BIZCOMMUNITY

Why the possibilities of connected cars are endless

By Sven Hammar

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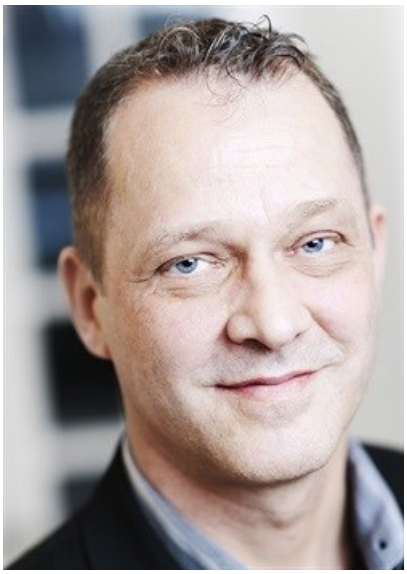
From Total Recall to Batman, it's fair to say that Hollywood loves a good autonomous vehicle. However, this technology is no longer the subject of public imagination. With connected cars already becoming a reality in 2017, and Gartner predicting that 64 million connected cars will be shipped globally in 2020, there is a very real question that remains as to what the potentials of autonomous vehicles are; their strengths, and how we can address their weaknesses.



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Gartner, GM and IBM are amongst those to predict that these driverless cars are an opportunity for e-commerce and retail. It's exciting to think of a car that will direct you to the nearest gas station when fuel is low, stop at your local coffee shop each morning, and even synch your shopping list with your car.

In fact, this vision of bringing together the connected customer with the connected car is already becoming a reality with services such as Volvo's in-car delivery: an online shopper can submit an order away from their parked car, for it to be delivered to their trunk by a driver with a one-time digital key for access. The customer is alerted simultaneously via smartphone that their shopping has been delivered.

With the connected cars market growing ten times as fast as the overall car market according to Gartner, the possibilities are endless: what if autonomous cars could drive up to petrol stations and make payments automatically, with credit cards built into the vehicle? In this case, cars will need to be connected to new versions of payment cards. The potential to save time and reduce queues would make this process more than worth the deployment costs.

Security concerns have become a competitive function

Connected cars in their initial stages had their fair share of vulnerabilities (as to be expected in any development process), and external parties have attained control of them before. In terms of potential security issues surrounding the deployment of new IoT-enabled features, manufacturers are now implementing measures such as military-grade encryption and two-factor authentication. Security concerns have become a competitive function in the new solutions, allowing for services, such as payment, to be enabled.

Given Amazon's 300 million users and Jeff Bezos' 2013 promise to deliver items within 30 minutes of their order, even 'dreamed up' possibilities appear realistic. Already, apps such as Viper SmartStart provide users with a combination of features including 'remote start', 'lock and unlock', and 'locate and track your car'. The latest models from leading manufacturers all have this technology shipped in for installation in their connected cars.

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Manufacturers to note include Volvo, Mercedes, Toyota, Audi, BMW and Tesla, who set the benchmark for what a connected car could be with its launch of the Model S in 2012. Uber's self-driving taxis, in partnership with Volvo, are another example of an autonomous vehicles initiative in place.

In 2015, Hyundai announced that its Blue Link app will be supported by Android Wear. This combination will allow Hyundai drivers to start or stop their vehicles' engines, flash their lights, honk their horn, find their car using GPS, call roadside assistance, and call Blue Link, all through voice control.

What are the issues manufacturers need to be wary of?

It's easy to picture a world in which connectivity is advanced enough for drivers to do virtually anything they like with their vehicles without even touching them. However, what are the issues manufacturers need to be wary of, and how do they solve them?

If a payment provider has a website outage, the user's vehicle may not be able to connect — if their smartphone loses connectivity, they could be locked out of their car. The successful development of connected cars demands the combination of 100% uptime, with fast response times and smooth integration with third-party systems. The consequences of the product failing to operate correctly can be disastrous for autonomous car manufacturers, and not only in terms of losing revenue. For example, if a car's system response time takes too long, its driver may not receive an alert for an approaching road hazard.

Impact on IT

If connectivity affects autonomous car passengers on a widespread scale, the negative impact across social media could spark a rapidly-growing trend of online 'horror stories'. Stakeholders will panic and share prices may drop, all due to an issue seemingly solvable with proper monitoring and testing: thus, a new era of IT operations and testing is crucial to the progress of connected cars. This will have a great impact on traditional IT operations outside of the IoT spectrum: there are plenty of lessons to be learned from the progress that has already been made in terms of deploying such technology in record time.

Autonomous vehicles to reshape the global economy

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In terms of timeframe, we cannot predict exactly when cars will be fully automated. But in a survey conducted by IEEE, autonomous vehicle experts predicted that rear-view mirrors, emergency breaks, and horns are likely to be removed by 2030, and that steering wheels and brake pedals will be gone by 2035.

Gartner predicts that over the next 10 years, "automobiles and large trucks will become true mobile devices that access, consume, create and enrich information, and will then be shared with people, businesses, organisations, public infrastructures and machines, including other vehicles".

Nothing is unthinkable when it comes to the potentials of connected cars: the speed of progress and deployment in this area is remarkable. We better buckle up for the ride, but be prepared to welcome increased connectivity with intensified testing and monitoring.

ABOUT SVEN HAMMAR

Sven Hammar is co-founder and CEO of Apica, a provider of powerful, best-in-class technology for testing, monitoring, and optimizing the performance of cloud and mobile applications. He has decade-long experience and expertise in web performance and web optimization, e-commerce, cloud services, IT entrepreneurship and the Internet. He is also a serial entrepreneur who has founded several successful IT companies over the years.

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