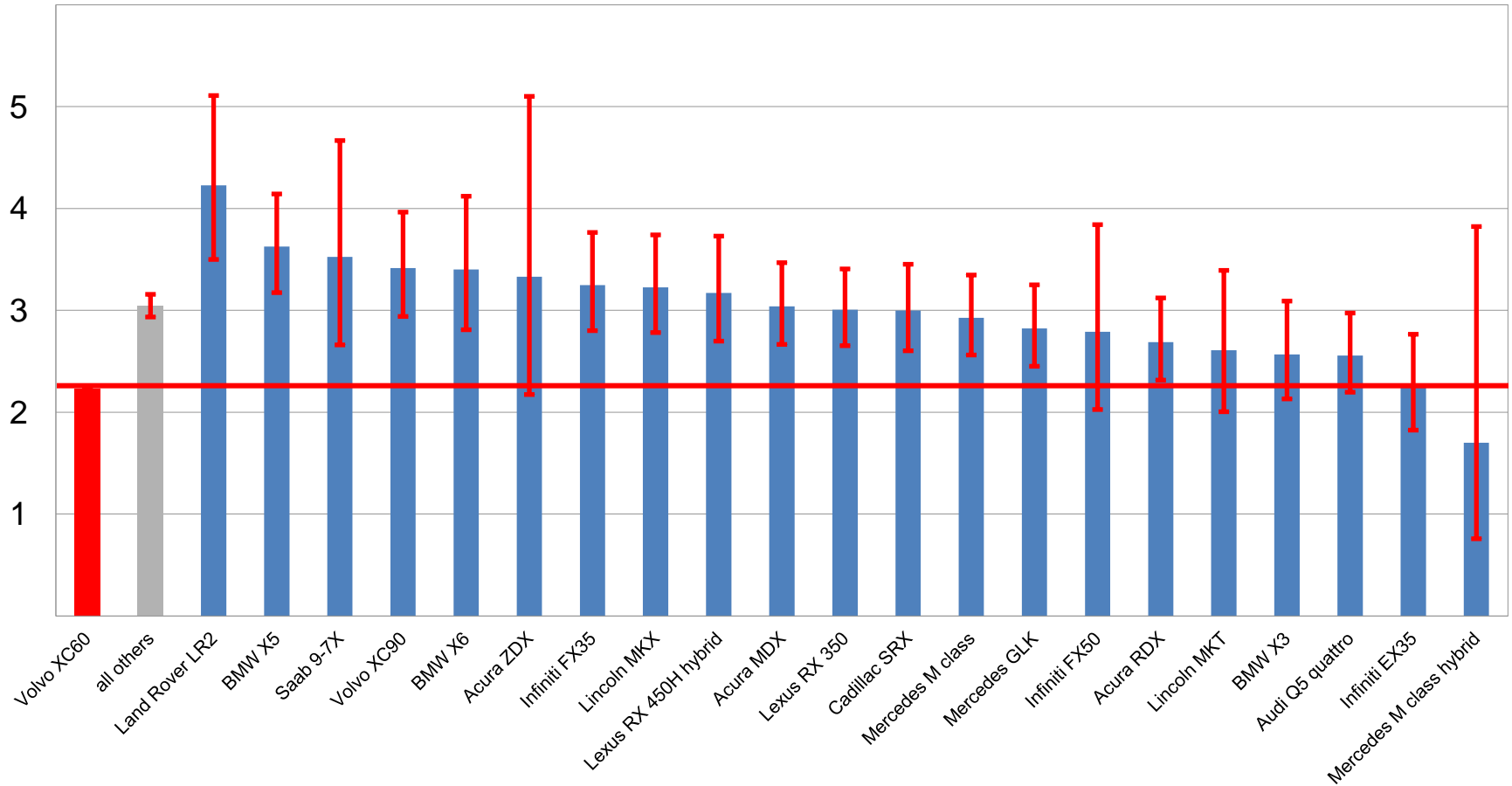
Crash avoidance technology is
a clear trend for highway safety

A blurred, low-angle shot of a city street at night. The scene is out of focus, showing the tops of buildings and traffic lights. The traffic lights are illuminated, with green and red lights visible. The overall atmosphere is dark and urban.

