



Prince Michael
**INTERNATIONAL
ROAD SAFETY AWARDS**



Saving lives:

Twenty years of automotive innovation



Welcome...

The automotive industry's contribution to road safety is enormous. Industry-led innovation, often followed by legislation, has helped reduce the number of UK road casualties by more than half in the last 20 years. Since 1989, vehicle occupant deaths alone have fallen by 56% in the UK.

Governments across the world acknowledge the important contribution from improved vehicle safety, but this positive story is rarely publicised. His Royal Highness recognises the industry's outstanding achievement, and wishes to mark it with a special Prince Michael International Road Safety Award.

Manufacturers, commentators, car dealers, business leaders and all those with an interest in making our roads safer must now take the opportunity to raise awareness of the systems on offer and help motorists choose the safest vehicles available.

Many are already working to promote the benefits of the latest safety systems. This report brings together some leading commentators to explain why the industry deserves recognition.

A timeline is included in the centrefold to illustrate just how much innovation has occurred. It shows when some of the major safety technologies came to market and is by no means exhaustive! Definitions are included on page 15.



**His Royal Highness Prince
Michael of Kent GCMG**

David Williams, *Motoring Correspondent*

Welcome headline figures – road deaths down to record levels, overall casualties and child deaths also down – reflect progress in many arenas, ranging from education to road design. But the most remarkable advances that most of us come into contact with on a daily basis are in the car, even if we do take them for granted.

In fact, it is only by making a determined study of the standard safety features crammed into even the humblest of cars that one can appreciate the huge advances of the past two decades or so.

Do I have a favourite? If pressed I'd name the seatbelt. Not because it saves lives – which it does – but because it symbolises what can be achieved when industry and government unite to create a safety ideal – and then educate the public into using it with almost universal acceptance. Now that's real progress.



Ray Hutton,

Motor Industry Correspondent

Twenty years ago it was said that ‘safety doesn’t sell’. Car manufacturers around the world would develop and demonstrate safety systems and crash protection measures but they would only be fitted to the most expensive cars, where the additional cost was not significant.

The well-publicised independent Euro NCAP crash test programme changed attitudes. The public demanded safer cars and the car companies responded quickly. That most new cars now achieve four and five stars in Euro NCAP is a tribute to their makers’ design and engineering skills.



In active safety – accident avoidance – the motor industry took the lead. In 2004, car manufacturers, through their trade association ACEA, agreed that ABS (anti-lock braking) would be fitted as standard to all new cars sold in Europe. ACEA’s counterparts representing Japanese and Korean car makers followed suit.

In 1995, Mercedes and Bosch introduced ESC (electronic stability control) as an adjunct to ABS. Costs have come down and manufacturers have welcomed its compulsory fitting to new models from 2012. ESC, which has been described as the most effective safety device since the seatbelt, is the industry’s most important development in this field in the past 20 years.

Tom Evans,

Content Manager, MSN Cars

Someone ‘not dying’ in road-crashes rarely makes the news. However, the amazing fact is that today people in modern cars frequently walk away from many crashes that would have killed them not so long ago. Many more people never had the crash at all, since ABS, ESP, ABD and associated systems stopped a loss of control in the first place.



Such technologies, together with energy-absorbing structures and airbags, have made an enormous contribution in the past 20 years or so to making the modern car much safer than before. This is a great tribute to the car manufacturers and their suppliers, and there is still much more to come, with systems on the horizon that will enable cars to communicate road conditions and hazards to other cars using the same road, to the more distant dream of cars that inter-relate to avoid collisions.

For now, the industry – in a world that appears to be rapidly urbanising - needs to do more to protect pedestrians and other non-car road-users, including promoting frontal car design that minimises injuries caused by low-speed impact

Richard Aucock,

Managing Editor, Motoring Research Ltd

What stands out for me is the industry's championing of ESC. Stability control is a technical development purely driven by the industry, whose commitment now sees it offered on virtually every car available. It will play a massive role in cutting accident incidence in the future and, as more cars enter the parc, will slash the number of loss-of-control accidents.



