

2022 – Vehicle safety in Europe takes a giant leap forward; but there are a couple of own-goals

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Abstract

For years, speed has been recognised as one of the main contributing factors to deaths and serious injuries on our roads. And for more than two decades, ETSC –with others- has been advocating the benefits of Intelligent Speed Assistance (ISA). ISA is a fantastic technology that helps drivers keep within the posted speed limit using a combination of GPS, digital maps and sign-reading cameras. The good news is that as of this July, all new models of car, van, lorry and bus launched on to the EU market will have to be fitted as standard with ISA, together with an array of new vehicle safety technologies.

But Intelligent Speed Assistance, one of the life-saving systems with the most potential, could fail to bring the hoped-for benefits. And the new in-vehicle black boxes, also known as Electronic Data Recorders (EDRs), will be virtually useless to safety researchers. So what happened?

Keywords

Lobbying; decision-making process; Intelligent Speed Assistance; Electronic Data Recorders; vehicle safety regulation

The EU has exclusive competence on vehicle safety measures and vehicle type approval under Article 114 of the EU treaty. These legally-binding tools represent the most direct and effective measures the EU has at its disposal to further reduce deaths and injuries on the road. The 2019 General Safety Regulation updates the 2009 standards and makes state of the art safety technologies mandatory on all new vehicles. New models of car, van, lorry and bus launched on to the EU/EEA market must be fitted as standard with

- Overridable Intelligent Speed Assistance on all new cars, vans, trucks and buses from 2022.
- Electronic Data Recorders or 'black boxes' are also required on new cars and vans from 2022 (2026 for lorries and buses).
- Alcohol Interlock Installation Facilitation to make it easier to fit an alcohol interlock if needed,
- car-to-car Automated Emergency Braking on all new models of car and van from 2022 (It was already mandatory on lorries, and those standards were recently updated),
- mandatory AEB systems on cars and vans will have to be able to detect pedestrians and cyclists too from 2024,

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- Driver Drowsiness and Attention Warning. And from 2024, Advanced Driver Distraction warning systems also need to be fitted.
 - Emergency Lane Keeping System on cars and vans (it was already mandatory on trucks and buses).
 - Detection of obstacles while reversing is also required, along with an automatic emergency stop signal.
 - Lorries will need side and rear underrun protection, to stop vehicles being crushed underneath.
 - From 2024, there will be a new standard for an enlarged head impact zone for pedestrians on cars and vans.
 - Finally, by 2026, lorries and buses will have to meet a new Direct Vision standard, to help drivers have better visibility around the vehicle.

ETSC contributed, together with other organisations to the adoption of those standards by the European Parliament and the Council, following the European Commission's proposal, through a constant and long-standing advocacy campaign. ETSC welcomed this milestone but said standards for two of the new technologies are too weak and need to be urgently reviewed.

A world premiere: all new vehicles sold in the EU will have to be fitted with Intelligent Speed Assistance ...

The 2019 General Safety Regulation includes mandatory fitment of overridable Intelligent Speed Assistance (ISA) on all cars, vans, buses and heavy goods vehicles. Research shows that this single technology could help to achieve a high level of compliance with speed limits and eventually cut road deaths by 20%.

ISA is a fantastic life-saving system. Using sign-reading cameras and digital maps of speed limit data, the car can cut engine torque automatically to keep the vehicle within the current speed limit. ETSC has been advocating the benefits of mandating ISA on all new vehicles in the EU for two decades.

The Safe System approach, which has been endorsed in the EU strategic action plan on road safety, requires the road traffic management system to limit speeds to survivable levels, taking into account that humans make mistakes and their bodies have a limited tolerance for kinetic forces in case of a road collision.

Some in the car industry correctly saw the marketing potential of such systems. When Ford launched its version of ISA on to the EU market in 2015, it sold it as a technology that would spell the end of speeding tickets. Honda, Jaguar Land Rover, Mercedes and Volvo have also offered variations on this type of ISA system over the years since.

Exposing industry lobbying

But when the EU announced that it wanted ISA, together with a range of other safety technologies, to be built-in on all cars sold in the EU, the tone from some industry voices was very different. ACEA, the lobbying group that represents the main car producers wanted ISA [removed from the EU's proposals](#) and replaced with a system that just displayed the current speed limit on the dashboard.

While making this case, it misrepresented the results of safety analysis it had paid consultants, such as TRL, to carry out on its behalf.

ETSC responded together with a coalition of organisations, and despite strong and sustained industry pressure, ISA remained in the EU's new vehicle safety requirements. But by the time the legislation was agreed and detailed technical specifications were worked out, the outcome was an unsatisfactory compromise.

The devil is in the details

Instead of requiring a system that actually intervenes to help drivers keep within the speed limit, vehicle makers, as a minimum, can fit a system that just gives an audible warning, a bit like a seatbelt reminder, when the vehicle goes over the speed limit. ETSC has [repeatedly pointed out](#) that, in tests it commissioned, an audible warning was found to be irritating to drivers, and would likely be switched off. The European Commission pushed ahead with permitting this alternative specification anyway.

Another problem with the final specifications is the minimum level of accuracy required in determining the speed limit for the road.

ACEA fought long and hard to ensure that they could get away with fitting the cheapest possible ISA system – i.e. one that doesn't require a digital map of speed limits, but only uses the front-facing camera already used by other in-car systems on most cars today. Why is this important? Because a camera cannot see a speed sign that isn't there. The fact is that there are parts of our road network in Europe that do not actually feature sign-posted speed limits at all

Yet the EU requirements represent the world's first regulatory standard for Intelligent Speed Assistance technology. ETSC is now calling on vehicle manufacturers to go beyond the minimum requirements of the legislation to maximise the huge potential safety benefits of the technology.

... and with Electronic Data Recorders (EDRs)

The importance of EDR for collision analysis

Determining the causation in a collision is becoming increasingly difficult with the increase of assistance systems in vehicles, as fewer physical traces are available to reveal the course of a collision. EDRs are therefore vital for gathering collision data (such as impact speed or the status of on-board safety devices) for better research as well as collision analysis – already today, and especially considering a future in which assisted and automated driving systems play an increasingly important role in road traffic.

How data protection rules can be misused

Article 6(5) of the GSR requires that the EDR should not be capable of recording and storing data that could lead to the identification of the vehicle, owner or driver, and the European Commission therefore argued that the recording and storing of data elements on location, date and time would violate this provision. Prohibiting EDRs from capturing data elements on the location, date and time of events would mean that they do not record essential data for accident research and analysis – the very purpose for which they are mandated by the GSR.

ETSC expressed its concerns about the envisaged prohibition, while providing safeguards to ensure data protection rules. Possible safeguards include, for example, more stringent provisions for how and when data on location, date and time can be retrieved.

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Fitting [#SafetyAsStandard](#): Intelligent Speed Assistance (ISA) video featuring Prof. Oliver Carsten.

<https://www.youtube.com/watch?v=SoZLrZTnUGs>