Volvo City Safety

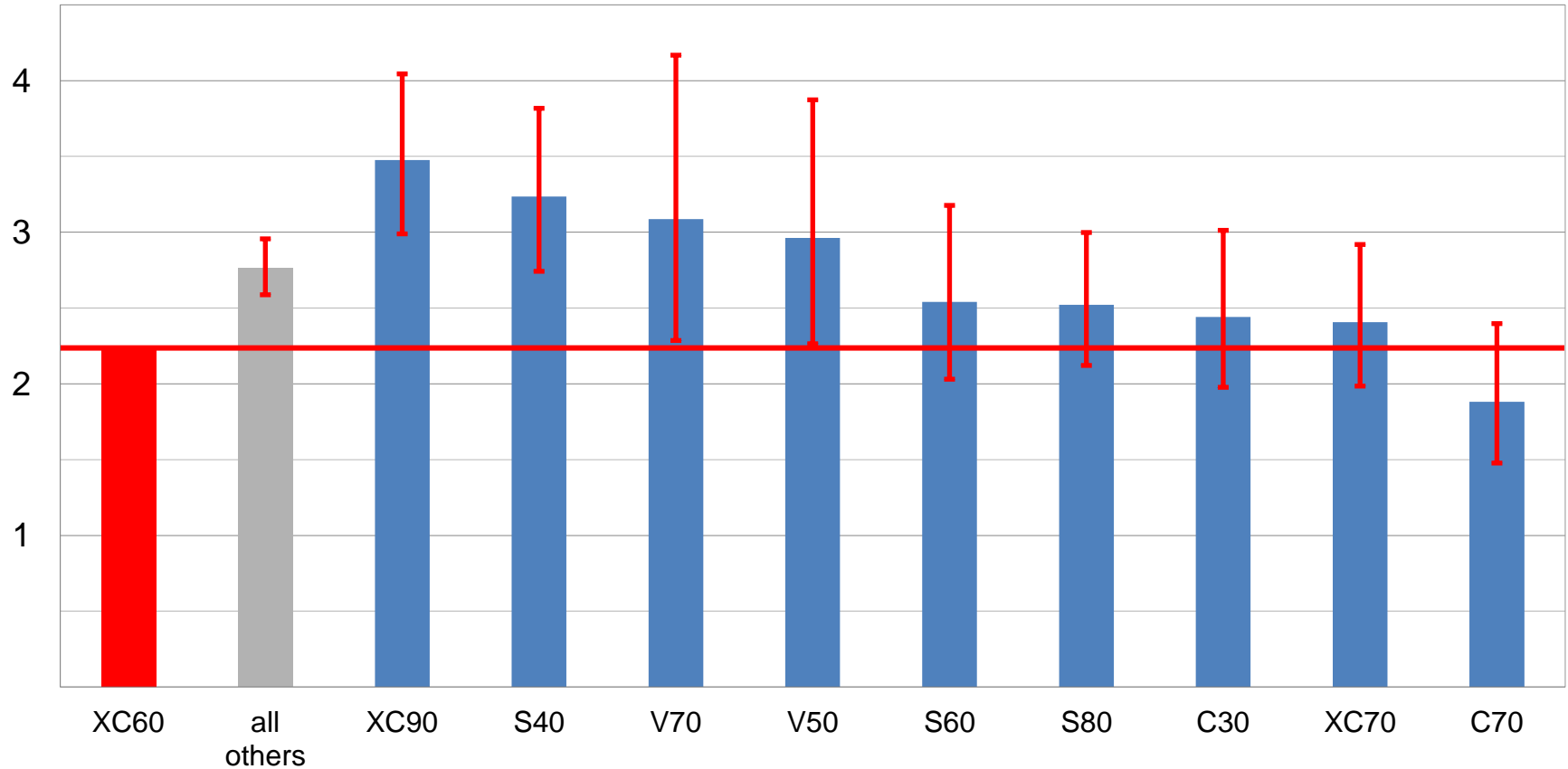
Property damage liability claim frequencies for 2010 Volvo XC60