The industry gets the recognition it deserves from some quarters, such as in making ever-safer cars following a crash: the Euro NCAP scheme is widely applauded. There are many other unseen developments that car buyers are simply not aware of though.

Billions of Euros are spent each year on safety research, with the car industry often generating and facilitating advances that are relevant far beyond the auto world itself. Ergonomics is a notable area where cars have helped lead new thinking.

For road users, it means less likelihood of being affected by a collision with a car. Today's models not only protect occupants but also other road users, both through the developments in ESC reducing the likelihood of them spinning, but also in other areas such as pedestrian detection and auto-brake systems.

Kevin Borrás,

*Publishing Director, H3B Media,
Editor-In-Chief Thinking Highways*

There have been a plethora of incredible technological advancements in road- and vehicle-safety systems over the last few years. Brake assist, ESC, adaptive headlights, lane support, blind spot monitoring, among others, are all designed to drastically reduce the number of people who are killed or seriously injured on Europe's roads.

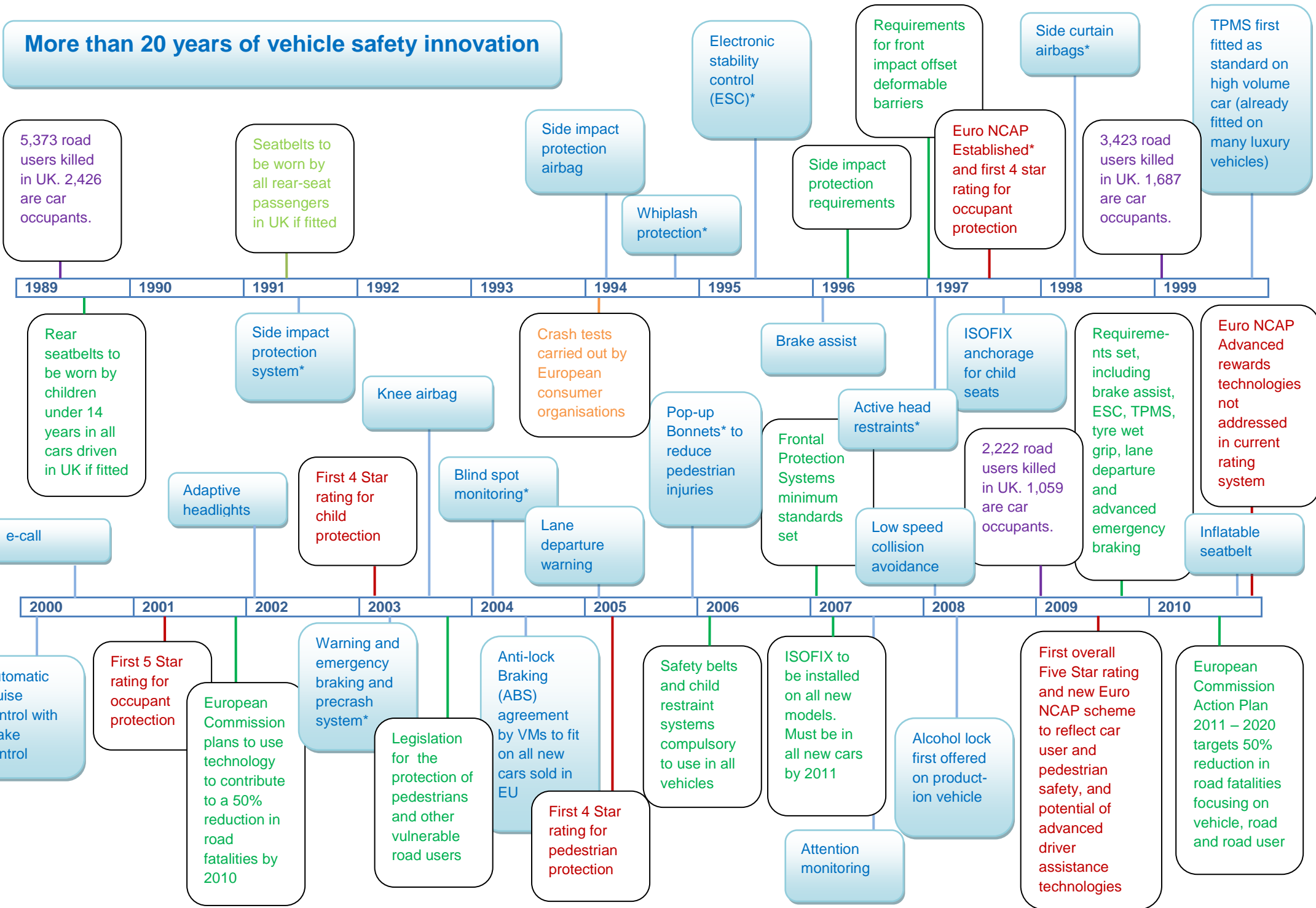


I've driven cars with these systems fitted and you do get the feeling that you would really have to do something incredibly stupid or dangerous to be involved in a serious crash.

Unfortunately, drivers are given to do incredibly stupid and dangerous things on occasion – so with the European road death figures continuing in a downward trend I'd like to throw a slight curveball and say that for me, the standout innovation of the last few years has been the change in the public's perception of road- and vehicle-safety systems.

The technology is quite brilliant but it works best, and has the most significant results, when it operates in tandem with intelligent thinking and decision-making.

More than 20 years of vehicle safety innovation



Steve Fowler,

Editor-In-Chief, What Car?

The car industry deserves massive credit for the work it has done to improve road safety. There's more traffic around than ever and driving standards haven't improved, so it's clear that it must be safer cars that are cutting accident figures.

