

Internet of Things: Connected Vehicle Market Driving Towards \$1.5Bn by 2020

posted on **Feb 24, 2016** by Senior IT Services Research Analyst, Mike Smart

This is the first in a series of blogs looking at various aspects of the Internet of Things (IoT) market. Here I take a look at the use of IoT in the connected vehicle space, and at the shape of market potential.

IoT can be used to build connected vehicle systems to enable:

- Vehicle-to-vehicle communication so that vehicles can update each other on road conditions, allow vehicles to properly maintain safe distances, etc.
- Vehicle-to-OEM communication so that vehicle manufacturers can build stronger relations with drivers. Using data on the use of a vehicle, the manufacturer can perform remote diagnostics and predictive and preventative maintenance
- Vehicle-to-third party communication facilitating new business models; e.g. telematics for car insurance, smart parking, navigation systems, entertainment streaming services, smart fueling stations
- Vehicle-to-infrastructure communication connections to traffic lights, toll stations, dynamic speed limits.

The use of these systems will change how vehicles are bought/sold, managed, driven and maintained, with the primary aims of increasing safety, added revenue for OEMs, a better driver experience, and efficiencies for third parties.

The consumer IoT market for connected car systems can be subdivided into categories including driver assistance, safety, and in-car entertainment. Currently the largest segment of the connected car market is dedicated to increasing the safety of motoring, either through the use of telematics systems or for accident reporting.

An easy entry point into the market is in the development of driver scores through the use of telematics. For a relatively small investment, black boxes can be installed to measure acceleration, speed, position, and cornering. Vendors can use ADM capabilities to develop driver scores which can be used by insurance providers or for fleet tracking. The majority of vendors operating in the IoT space have some form of telematics or fleet management offering, including relatively new entrants such as NIIT Technologies.

While the use of telematics, predictive maintenance, and fleet management may currently be the largest application of IoT, the biggest opportunities are in building driver assistance and in-vehicle entertainment. In the self-driving space, fully self-driving vehicles have the chance to change multiple industries dramatically in years to come. If vendors can support manufacturers in developing near 100% reliable onboard real-time analytics (provided that regulation supports their use), the potential market for the autonomous vehicle is enormous. Apart from consulting and systems integration of these systems, the building of connected applications that require real-time analytics, and platforms and infrastructure to support the influx of data is a huge opportunity. The obvious caveat to this market becoming established is the issue of security, following recent revelations of system vulnerabilities enabling attackers to take control of a vehicle's acceleration and braking, for example.

However, on the assumption that before long the self-driving vehicle market will take off, vendors have been working with vehicle OEMs and banks to extend the use of in-car entertainment systems – e.g. to provide shopping facilities. From a car's infotainment system, passengers will be able to secure tickets to an event, or pay for a drive-through, automatically using beacon technology. Vendors working in this space include:

- Atos' work with Renault to use Renault's R-Link tablet for in-car shopping
- Accenture's PoC with Visa for ordering fast food (pizzas).

In the wider connected vehicle space, vendors are primarily supporting clients in maintaining transport infrastructure and providing asset management. Examples of this include:

- Capgemini's Linear Asset Decision Support solution used by National Rail that uses data from a number of sensors, including carriages fitted with rail fault detectors for preventative maintenance
- CGI supporting ProRail by developing the Train Observation and Tracking System (TROTTS).

The connected vehicle space has had some of the largest adoption rates of IoT, mainly due to the easily demonstrable benefits to end-clients and third parties, and the numerous potential applications. NelsonHall estimates that the connected vehicle IoT market is currently worth \$250m and forecasts 43% growth (CAGR) over the next five years, taking it to \$1.5bn by 2020.

You can view this blog online [here](#).