Do we still need road signs? Yes we do!



The history of the road sign in the UK is richer than you might think. Many point to the Romans as being the first 'inventors' of signs. They used to 'mark off' road distances at one thousand paces-or approximately a mile-with stones called milliaries.

In 1648 a law was passed requiring each parish to erect guideposts at crossroads and then in 1773 the General Turnpike Act meant these posts were to become more common. In the second half of the nineteenth century, bicycles became more popular. Steep hills and sharp bends were very dangerous for early cyclists, and 'danger' and 'caution' signs were erected at the top of steep hills. And then there was the arrival of the motor car.

Fast forward hundreds of years and we are witnessing a massive period of change on the road network. The last decade has seen technology drive change at a pace that has never been witnessed before.

Now the arrival of connected cars and driverless technology has brought into question whether traditional road signs will be needed as much or in the same way ever again, especially with more and more information coming via in-car systems. But are signs really a thing of the past?

While in-car technology will play its part, road signs, albeit more technologically advanced ones, will be needed more than ever. It has been proven several times, in several different scenarios that behaviour is significantly influenced by road signs and with



new and emerging forms of transport such as driverless technology, the ability to warn the travelling public how to behave in these vehicles and how to drive with them on the network will mean the need for signs to support this education process on the side of the road will probably never be greater. Proven technology means speed limits and warning messages can be changed at a flick of a button in a control centre, rather than putting road workers at risk near live traffic.



Dr Shaun Helman of TRL looked at the purpose of road signs in a recent report. He said that on first consideration, road signs seem critical to the proper functioning of the road system. Another point of view is that like 'paying with cash' they are a relic, no longer required in the world of connectivity, satnavs, driver assistance systems, and (soon) fully automated cars which drive themselves.

A study conducted in 2003 by Shinar et al which studied sign comprehension in multiple countries and groups including novices and older, more experienced drivers. They found that more experienced drivers almost always performed worse than novices; the levels of sign comprehension when learning would appear to be more than is needed in later driving. In another test, it was found the amount of warning signage and other treatments on a bend led to drivers choosing slower speeds, even when the effect of the actual geometry of the bend was taken into account; in other words, people slowed down when signage warned them to, the report said.

Also, much driverless technology needs clear, well-maintained road signs either to read and react accordingly or as a permanent mark on the landscape to 'map' from and ensure consistent driving. This is also highlighted in the forthcoming EU General Safety Regulation for the Intelligent Speed Assistance (ISA) systems. Also, Highways England has conducted trials to see if information that would normally require physical signage can be directly ported to screens inside vehicles.

But how can you guarantee 100% take up of this technology straight away when not all cars include this technology?

Physical signs bring many other advantages. As well as the work that has proven behavioural change as a result of physical signs at the side of the road, there are many other benefits.

Vehicle Activated Signs, for example, remain vital to help influence driver to adhere to speed limits. Did you know, on 30 mph roads in built-up areas, 53% of car drivers exceed 30 mph and 19% exceed 35 mph. On motorways in non-built-up areas with 70 mph limits, almost half (46%) of car drivers exceed the speed limit, with 11% going faster than 80 mph, according to Department for Transport figures.

Then there is the environment. Again, signs have a positive effect on the way people drive to help reduce emissions. If you can reduce traffic by 10-20% and remove a lot of the congestion, that may have a disproportionate effect on the emissions. This comes at a time when there is more pressure than ever on road authorities to meet air quality targets and in some increasing case-deliver net zero within the next decade.

More signs are being deployed on the network to ensure drivers and those investing their time in more cycling and walking, understand that vital changes to the layout of the road networks have been made and how to behave as a result.

With all this in mind, is it really time to question the need for less signs on the network? Planned, delivered and maintained in the right way, road signs can play a vital role in helping with many challenges, so surely now is the time to invest in technology to make them better alongside work on when and where they should positioned for maximum effect?

Written by Adrian Tatum

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