Today's cars are dynamically easier and safer to drive (yet just as much fun), while the standard fitment of airbags, anti-lock brakes and traction control has brought new levels of safety to all road users and pedestrians.

Most car buyers would tick a stereo upgrade box rather than opt for extra safety kit in their cars, so they should know exactly what the oft-criticised car industry has done to keep them and their loved ones safe.



Elizabeth Box,

Head of Research, RAC Foundation

Vehicle manufacturers have taken the lead in making safety a priority and innovations such as airbags, ABS and ESC are just some of the developments that have played a vital part in reducing death and injury on our roads. This sustained effort from vehicle manufacturers deserves recognition and applause. Cars are undoubtedly getting safer, but the challenge remains to ensure consumers are aware of the benefits on offer. 'Safety' as a consideration in the car purchasing decision typically features after fuel consumption, size, price, appearance, reliability and comfort.



The importance and impact of providing information in an accessible format and, where possible, offering new technology 'as standard' on all classes of vehicles, not just high-end models, should not be underestimated. Without careful drivers and well designed roads, even the safest of cars will not prevent injury but the ongoing endeavors of automakers have set the right course when it comes to occupant protection.

Cars are continuing to develop in response to environmental challenges and the need to provide additional protection to pedestrians and others road users. These changing times bring new challenges, but if past successes are anything to go by, the industry is well placed to deliver the improvements demanded by the public and politicians.

Ashley Martin,

*Fleet industry commentator;
Director, Ashley Martin Communications Ltd*

At-work driving safety is now a key component within the multi-faceted world of fleet management. But it is amazing to think that not too many years ago the attitude of many businesses to their vehicles and drivers being involved in crashes was ‘accidents do happen’.



Such crashes come at a tremendous cost to employers, cause administration chaos and hit operating efficiency. However, technical advances in active and passive safety in cars and vans have proved to fleet decision-makers that they can influence road safety and reduce the toll of death and injury.

