

The Value of Safety

Volvo Trucks
Driving Success





What reasons would cause you NOT invest in safety technologies?

- **Cost**
- **Unproven or complex technology**
- **Lack of return on investment**



OBJECTIONS

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What would it mean to your business if safety technologies could pay for themselves in the first year?

Good reasons for safety technology

Highway congestion increasing;
national infrastructure not keeping up
with population growth.

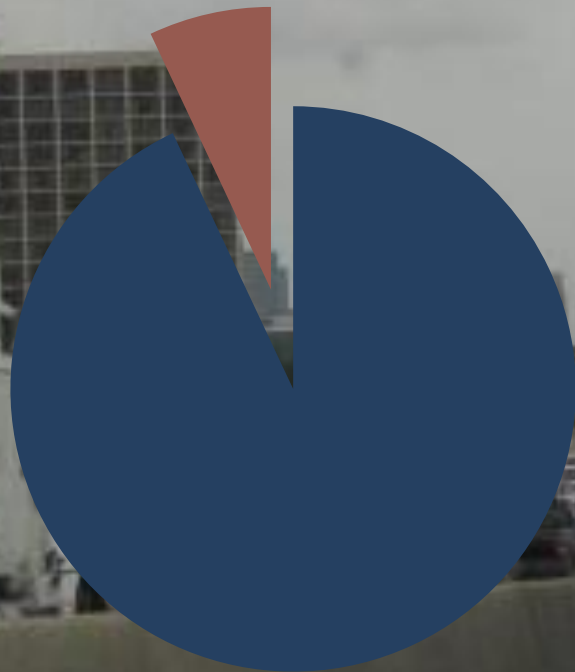
Good reasons for safety technology

NHTSA and AAA:
“Aggressive driving accounts for more than HALF of all traffic fatalities.”



**ROAD
RAGE
AHEAD**

Good reasons for safety technology



NHTSA and FMCSA:
“93% of all commercial vehicle accidents are caused by human error.”

That means they can be prevented!

Active? or Passive?

Active Safety Technology	Passive Safety Technology
<ul style="list-style-type: none">Volvo Enhanced Stability Technology (VEST)Volvo Enhanced Cruise (VEC) with Active BrakingPanoramic WindshieldReduced Interior Noise and VibrationAnti-lock BrakesTraction ControlI-Shift TransmissionInterior and Ergonomic Grab Handles	<ul style="list-style-type: none">Driver-side Air BagHigh-strength Steel CabRaised foot pedalsImpact-absorbing steering wheel/columnImpact-absorbing dash3-point Safety Harness



Active? or Passive?

Active Safety Technology

Helps drivers prevent a crash.

Passive Safety Technology

Protects drivers and other occupants in the event of a crash.

Both active and passive technologies are important, but the ROI is on the active side.

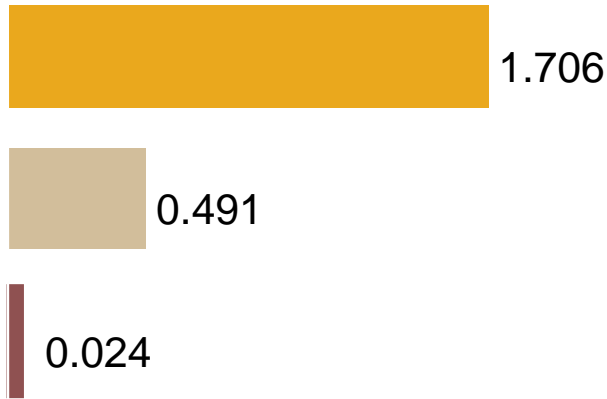
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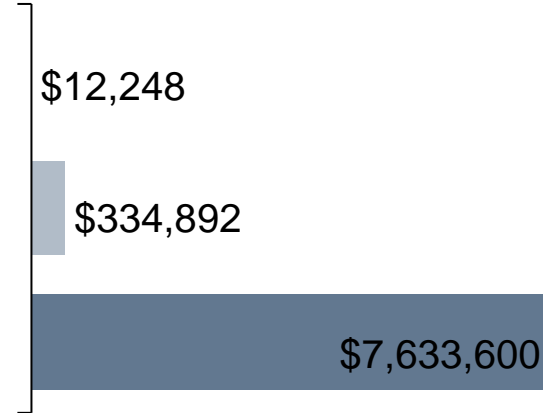


What does a crash cost?

