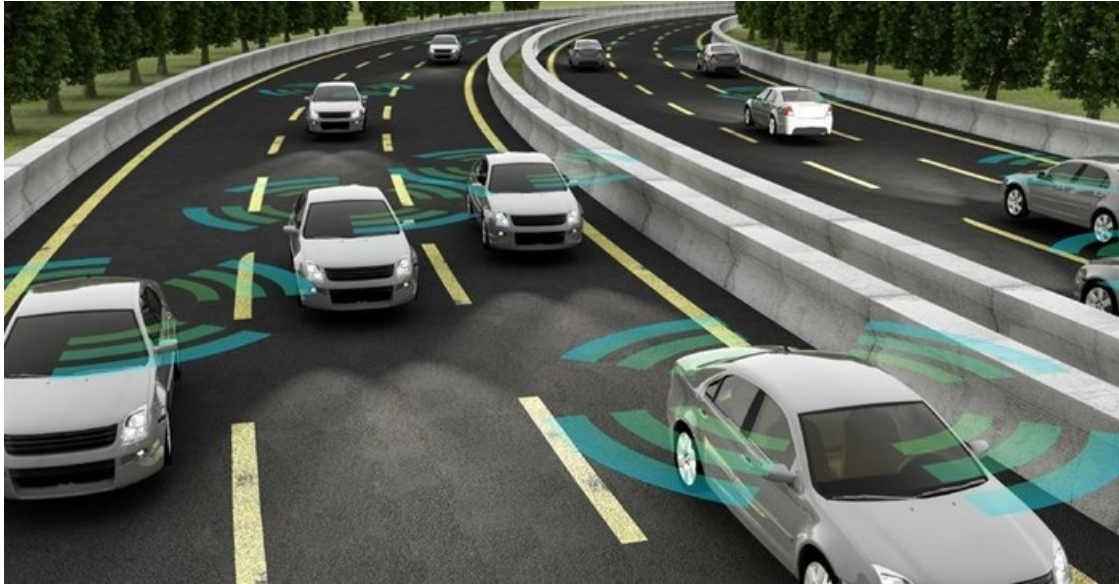


Do self-driving cars eliminate the number of road fatalities?

A report by the International Transport Forum says that claims of self-driving cars avoiding 90% of road deaths are untested and that automated vehicles do not in fact promise more safety by eliminating crashes linked to human error.



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Shared responsibility between robots and human drivers can actually lead to more complex driving decisions. The unintended consequences might make driving less safe, not more. In situations where humans take over control from robots, more crashes might occur among 'average' drivers who normally do not take risks.

Humans retain an advantage

Full automation may reduce the number of severe crashes significantly. Yet with partially automated systems, humans retain an advantage in many contexts. Overcoming this gap requires multiple sensors and connectivity with infrastructure.

Such fully automated and connected cars are vulnerable to cybersecurity risks. However, the report warns that the avoidance of crashes should never depend on access to shared external communication channels alone. It recommends designing automated vehicles so that safety-critical systems are functionally independent and cannot fail in case of connectivity issues.

Safe system approach

Automation makes it more urgent to adopt a safe system approach to road transport. A safe system organises all elements of road traffic in a way that when one safety mechanism fails, another comes in to prevent a crash or at least serious injury. Applying this approach to automated driving means the traffic system will account for machine errors.



Who's to blame when driverless cars have an accident?

Raja Jurdak and Salil S. Kanhere 23 Mar 2018



The report cautions against using safety performance to market competing automated vehicles. It states that the relative safety level of vehicles should not be a competition issue and that the regulatory framework should ensure maximum achievable road safety, guaranteed by industry, as a precondition of allowing these vehicles to operate.

Other recommendations include:

- Require automated vehicles to report safety-relevant data.
- Develop and use a staged testing regime for automated vehicles.
- Establish comprehensive cybersecurity principles for automated driving.
- Provide clear and targeted messaging of vehicle capabilities.

For more, [download the report](#), *Safer Roads with Autonomous Vehicles?*

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