THE CONNECTED CAR
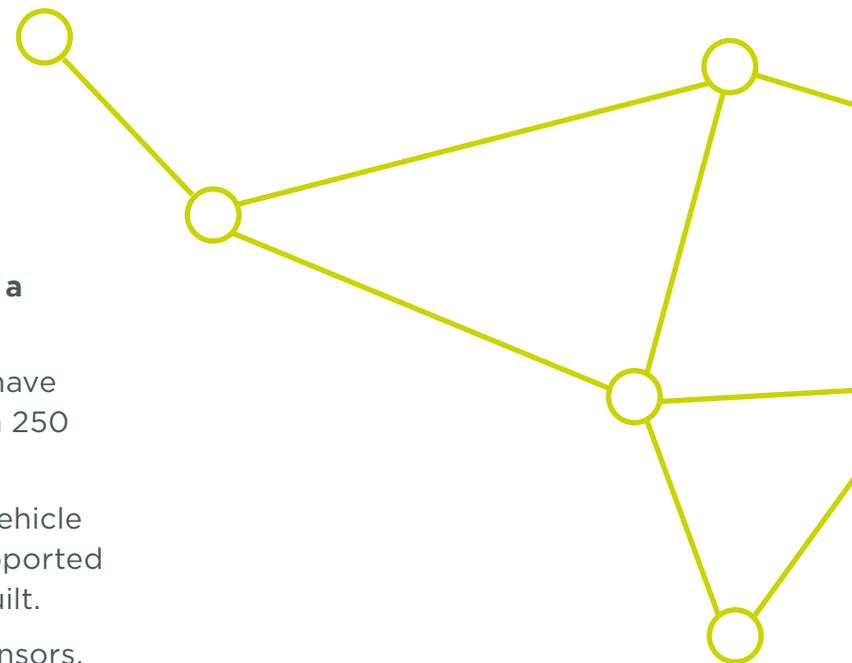## BELIEVE THE HYPE...

WEBFLEET

TOMTOM TELEMATICS

Described recently as 'a big smartphone on wheels', the Connected Car is a much hyped but often nebulous concept.

Gartner forecasts that about one in five vehicles on the road worldwide will have some form of wireless network connection by 2020, amounting to more than 250 million connected vehicles.

For the record, the term relates specifically to how data is collected from a vehicle and shared with other devices, often using apps. The technology is often supported by a telematics platform, where data can be managed and the application built.

Using data like GPS location, driving style, engine health and temperature sensors, applications can be developed to deliver a range of benefits including roadside assistance, parking apps and vehicle diagnostics.

Recent developments are making Connected Car technology a potential game changer. We look to the future in our infographic and outline 9 key emerging uses of the technology.

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HEY GOOD LOOKING IN THE BLUE RENAULT ZOE

JOHN – YOU HAVE 27 NEW EMAILS

Personalised roadside advertising

Vehicle recognition technology has already been used by Digital Out-Of-Home (DOOH) advertising specialists and Renault to display vehicle-relevant billboard ads to drivers in London, based on the popular 'I spy' car game.

In the future, vehicle-to-vehicle (V2V) and vehicle-to-infrastructure (V2I) technology could be exploited by shop fronts to display relevant ads, based not only upon the type of car driving by, but also the age or known interests of the driver inside.
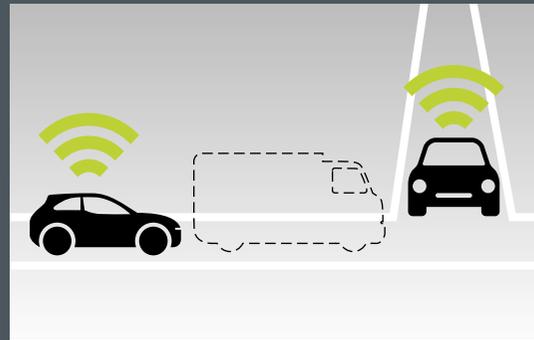
See-through vehicles

We already have cars which can automatically keep a safe distance behind the car in front, but the next wave of automotive safety, Vehicle to Vehicle (V2V) technology, connects cars via Wi-Fi® signals, allowing them to share information about location and speed, as well as other driving and safety data.

In this way, an HGV could send back images from digital cameras embedded in the front of the vehicle to a car behind it, essentially allowing the car to 'see' through the truck. Supported by the car's autonomous safety systems, this could help the driver to avoid a collision even before he is aware of it.

According to the U.S. Department of Transportation, "V2V [technology] has the potential to help drivers avoid or mitigate 70 to 80 percent of vehicle crashes involving unimpaired drivers."

In-car personal assistant

Key elements of popular office software can now be integrated into in-car 'infotainment' systems. The move will use voice-activated personal assistant software to allow drivers to schedule meetings, hear and respond to emails and join conference calls.

