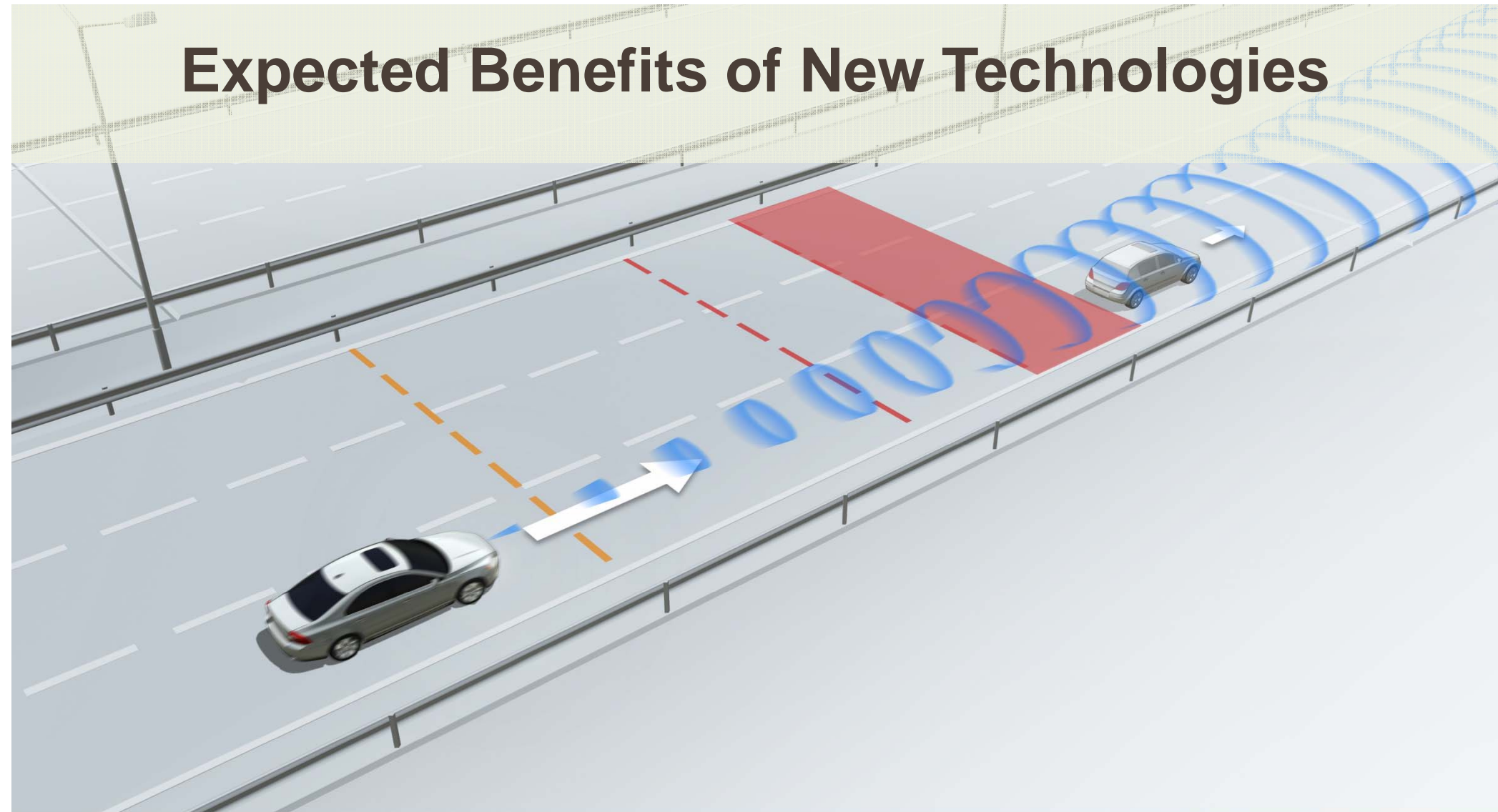


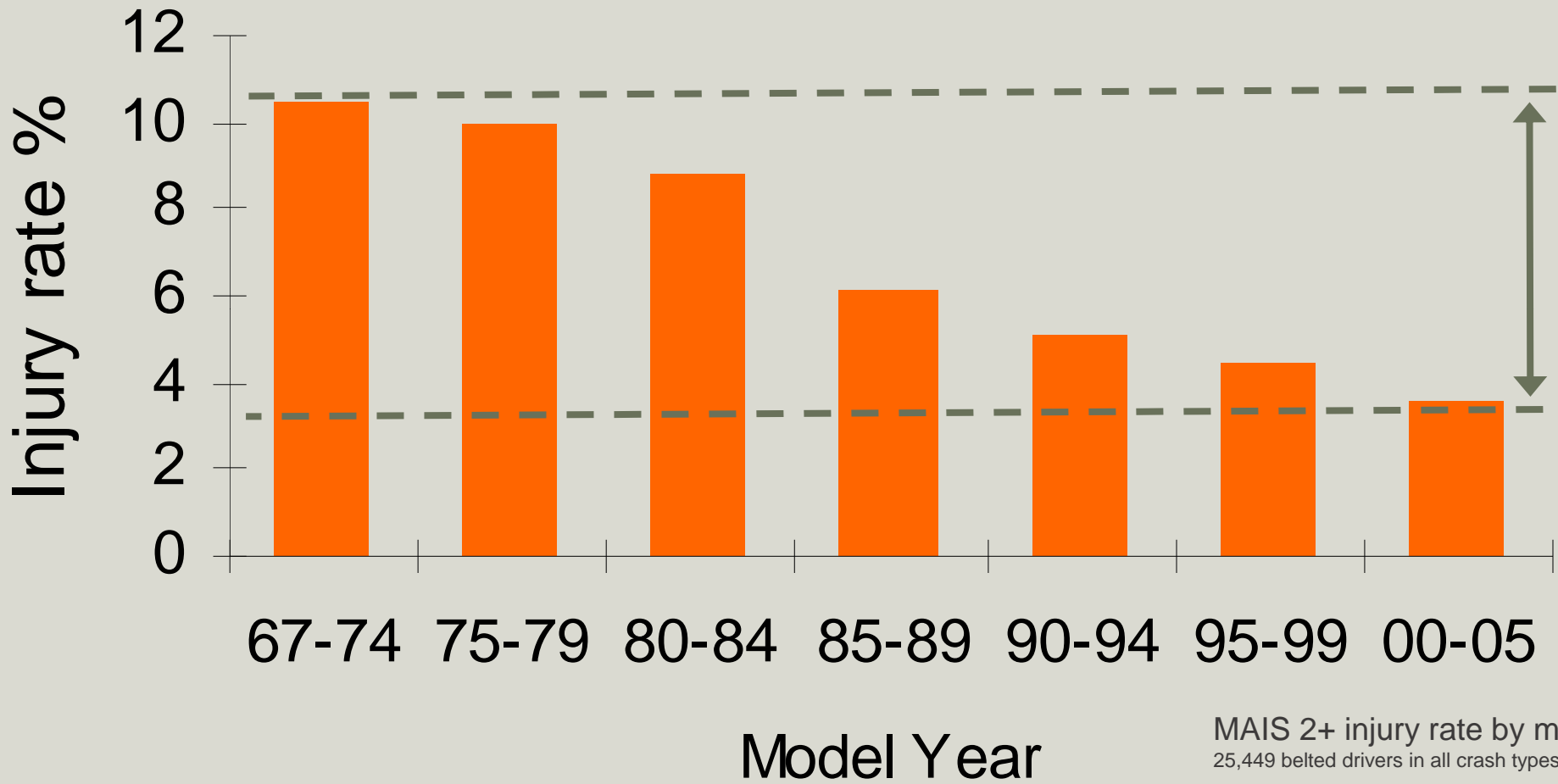
# Expected Benefits of New Technologies




Anders Eugensson, Volvo Car Corporation



# Protective Safety Achievements 1967-2005



An aerial, top-down view of a multi-lane highway curving through a landscape. Several cars are visible on the road. Two cars are highlighted with green circular sensor-like outlines, suggesting advanced driver assistance or autonomous driving technology. The overall aesthetic is futuristic and clean, with a light blue and grey color palette.

