A study of the Volvo XC60's low crash involvement rate offers evidence that collision avoidance systems can improve vehicle safety. The XC60, which has a low-speed collision avoidance system called City Safety, was involved in 27% fewer property damage crashes than its direct competitors, say HLDI, the U.S. Highway Loss Data Institute. The XC60 also was involved in 51 percent fewer collisions involving bodily injury.

The survey suggests collision avoidance systems can effectively help distracted motorists who fail to notice a developing emergency. HLDI President Adrian Lund says "Driver mistakes are responsible for 90% of crashes…this is the first technology that can reach out to the driver at the moment of danger and bring his mind back to the danger."

City Safety uses an infrared laser sensor — lidar — to spot objects of potential collision at speeds ranging from 5 to 30km/h. If the motorist fails to react in time, the system automatically activates the brakes. The unit is not designed for speeds above 19 mph. City Safety was designed by Continental who are providing a similar unit to Ford this spring. Ford introduced its own version on the European Ford Focus but have not announced plans to introduce it in North America.

Dean McConnell, Continental's North American director for passive safety and advanced driver assistance systems, says it would be possible to combine lidar with a camera to create a collision avoidance systems that works at speeds up to 30 mph. For motorway speeds, radar is considered most reliable. Volvo, for example, have introduced a high-speed radar unit designed by Delphi.