With City Safety vs. other 2009-10 midsize luxury SUVs



Property damage liability claim frequencies for 2010 Volvo XC60

With City Safety vs. other 2009-10 Volvos



Annual crashes potentially prevented or mitigated

By type of system

| | all | injury | fatal |
|---------------------------|-----------|---------|--------|
| forward collision warning | 1,165,000 | 66,000 | 879 |
| lane departure warning | 179,000 | 37,000 | 7,529 |
| side view assist | 395,000 | 20,000 | 393 |
| adaptive headlights | 142,000 | 29,000 | 2,484 |
| total unique crashes | 1,866,000 | 149,000 | 10,238 |

vehicle to pedestrian



vehicle to stationary vehicle



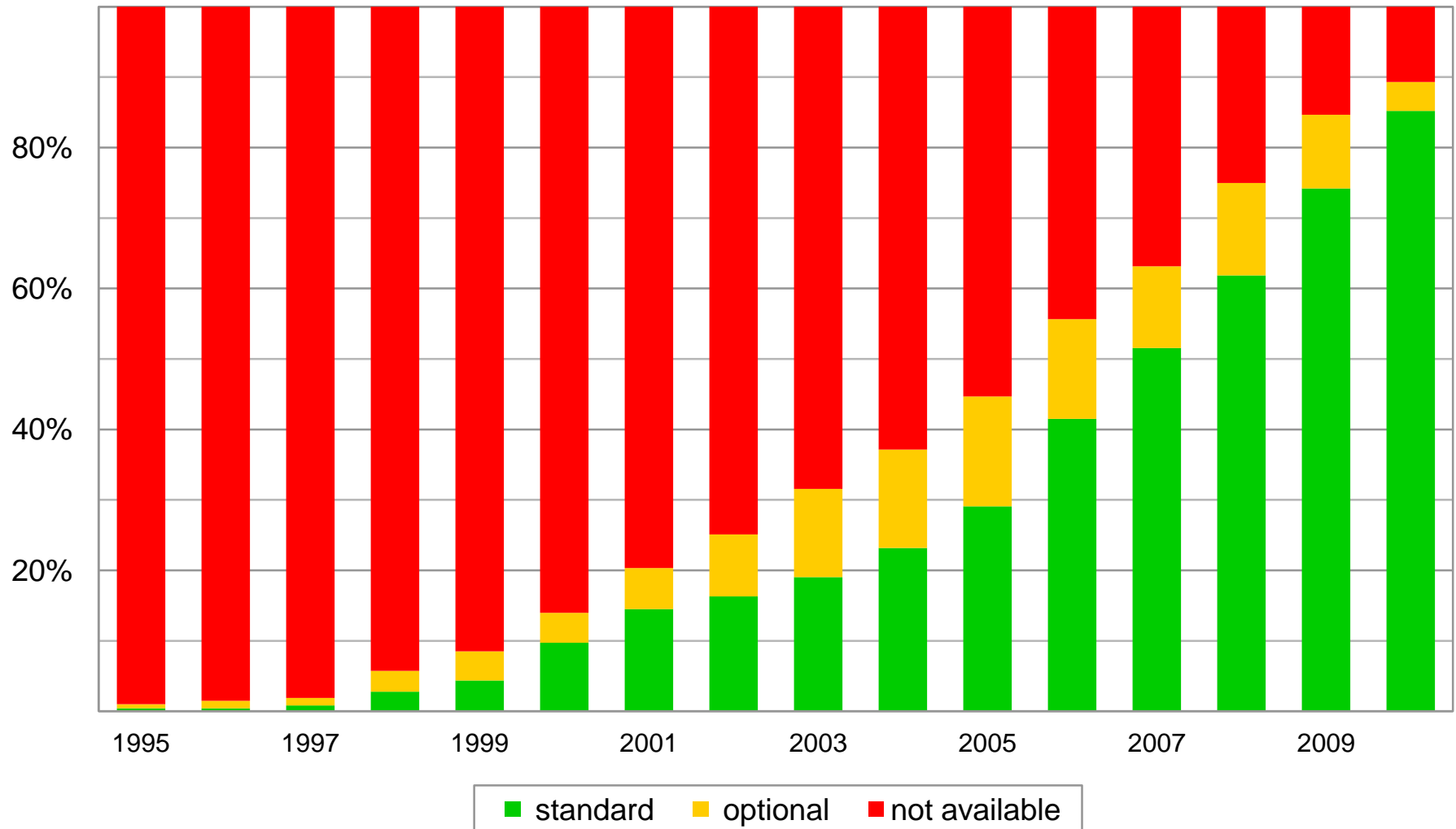
vehicle to moving vehicle



Benefits of crash avoidance
technology will occur gradually

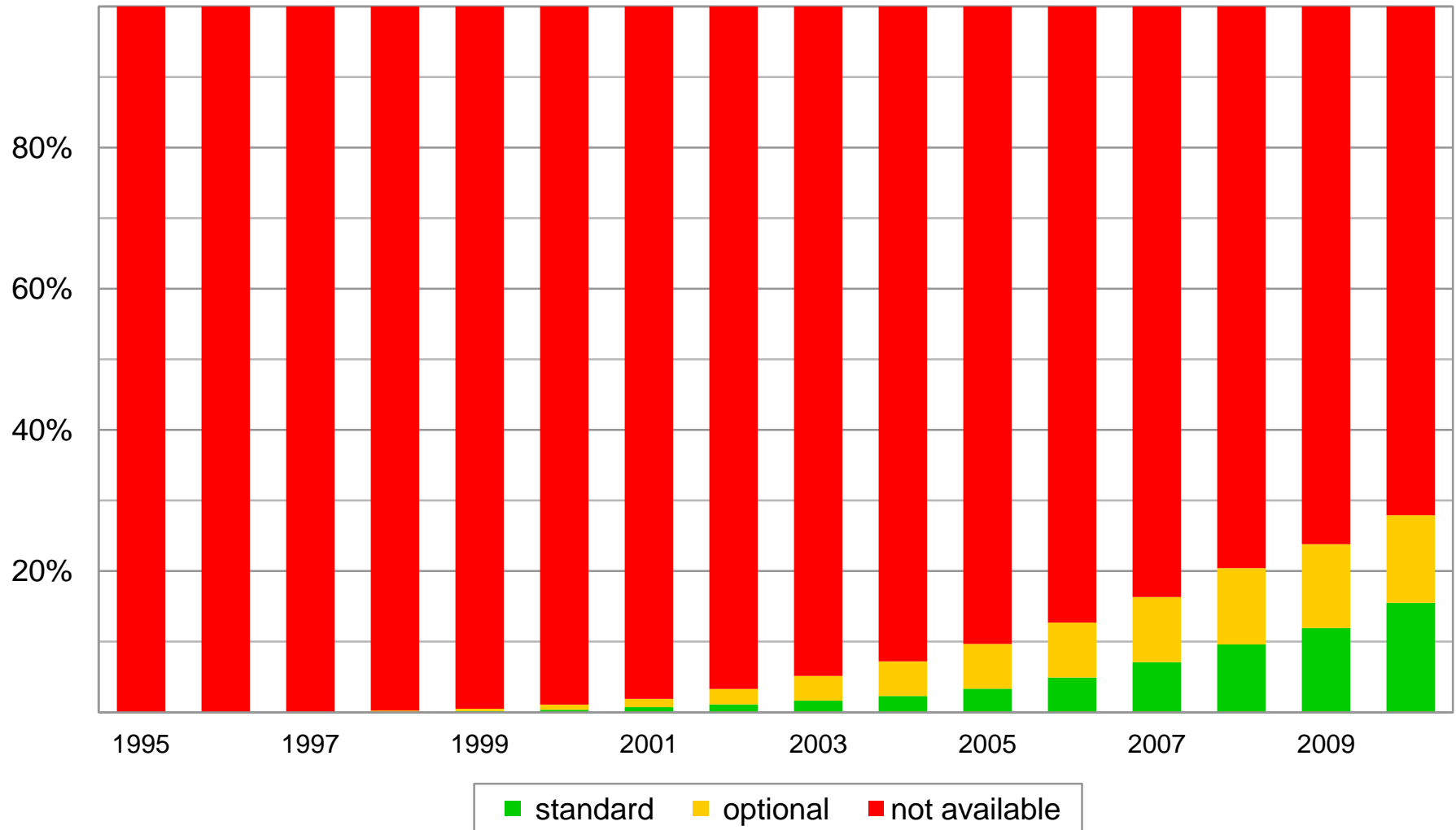
New vehicle series with electronic stability control