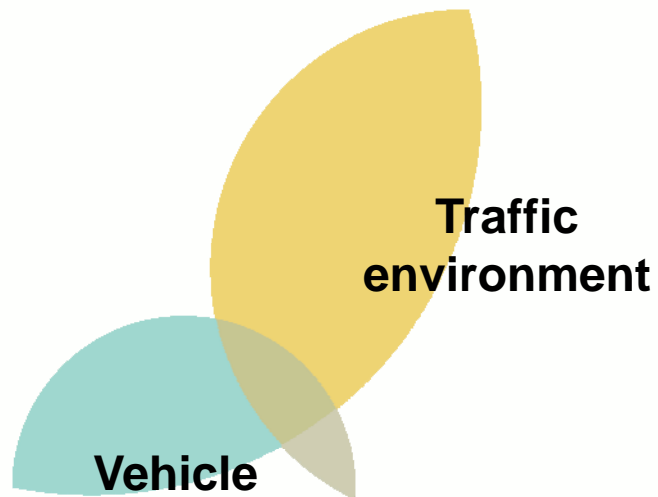
Our Vision is that no one is killed or injured in a Volvo in the year 2020

***Volvo Vision 2020***



# What Causes Accidents?

**Human error (up to 93%)**



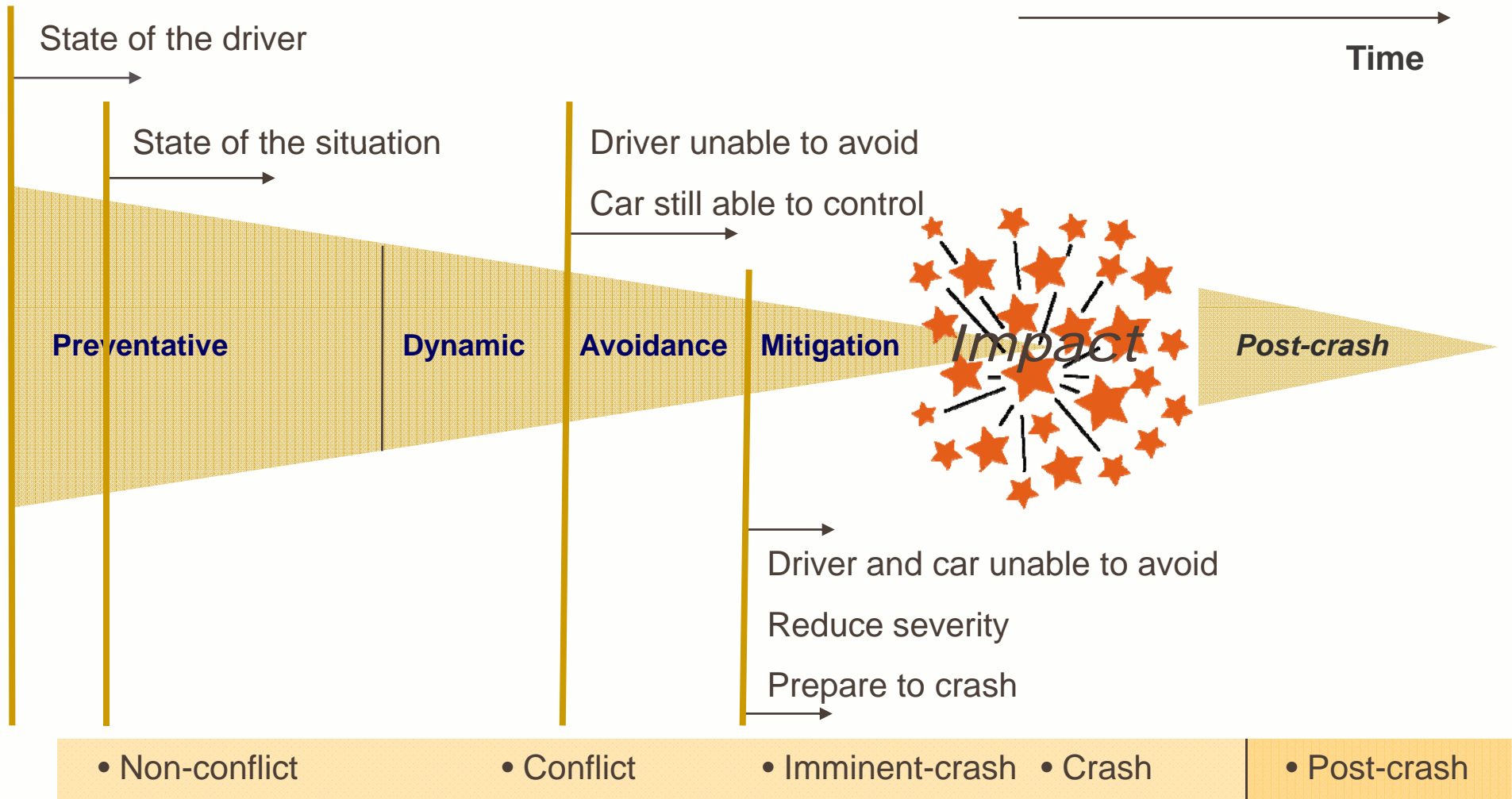
Driver distraction  
Driver drowsiness  
DWI (alcohol and drugs)  
Driver capabilities

