What does the IoT really mean for the future of the automobile?

As more and more industries attempt to nudge our "things" into a technologically interconnected ecosystem, the excitement around the Internet of Things continues to gather momentum, and fast.

Hype surrounding the IoT in automotive is at an all-time high but, with only 12% cars set to be connected by 2016 (McKinsey), where does the noise stop and do the results begin to speak for themselves? Ella Williamson investigates…

Martin Rosell, managing director of Wireless Car, considers the term 'Internet of Things' both "too broad" and "too fluffy" to apply to automotive. "For me it is not even relevant to talk about the IoT. The core industries haven't connected their devices yet so we have a lot of work still to do to get to the critical mass of connected vehicles to really be an ecosystem that gets even close to the big story around the IoT," he explains. Getting closer to the IoT story is of utmost importance explains Roger Lanctot, associate director of Strategy Analytics: "Given the recall crisis of 60M cars in the US the priority on connecting cars has increased significantly for fixing flawed cars and reducing highway fatalities which lie at 1.2M per year globally."

Getting the car ingrained within the IoT means identifying what applications consumers really want in their connected vehicles. Phil Skipper, head of M2M business development at Vodafone predicts that consumers will put safety first. "Any IoT applications that will improve the driver experience and the safety of the driver, its passengers, other vehicles and pedestrians are crucial," he said, highlighting Public eCall and voice control technology as key in achieving this. Lanctot puts safety at the fore also: "Consumers want safe operation of the vehicle – so collision avoidance sells – and software updates." Applications pertaining to vehicle monitoring and maintenance are likely to generate customer loyalty Rosell believes, adding that content based navigation will also be of great importance. Entertainment is valuable adds Martin Kristensson, director of connectivity strategy at Volvo. He continues to point out that there is an element of the unknown when it comes to what consumers really want: "One of the great things about the IoT is that it opens up for innovation, so many of the best applications for the car simply haven't been invented yet." Whatever the application, seamless integration is paramount says Skipper: "The user needs to extend their digital lifestyle within the car space in a simple and smooth way as they are used to doing with

their smartphone. They shouldn't view it as a "connected car" – to them, it should just be their car, with extended, beneficial features."

Many industries stand to gain from having integrated solutions in the car – insurance, healthcare, ecommerce and utilities to name a few. Vodafone's Skipper expresses that such integration is mutually beneficial for the consumer too. "Engagement across industries provides drivers with a more interactive and exciting experience, while empowering organisations in multiple industry sectors to benefit from the opportunities presented by the connected car."

Generali Group's increasing use of UBI and BMW's car-sharing service DriveNow are singled out as examples. In-car advertising is an area to watch according to Skipper. "In the future, it's possible that the connected car could even identify when drivers are tired, thirsty or hungry. This kind of insight has the potential to provide opportunities for brands in other industries, for example, food outlets or FMCG firms. When they know the driver needs a break, they can provide targeted advertising to the car to draw them to the nearest outlet."

Incorporating a healthcare solution in the car is of particular interest to Wireless Car's Rosell. He paints the picture of a healthcare scenario of the future: "Imagine a couple driving to a hospital about to give birth – things are going quickly – but the seatbelt can monitor heart activity. If the car is connected to the hospital then hospital workers can be ready and prepared." He accepts that this is a vision for the future but from a technological point of view explains it is "possible". The high cost of tech installation to facilitate such a scenario, coupled with McKinsey's low 12% prediction for car connectivity in 2016, begs the question as to whether this vision could ever be a cost-effective, mainstream reality. Skipper states that: "As car connectivity becomes more attractive to consumers and adoption increases, economies of scale will drive costs down. Even now the scale of the benefits connectivity can deliver often outweighs the cost. In essence, the sooner brands accelerate their involvement within the connected car, the sooner they can bring connected opportunities to life and gain further insights into their customers – creating personalised, tailored experiences for drivers, and creating new revenue opportunities."

The technology of the cars of the future opens up new opportunities and challenges within the idea of the IoT. When it comes to EVs, Volvo's Kristensson says: "The large battery is an opportunity, since it allows much more interaction and access to a parked car. Charging and range are challenges, that the IoT can help solve." He goes on to discuss autonomous cars, saying: "Autonomous cars on one hand allow the customer to do things other than driving, providing an opportunity for new forms of interaction and consumption. On the other hand, the autonomous car also introduces challenges such as requiring constant contact with the cloud or real time contact with infrastructure and other vehicles."

So what are the next steps for the connected car within the IoT? For Vodafone it is: "Getting more brands involved, expanding the customer experience and working

towards integrating with other industries. In-car advertising is something that seems like the next obvious development- and something that's likely to take off," reveals Skipper.

Volvo plans to turn its conceptual plans into reality in the years to come. "Volvo is an innovation leader in the Connectivity space with concepts such as Roam Delivery (using digital keys to deliver parcels or groceries directly to the car) and Slippery Road Alert (using car sensors to detect patches of ice and warn other drivers on the same road). We will continue to both innovate in this space, and to bring some of those concepts into production," Kristensson says.

Wireless Car's Rosell predicts that: "For the next five years the industry will prepare for being connected. 10 years from now we will have a considerable number of connected cars but if we get to 60% of new cars being connected then that's really good going. It's a complicated ecosystem and we all need to work together. There are a lot of challenges but we are getting there."