By model year



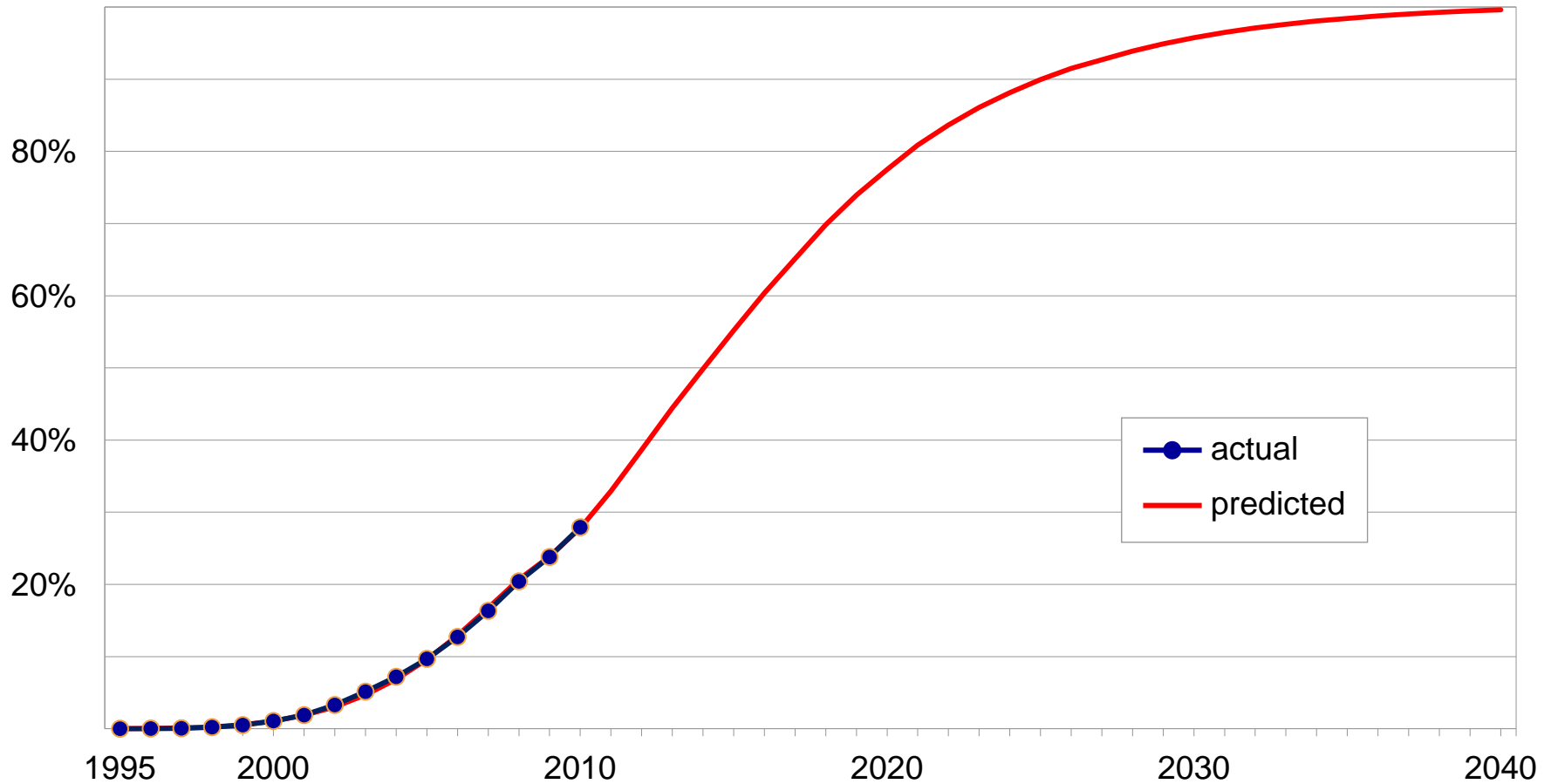
Registered vehicles with electronic stability control