Large Truck Crashes per million miles
Source: NHTSA



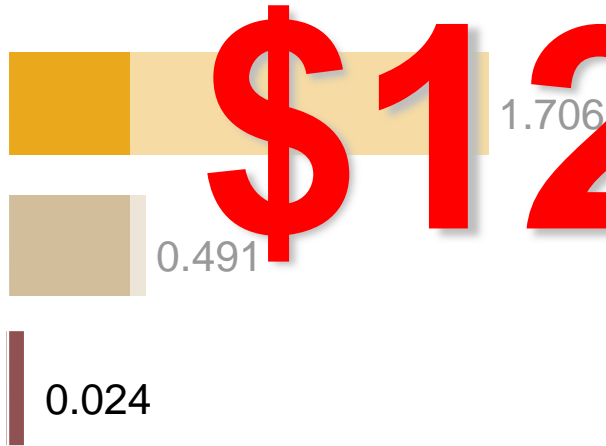
Total *Societal* Crash Costs Per Accident
Source: FMCSA



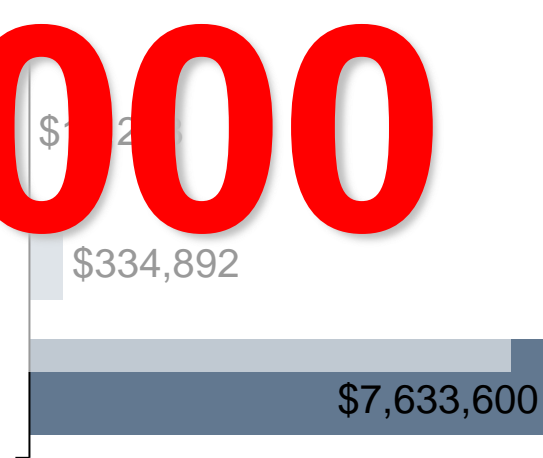
The average truck has 2.2 accidents per million miles

What does a crash cost?

Large Truck Crashes per million miles
Source: NHTSA

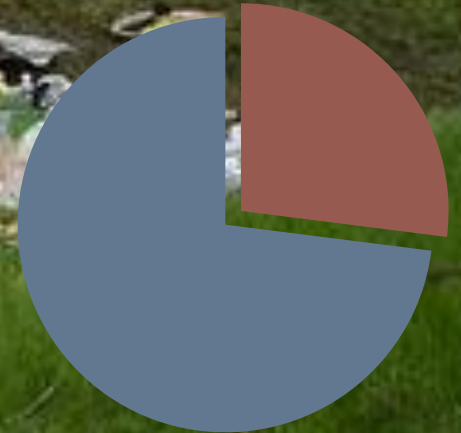


Total Societal Crash Costs Per Accident
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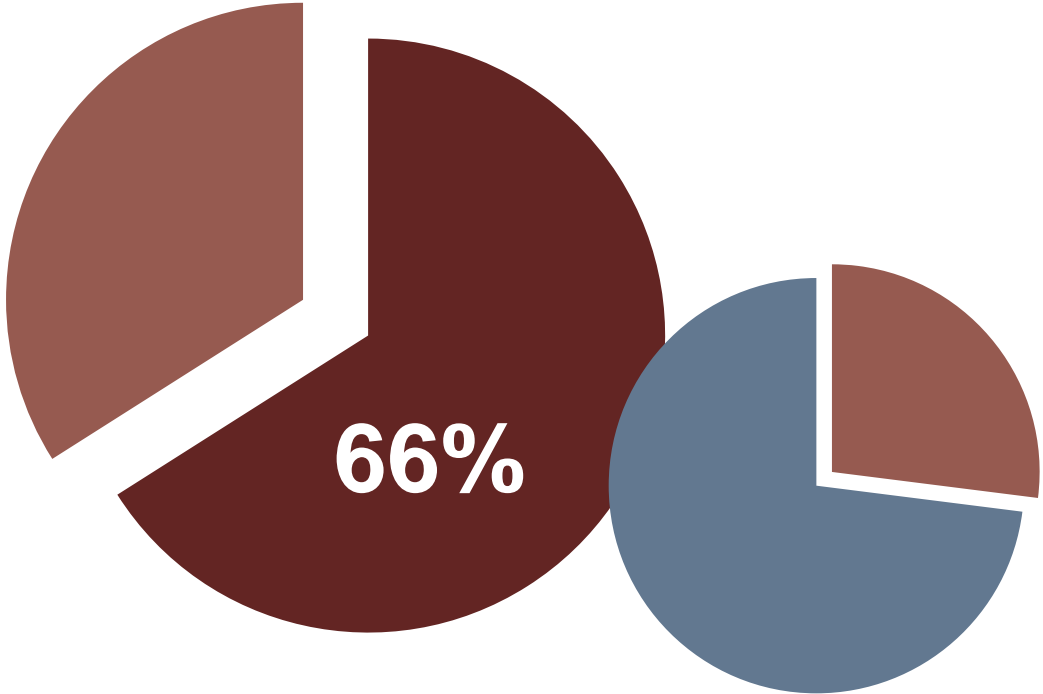
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27% of all commercial vehicle crashes are classified as a “rollover”