Improving road safety starts with the compilation of vehicle choice lists featuring models equipped with the very latest safety features such as ESC, blind spot monitoring, lane support systems and adaptive headlights – while also ensuring they have a top-notch Euro NCAP rating.

Having provided drivers with a ‘safe’ vehicle, businesses can start to influence the behind-the-wheel actions of their staff. It would be difficult to influence driver behaviour if employees felt they were at the wheel of anything other than a ‘safe’ car or van.

It should also be remembered that most new models are bought with company money, so tomorrow’s second-hand buyers will also take to the road in a vehicle equipped with proven safety features.

Andrew Howard,

*Head of Road Safety,
the Automobile Association*

The 1990s were a momentous time for vehicle safety, as initiatives like Euro NCAP pressured the manufacturers into making cars to protect their occupants better. By publicising the performance of cars in crash tests, Euro NCAP meant that designs didn’t just have to meet standards, but were monitored on how well they exceeded them.



Having reached this level, the manufacturers embraced the challenge. The safety of a car became key to how well it sold, leading to greater innovation. This soon extended past mere protection into ways of using intelligent systems to prevent collisions happening.

Drivers can welcome all this change. But they have to remember that many of the improvements rely on seatbelts to ensure that occupants are in the right place. The oldest safety aid is still the most important.

David Ward,

Director General, FIA Foundation

The automobile industry deserves recognition for its investment in making motor vehicles much safer than ever before. More than 30 years of innovation has transformed the crash-worthiness of cars so that they feature life-saving systems such as crumple zones, seatbelts, air bags, and electronic stability control.



Many of these improvements were stimulated by the demands of regulators and consumers. However, the automobile industry has responded strongly to these challenges. Through Euro NCAP, for example, manufacturers now compete in a market for safety in which consumers can choose to buy the safest products.

More remains to be done to make roads safe, but huge investment in safety technologies by the manufacturers and their suppliers is now bearing fruit and the results can be seen where it matters most, on roads with far fewer fatalities.

Definitions

Adaptive headlights: maximise visibility with advanced light sources, like Xenon or LED. They continually adjust the beam to light the scene ahead, shining up hills or around bends as necessary.

Alcohol lock: measures a driver's blood alcohol level and immobilises the vehicle if they are over the legal limit.

ABS (anti-lock braking): stops wheels locking when the brakes are applied to help maintain control and prevent skids.

Attention monitoring: monitors drivers' behaviour, and warns if they are erratic or drifting in the lane.

Blind spot monitoring: scans the driver's blind spots on either side of the vehicle for safe lane changing.

Brake assist: monitors the driver's use of the brake pedal and helps maintain full braking power in an emergency.

e-call: alerts the emergency services if a vehicle crashes and provides its location.

Euro NCAP: European New Car Assessment Programme

ESC (electronic stability control): detects and minimises / prevents

skidding, and helps keep the vehicle on course. The system applies brakes to individual wheels to, for example, counter understeer or oversteer. Some systems also reduce engine power until control is regained.

Lane departure warning: monitors a vehicle's position in the lane and alerts drivers when they leave the lane without signalling. Some systems steer the vehicle back in between the lines.

Pre-crash system: works with warning and emergency braking systems to prepare the vehicle when a crash is imminent, for example, pretensing seatbelts, adjusting seats and head restraints and lowering the brakes to maximise impact when applied.

TPMS (tyre pressure monitoring system): monitors tyre pressure and alerts the driver when levels are low.

Warning and emergency braking: detects a potential crash ahead and alerts the driver. If no action is taken, the system warns the driver again, prepares for a crash and applies the brakes to mitigate or avoid the collision.

UK road deaths by road user type

Year	All road users	Car	Pedestrians	Motorcycle	Pedal cyclists	Bus / coach	Others
1989	5,373	2,426	1706	683	294	20	244
1999	3,423	1,687	870	547	172	11	136
2009	2,222	1,059	500	472	104	14	73

(Source: Department for Transport)



The Prince Michael International Road Safety Awards
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