By calendar year



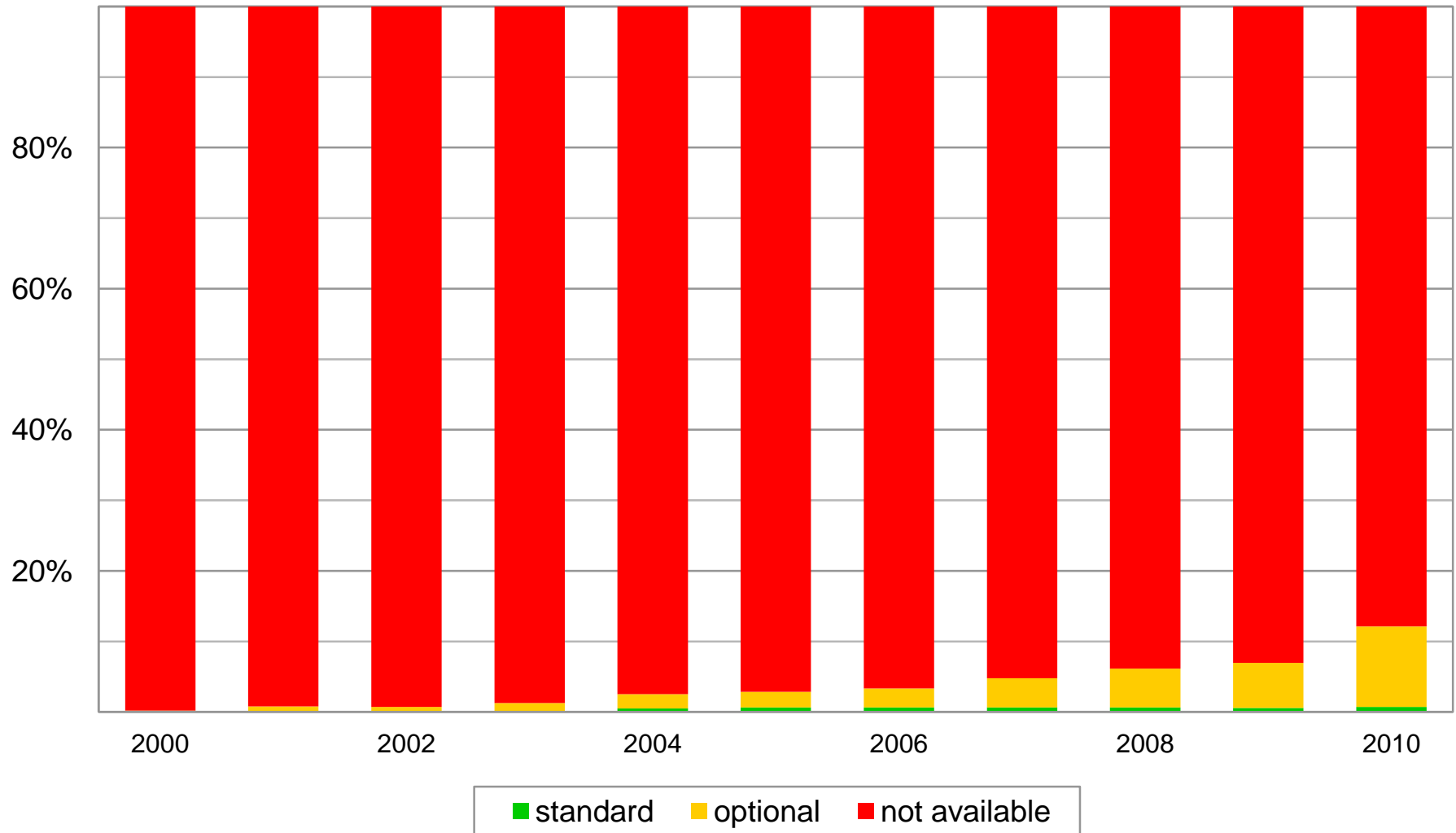
Registered vehicles with electronic stability control, actual and predicted

