



How can we use
artificial intelligence
to **enhance road
safety?**

FUTURE READY
singapore



In the global spotlight

More than 3,000 people die every day from road traffic injuries with children, pedestrians, cyclists and the elderly being the most vulnerable road users. Due to rapid urbanisation, this number is expected to rise as more cars are put on the roads. Besides observing good traffic practices, is there a solution that can significantly reduce road accidents in the future?



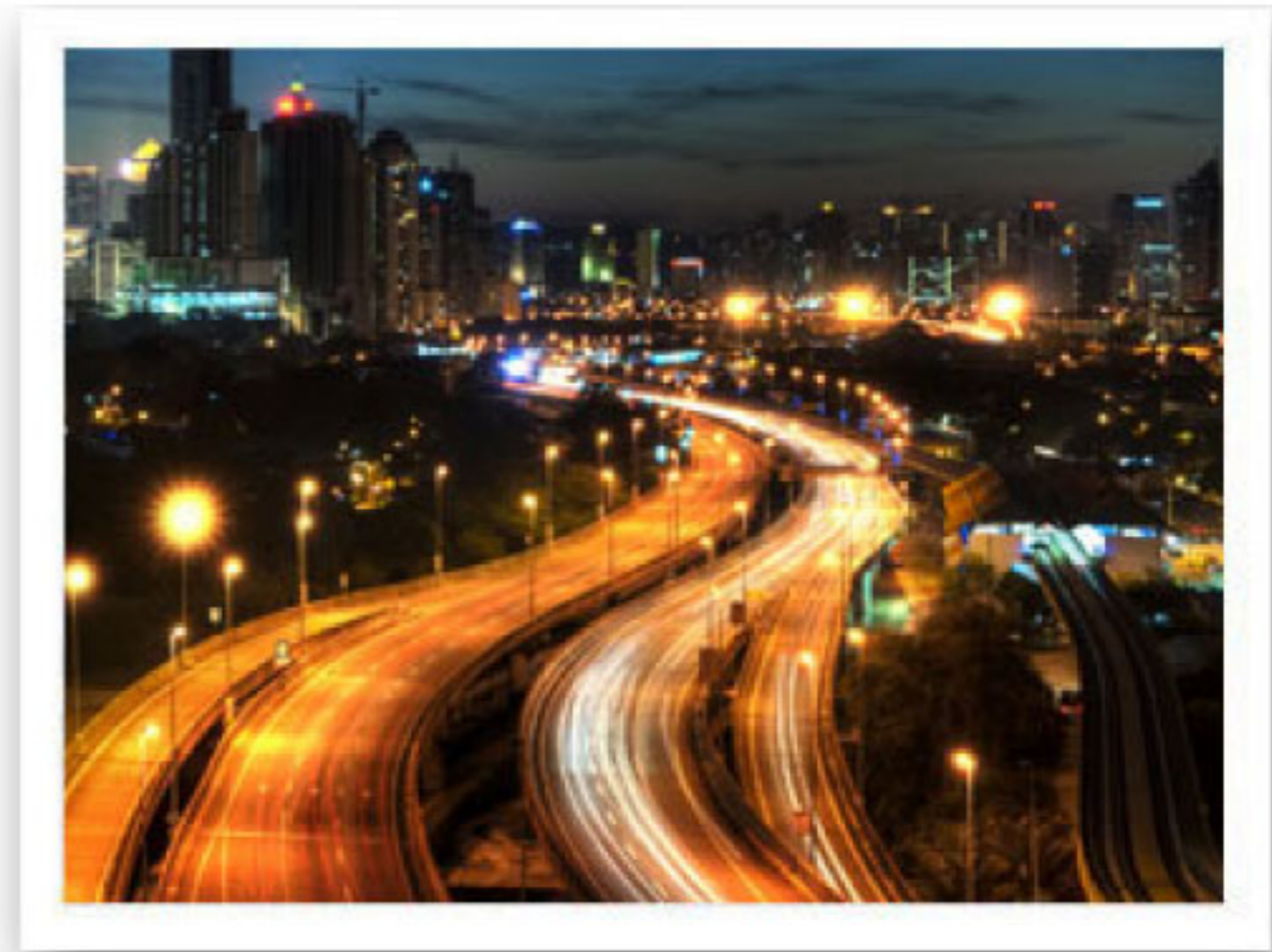
Tackling the issue

If vehicles could detect impending collisions and automatically apply brakes, there would be lesser road incidents. Currently, there are solution systems that offer such unique safety features, but their capabilities are limited and full safety is not guaranteed. With better technology needed to exceed safety standards, Delphi has initiated the development of a Vehicle-Infrastructure-Integration (VII) system. By equipping vehicles with artificial intelligence, the VII is able to collate traffic information and assess its physical surroundings in order to avoid road accidents.



What makes the solution **innovative**

The VII system functions like a nerve centre that is constantly transmitting and receiving traffic information so as to understand what's happening around. Put together a network of VII systems and you would have vehicles that can artificially communicate with each other – exchanging data on speed, orientation, road conditions and perhaps even driver awareness. In addition, the VII system can communicate with roadway infrastructure to receive real-time traffic information. Vehicles that have a VII system installed can tap on all these features to navigate the roads smoothly.



Singapore's role in developing the solution

The Land Transport Authority (LTA) is currently working closely with Delphi to trial this revolutionary technology, offering the use of Singapore's efficient road infrastructure for test bedding. As a growing urban city with limited land area and mounting traffic, Singapore offers the ideal environment to ensure accurate test results. With conclusive results, the VII system can subsequently be replicated in other parts of the world.

Exploring **new frontiers**

One of the goals of VII is to make roads accident-free, where road users can travel with total peace of mind. Besides improving road safety, VII also has the potential to increase efficiency and convenience of transportation systems. Its technology can retrieve real-time traffic data, enabling transport authorities to efficiently manage and address traffic problems. There is also the possibility of combining VII technology with a guided GPS system to produce auto-driven cars, leveraging on artificial intelligence for navigation.

DELPHI

Innovation for the Real World

Background on solution provider

Headquartered in Troy, Michigan, Delphi Corporation is a leading global supplier of electronics and technologies for industries such as automotive, commercial vehicle, contract manufacturing and medical, among other market segments. Delphi employs over 100,000 employees in 270 locations and 24 engineering centres across 32 countries. In Singapore, Delphi employs over 800 people including a 200-man team in the Singapore Design and Engineering Centre, which focuses on R&D in areas like advanced safety products and power electronics.



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**For tomorrow's
world_**

What is *Singapore: Future Ready*?

Singapore: Future Ready articulates Singapore's aspiration to be an ingenious partner for global businesses as they develop their ideas for tomorrow's solutions. We do so by recognising the value of long-term relationships, adopting a forward-looking approach, and taking on challenges with a can-do spirit. Against the backdrop of an ever-changing economic landscape, it also underlines Singapore's unique ability to help companies deliver solutions more quickly, with the right combination of talent, innovation, and strategic leadership.

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