



Automated vehicles will reduce and alter crashes

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Serious crashes on inter-urban roads may be slashed by a quarter over the next 30-40 years with the introduction of automated vehicles.

But the ride may be far from smooth, with a mixed fleet transition and vital need for roads that cars can read, according to a EuroRAP report.

The report, the third in the “Roads that Cars Can Read” series, examines the relationship between road infrastructure and safety for conventional and increasingly-autonomous vehicles and provides a framework for infrastructure safety investment.

EuroRAP Regional Director and report author Dr Steve Lawson said the shift to AVs is likely to take decades and alter the crash types and risks we’re dealing with, as well as crash liability and appropriate countermeasures for safety.

Understanding these risks will be important to managing the transition with utmost safety.

“Increasing automation currently relies on clear road line markings and signs that can be reliably detected, and road users need to be able to anticipate AV manoeuvres accurately for safe, smooth traffic flow.

“Roads that cars can consistently and unequivocally read will be key to safety in the changeover period as the common factor of reliance for both driver-operated and automated vehicles,” Dr Lawson said.

The report, a joint initiative of EuroRAP, the UK Road Safety Foundation and International Road Assessment Programme (iRAP) summarises current crash patterns and



countermeasures in Great Britain and illustrates with examples of crash countermeasures in the Netherlands and 14 countries through south-east Europe. It considers how each might change with the introduction of AVs.

The greatest crash risk for conventional vehicles on inter-urban roads involves run-off, head-on, intersection and shunt crashes.

This is likely to change with the introduction of AVs as lane-keeping technology, enhanced road positioning, speed management, vehicle to vehicle connectivity and autonomous emergency braking comes into play.

It will be increasingly important that road markings are kept very clear and repainted regularly as systems use them to steer paths and road surfaces will need more anti-skid treatments while roadside furniture may need relocating to avoid injury to pedestrians and riders and give better sight lines to road users and camera systems.

There will still, for a long time, be non-assisted or automated vehicles in the road traffic mix as well and future schemes must consider their needs as well, said the report.