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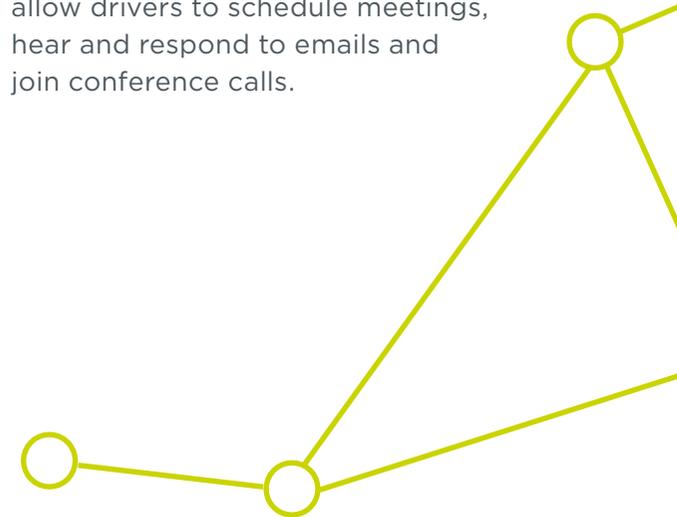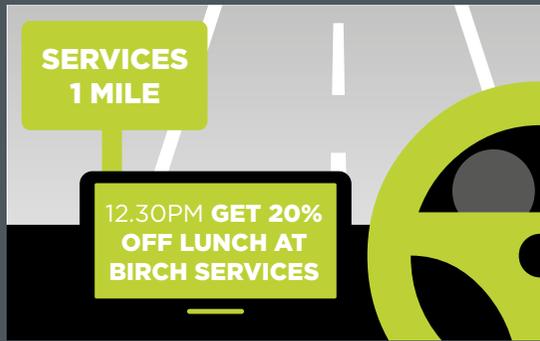
Personalised on-the-move discounts and incentives

In 2015, a US motor manufacturer launched a coupon distribution feature. The tool, which is so far only available in the US, appears in an app in which users are sent location-based coupons and offers according to how and where they drive (for example, for favourite places that they visit). Its most recent partner will offer fuel and convenience store special discounts across its 10,000 US petrol stations. It may only be a matter of time before this technology crosses the pond to the UK.

Automatically configured shared cars

A specific set of apps, driving preferences or entertainment options could be downloaded to a vehicle or smart phone to create a personalized software-based user profile. This would allow users to select and set their preferred driving mode, mirrors, seat position and infotainment services with a single voice command or touch of a button.
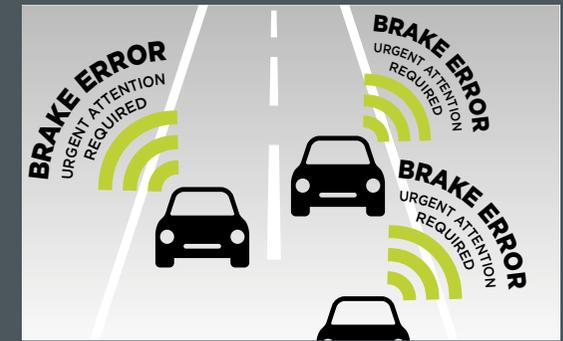
Seamless safety warnings

Individual remote vehicle diagnostics are already a reality, but used in combination, they could help to highlight safety issues before they cause an accident. If, for example, several cars of the same model reported problems with their brakes, the manufacturer could issue a recall in time to prevent accidents. The in-vehicle systems could then inform the driver and automatically book a repair appointment at the dealership.

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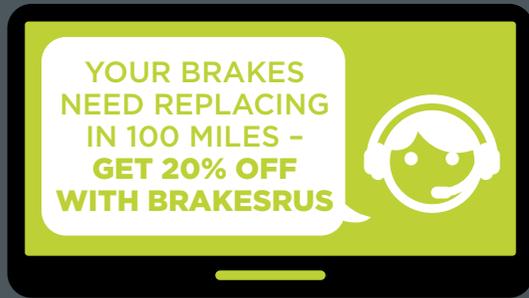
Bidding model may drive down motoring costs

According to Internet of Things expert Mike Kavis, writing recently in Forbes, the service model could be turned upside down in the future, with a variety of services moving to the bidding model, driving down costs for the consumer. For example, if a connected system detected that your front brakes needed replacing in the next 5,000 miles, a request could be automatically sent out to a network of service repair companies who could send competitive bids and offer to schedule the appointment based on an opening in your calendar.

Cars that talk to fridges - and takeaways!

Your car will remind you to pick up milk on the way home as your connected refrigerator will have told it you're low on milk. Or it will pay for the pizza you order from your dashboard via a voice instruction before you arrive at the drive-through take-away. PC Magazine recently reported on how a pizza retailer has already trialled integrated technology which "provides in-car access to menus, delivery and collection options, while beacon technology notifies workers when your car is pulling in to the restaurant."

More efficient traffic flow

The fact that vehicles will also be able to communicate with transport infrastructure could signal an end to current traffic light systems. Instead of having to stop for a red light when there are no other cars coming through from the other side, the Connected Car could communicate with the traffic light and let it know when to change. Similarly, sophisticated algorithms could use speed, route and lane data to instruct cars to move in the right way to help maximise traffic flow, help improve travel times and facilitate reduced fuel consumption.

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