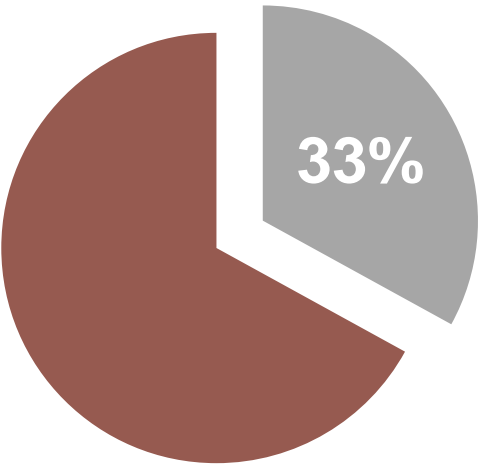
Volvo Enhanced Stability Technology

featuring Bendix ABS-6 Advanced with ESP

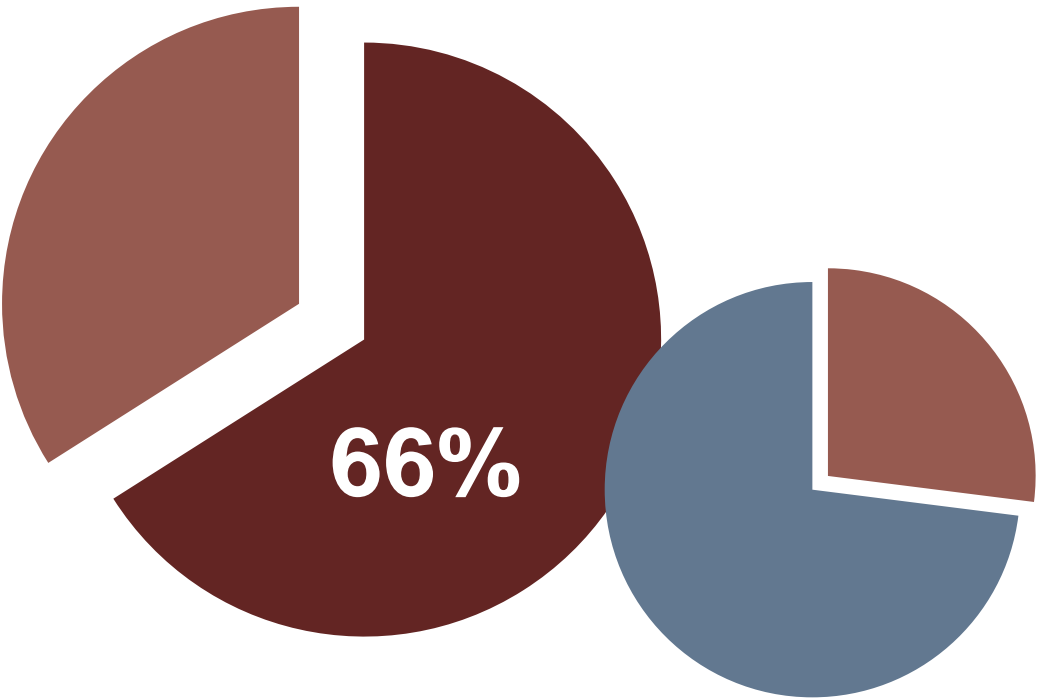


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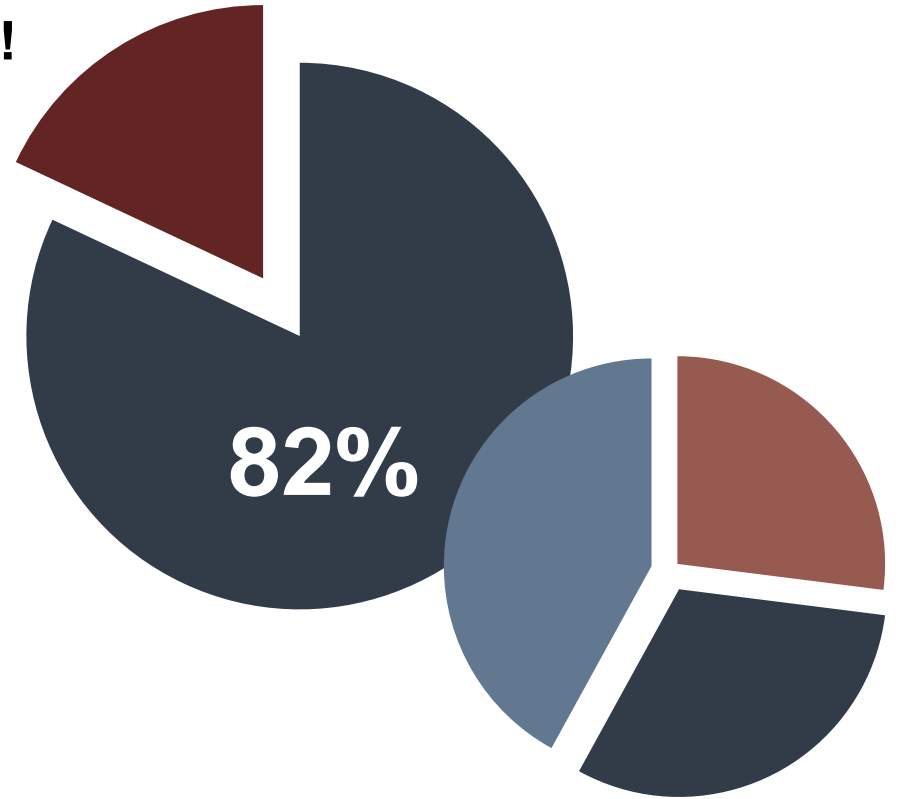
Roll Stability Only



31% of all commercial vehicle crashes involve a front-end collision





Volvo Enhanced Cruise with Active Braking ... from Bendix!



Volvo I-Shift

Driver productivity, fuel efficiency ... but safety too?





Fleet Study: Automated Transmission Benefits

Driver Training, Retention, or Safety Metric	Automated Transmission	Control Group
Percent new drivers retained at 1 year	 54%	40%
Annual turnover, experienced drivers	 10%	19%

Volvo I-Shift

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Percent new drivers retained at 1 year	 54%	40%
Annual turnover, experienced drivers	 10%	19%
Reduction in crash rate:		
- new drivers	 26%	n/a
- experienced drivers	 22%	n/a

What is your safety ROI?

Volvo's value calculator

Let's put a
number on it!

Volvo Enhanced Stability
Technology

Volvo Enhanced Cruise

Volvo I-Shift

Finally ...

Don't forget the value of passive safety ... it's about saving lives!

- High-strength steel
- 3x strength-to-weight ratio of aluminum
- Exceeds Swedish Cab Safety Standard





Questions?

Data Sources for Value Calculator (Safety)

(1) National Highway Traffic and Safety Administration and Federal Motor Carrier Safety Administration data. Reported in 2009 that full (or enhanced) stability technology was projected to be effective in 66% of those crashes classified as rollover (but that also include jackknife and loss of control events); whereas roll stability only systems were projected to be effective in only about 33% of crashes classified as rollover. Roll stability systems are not designed to mitigate jackknife or loss of control events.

(2) American Automobile Association and Federal Motor Carrier Safety Administration data. Reported in 2009 that front-end or intersection crashes would be reduced up to 90% if the driver had additional warning of just one second. Calculations are based on benefits of warning only, although VEC provides fully integrated audible and visual warnings as well as active intervention by engaging foundation brakes to help the driver avoid collision. However, major U.S. fleets have reported an actual reduction of 82% in front-end collisions; this number is used in the above calculation.

(3) Safety for the Long Haul, American Trucking Associations, Inc., 2009. A major U.S. fleet reported that use of an automated manual transmissions reduced the crash rate for new drivers by 26% and for experienced drivers by 22%; the calculation above assumes 22% reduction.