***'the 4 D's'***

Source: Virginia Transportation Institute



# The Holistic View of Safety

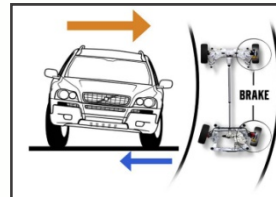
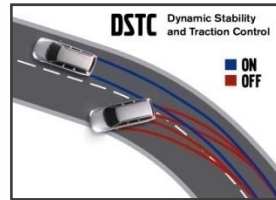
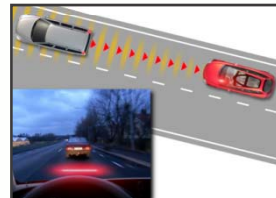


# Technology as Countermeasure in the Holistic Perspective

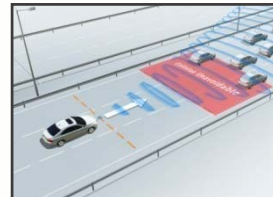
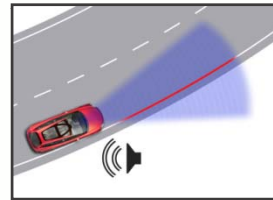
BLIS  
Driver Alert  
Alcoguard



Forward Collision Warning  
DSTC  
RSC



City Safety  
Emergency Lane Assist  
Collision Mitigation



Safety Cage  
Inflatable Curtain  
Whiplash Prevention System



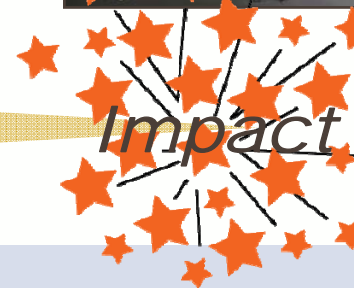
Volvo  
On Call



Preventative

Dynamic

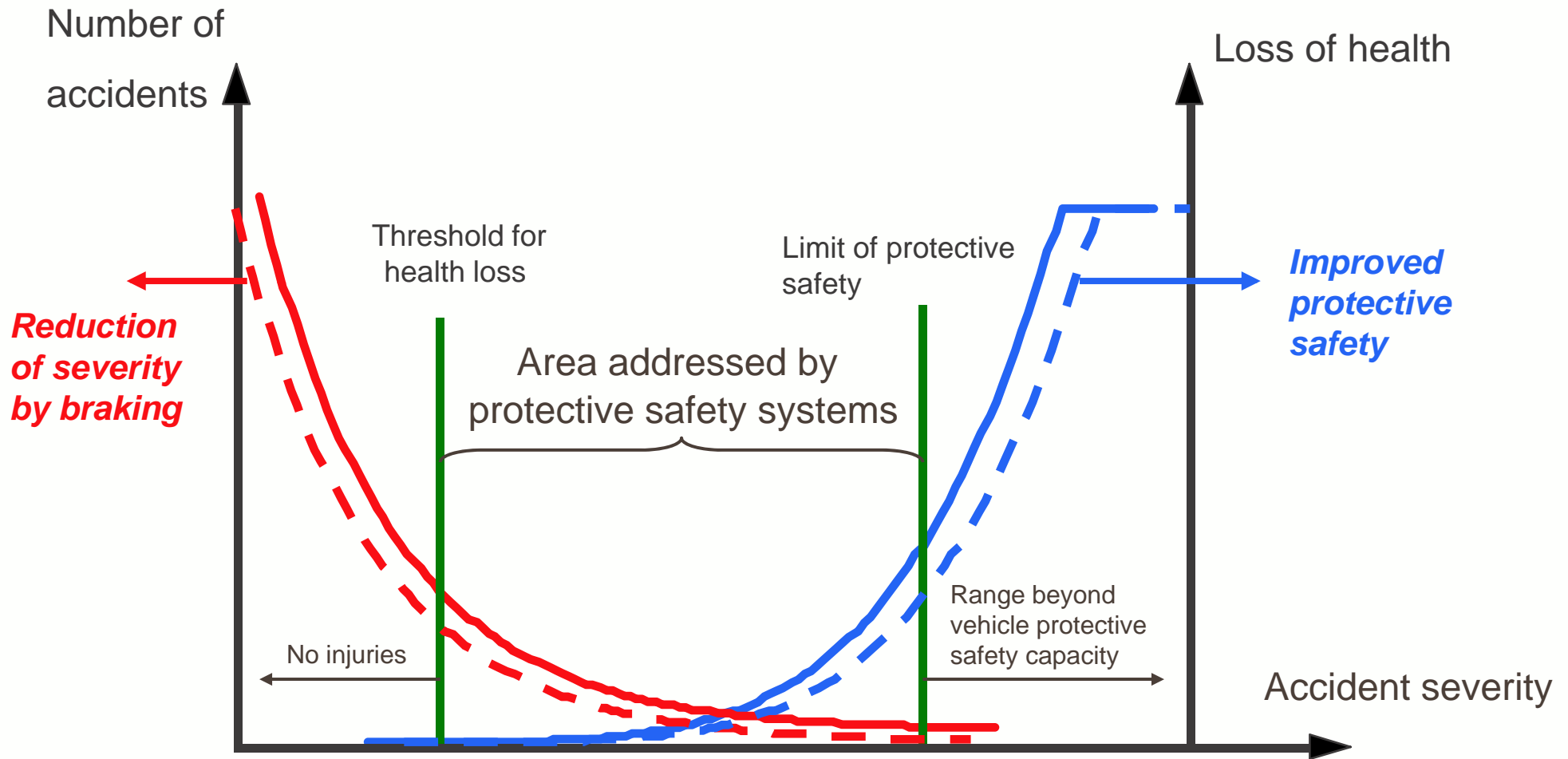
Avoidance/Mitigation



Post-crash



# Integrated Safety – Combining Protective and Preventative Safety



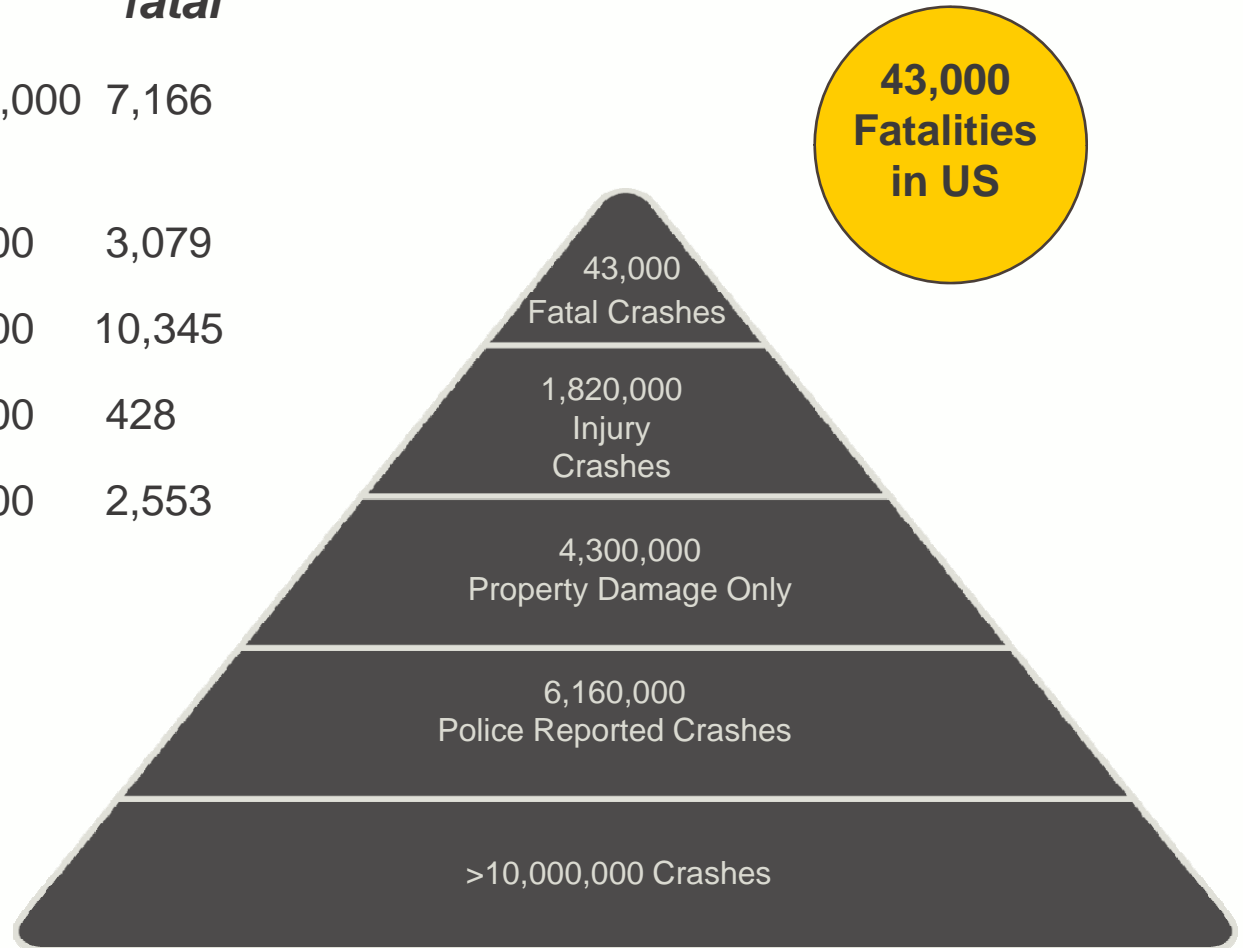
# Annual Crashes Relevant to Vehicle Technologies 2002-06 (US)

<i>Technology</i>	<i>all</i>	<i>fatal</i>
• <b>Forward Collision Warning with Automatic Braking</b>	2,268,000	7,166
• <b>Emergency Brake Assist</b>	417,000	3,079
• <b>Lane Departure Warning</b>	483,000	10,345
• <b>Blind Spot Detection</b>	457,000	428
• <b>Adaptive Headlights</b>	143,000	2,553

Source: Insurance Institute for Highway Safety (IIHS)