By calendar year



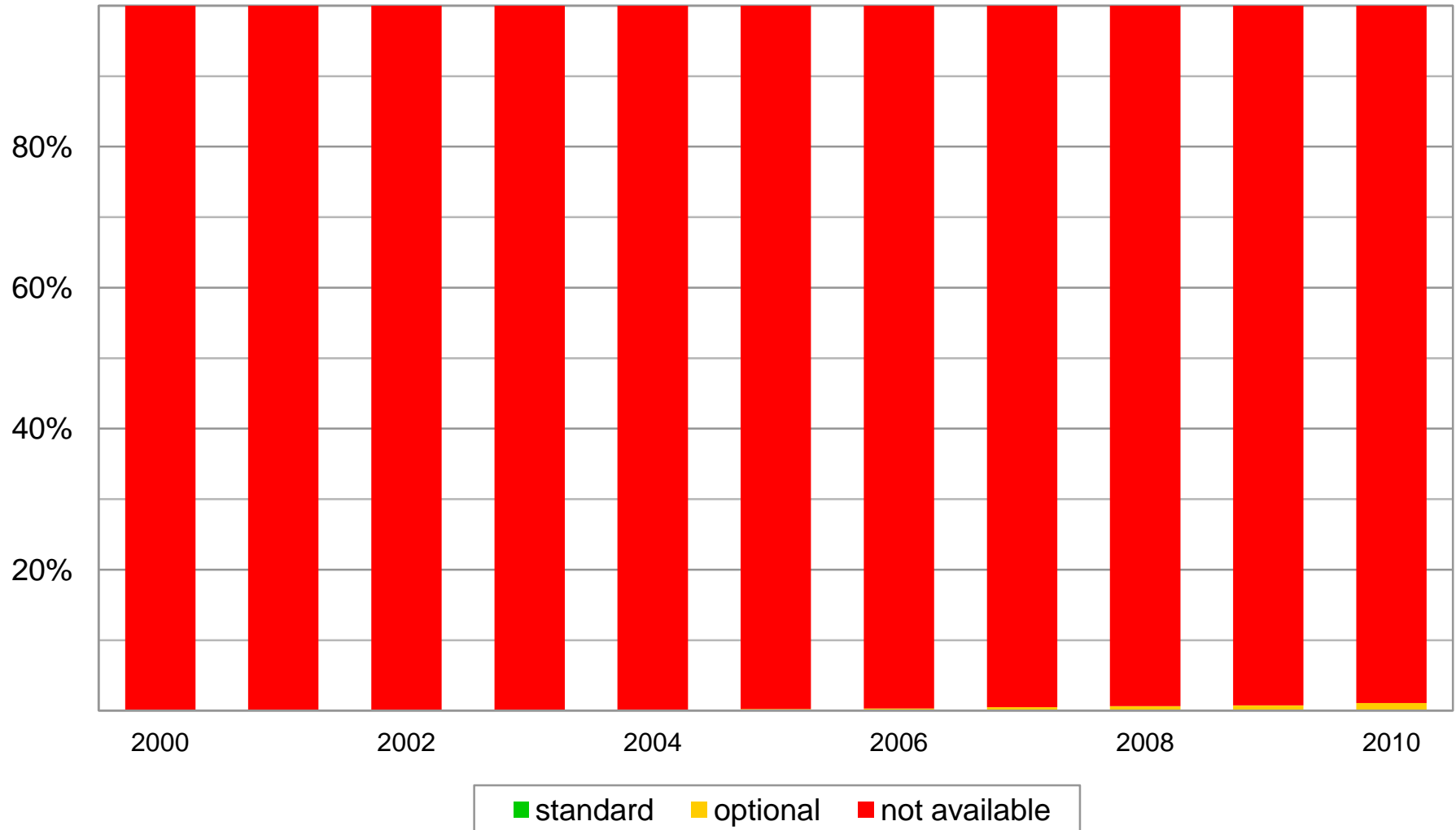
New vehicle series with forward collision warning