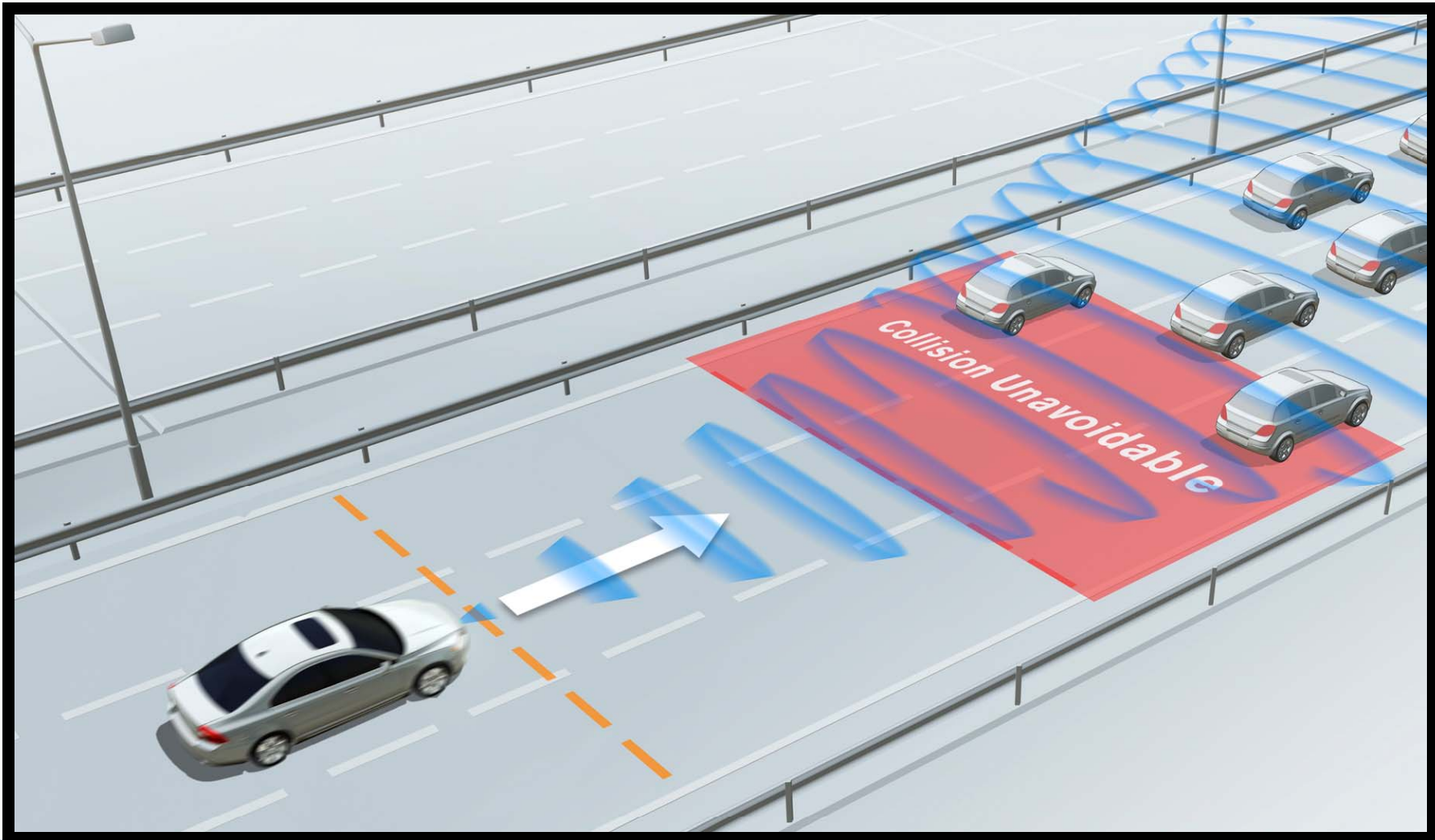
**and**

- **Alcohol Interlocks: 40% of all fatalities**





## Avoidance / Mitigation: Collision Warning with Autobrake



# The Future – Volvo Vision 2020

***Our Vision is that no one is killed or injured in a Volvo in the year 2020***

New technologies have taken traffic safety one step further ***but...***

- Can we find technical solutions quickly enough?
  - Only 12 years of development/research available
  - Only two generations of products to achieve target
- Will we have sufficient know-how?
  - We have only just commenced the learning curve for preventative safety systems
  - There is still a development need in protective safety systems

- *We cannot solve this on our own – we must cooperate with other partners*
- *Incentives for increased penetration of preventative systems needed*
- *Consumers need to be aware of potentials with preventative safety systems*



Thank You!