By model year



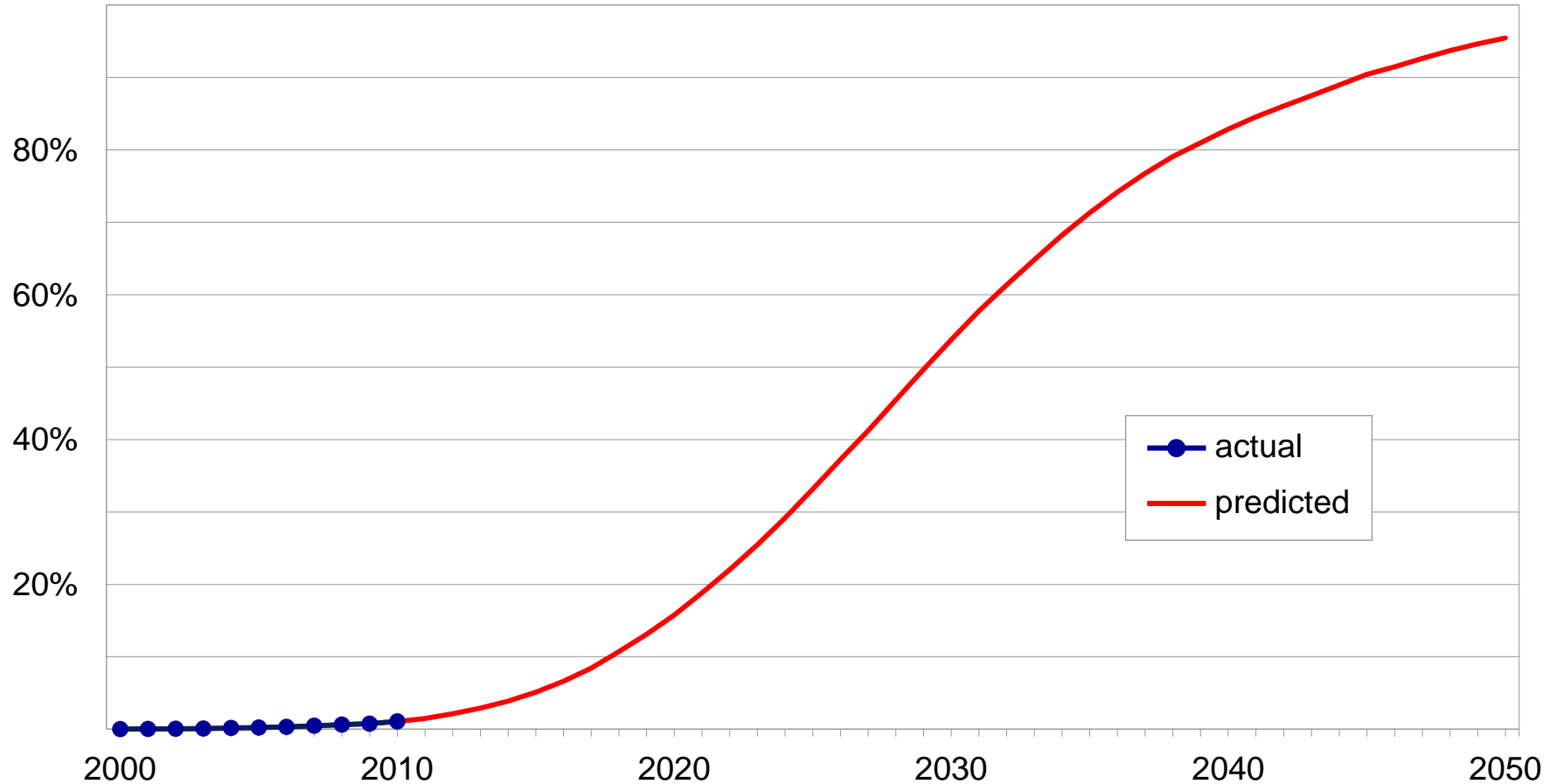
Registered vehicles with forward collision warning

By calendar year



Registered vehicles with forward collision warning, actual and predicted

By calendar year



The next ten years?

Roundabouts are safer and more efficient



If 10 percent of signalized intersections in the United States were converted to roundabouts

- Approximately 70,000 crashes prevented annually including:
 - 450 fatal crashes
 - 45,000 injury crashes
- Vehicle delays reduced by about 800 million hours
- Fuel consumption reduced by more than 500 million gallons

Some people complain that roundabouts are too complex, but compared to what?!



Wide streets encourage high speeds and require long crossing distances for pedestrians

STATUS REPORT

INSURANCE INSTITUTE
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LOW-HANGING FRUIT

Oftentimes saving a life on the road is as basic as getting people to slow down, buckle up, or don a helmet. Tried and true countermeasures like these usually don't grab headlines, but if they were more widely propagated across the nation they would yield an immediate reduction in motor vehicle crash deaths.

The number of people who die in crashes in the United States is at a record low. Still, there were an estimated 32,788 motor vehicle crash deaths last year, according to a preliminary projection by the National Highway Traffic Safety Administration (NHTSA).

Vehicles are safer than ever, and emerging technologies

August 2011

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Other low hanging fruit

- Primary belt use laws
- Mandatory helmet use for all motorcyclists
- Strengthen graduated driver licensing laws
- Lower speed limits
- Automated enforcement of red light running and speeding
- Sobriety checkpoints

Summary

- We are entering an exciting period in automotive engineering
 - Technology that can prevent crashes is a reality
 - Although research must sort out which new technology is helpful
- Reaping the rewards of this technology will be a gradual (slow) process
- In the near term – over the next ten years – our success in reducing deaths and injuries from motor vehicle crashes will depend on other activities in highway safety
 - Fortunately, there are many proven highway safety measures that can be implemented now



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Dedicated to reducing deaths, injuries,
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