BERYLLS INSIGHTS:
BIG TECH VS THE CAR-MAKERS

By Berylls Strategy Advisors
With the unstoppable march of the Connected Car, Big Tech is positioning its Trojan Horses to take control of the digital future of the automotive industry.

Google, for example, has already built up an impressive reach in the field of smartphone mirroring, extending to some 80% of annual global car sales.

With its new “Android Automotive OS” and based on the pre-announced OEM partnerships, Google will become a key CarOS player with around 17% market reach within only five years.

Soon, autonomous driving could see Big Tech take hold at the heart of vehicle design and manufacture.

It’s easy to underestimate how much is at stake here. But how can OEMs possibly take on the Goliaths of the digital world at their own game... and should they even try?
The tech industry has long seen the Connected Car as the next new ‘device’ for its services.

While car-makers have struggled to build their own connectivity products, investing huge sums in immature and expensive technology, all Big Tech plans to do is scale up their platform-based empires to encompass the car. In this way, Big Tech is carefully positioning its Trojan Horses to take control of the digital future of the automotive industry.

First came the “innocent” infotainment domain, with allegedly risk-free partnerships between car manufacturers and tech companies – and it certainly made good sense for vehicle screens to duplicate familiar smartphone content. Hence Android Auto, Apple CarPlay and (in China) Baidu CarLife. Today, most OEMs simply sell technical interfaces for all common mirroring standards, rather than opting for an “either/or” approach.

Now there’s an increasing number of AI-based voice assistants that are integrated into the car: Siri (Apple), Alexa (Amazon), and the like – and so the range of digital services around the connected vehicle is growing, and will continue to grow, until the advent of highly automated cars sees digital technology take hold right at the heart of vehicle design and manufacture.

And that’s when things get serious.

**BIG TECH’S TROJAN HORSES**

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WHO CONTROLS
THE FUTURE?

Autonomous driving could see Big Tech seeking to dominate not only the provision of cloud-based services, and even the car’s operating system, but right through to the “hardware layer” – the electrical and electronic components that are the OEM’s home turf.

Given the huge stakes, it might seem astonishing how readily OEMs choose to co-operate with Big Tech companies but the advantages are compelling; especially when compared with the challenge of developing independent operating systems that are a long way from the manufacturers’ core competencies.

There’s no way to avoid the unstoppable march of the ‘Connected Car’. Not only are all new vehicles in the European Union required, since March 2018, to have an emergency call function as standard, but electric cars, car-sharing and autonomous driving are inconceivable without a fully connected vehicle. The new 5G wireless standard – a key prerequisite for highly automated driving – will bring another new wave of Connected Car technology.

No doubt about it, connectivity is a central enabler for the digital transformation of the automotive industry; but it’s still unclear what the next connectivity wave will be – and who will own it. And it’s easy to underestimate how much is at stake here.

CONNECTIVITY AS KEY DIGITAL ENABLER
Big Tech has something of a stranglehold over Connected Car technology. In particular, Google has a long track record in the automotive industry, making it one of – if not the – most important digital players in the field; and that's before we get to Waymo, the autonomous driving technology company that was originally Google’s own self-driving car project before it was spun-off in 2016. Starting back in 2005 as a provider of client software for Google Earth serving OEMs' proprietary infotainment platforms, then evolving into a content provider of cloud-based interfaces for Google Street View, Google’s automotive offering has already gone through several phases. For some years now, Google has sought to position Android as an infotainment platform – with great success so far: a Berylls analysis shows how Google, within a few short years, has built up an impressive reach in the field of smartphone mirroring (i.e. Android Auto), extending to some 80% of annual global car sales.

Now Google is pushing this strategy ahead with “Android Automotive OS”, its new car operating system (CarOS) that’s integrated even more deeply into the car. It’s attractive and tempting to OEMs, requiring minimal up-front investment and offering a comprehensive suite that can be adapted to OEM-specific needs, with the option of integrating additional services from Google. As Android is already a popular operating system, many drivers are familiar with the look, feel and basic functionality. Meanwhile, of course, the underlying software is state-of-the-art and continually developed and maintained by Google. According to a Berylls analysis, the pre-announced OEM partnerships will allow Google to achieve a noticeable global market reach of around 17% for its new product within only five years. While Google’s advance into the CarOS market is unlikely to show similarly high growth rates for Android Automotive OS as seen for Android Auto – it is a fairly complex undertaking to implement and ramp-up a new CarOS from scratch – the forecast market shares might still be more than a wake-up call for car-makers and suppliers.

Source: Google, IHS | Illustration credits partly with the given brands/companies
So, is it still possible for manufacturers keep control of the digital technology in their cars? How can they limit their increasing dependence on Big Tech, global technology companies who could, in time, dictate the direction of vehicle development and future business models? And how can OEMs build a direct line to the customer – in order to reap the benefit of any future profit pools that emerge from the Connected Car revolution?

To date, OEMs have adopted one of three main strategies:

- **The Cooperation Approach.** In the volume segment of the market – GM, Renault-Nissan-Mitsubishi, for example – partnerships with Big Tech are popular, as they compensate for missing competencies, avoid larger investments and still offer attractive and up-to-date solutions. The downside is the increasing dependence on the tech industry.

- **The Counter-Attack.** The premium manufacturers and groups, such as Volkswagen Group, have proved more willing to invest heavily in the development of their own software and independent operating systems, but it means taking on Big Tech at its own game.

- **The Industry Standard.** A number of OEMs and suppliers have joined the GENIVI Alliance, an automotive industry initiative to develop a scalable, open-source solution based on Linux. As with the Counter-Attack, this scenario helps to keep the tech companies at bay.

In the battle to ensure that OEMs retain control, and are able to differentiate their offerings in the face of specialist tech companies with high software competence, each of the current approaches has its pros and – more to the point – its cons.

Yet, despite all the obstacles, the race for CarOS supremacy remains open.
Increasingly, a concrete starting point for ‘self-assertion’ is to offer multiple, value-added services via a targeted, personalized ‘Collaborate & Compete’ strategy. With a few rare exceptions, today’s vehicle-based connectivity services are lagging far behind smartphones in terms of performance and customer experience. The driver’s desire to use such services as locating refueling/charging, convenience/wellbeing (food and drink), or parking tend to involve a laborious, manual search in the navigation system, often with the aid of a smartphone.

Nor are the car-makers satisfied. Today, no OEM operates a truly global, scalable connectivity platform. The reality is that OEMs must maintain heterogeneous software versions of countless infotainment variants and generations.

**CONNECTIVITY: FROM SMALL ISLANDS TO BIG EMPIRES?**

An exciting, fully automated experience – where needs are recognized early on and personalized and operated via an engaging and innovative Human Machine Interface – would be transformative for the customer. And by adopting a standardized CarOS with flexible interfaces to connect to a range of content and service providers, the OEM can achieve this goal without reinventing the wheel.

Previously discrete, individual services, from real-time traffic data to music streaming to the mobile office suite, can be linked in real-time to form an intelligent and proactive solution chain. The OEM’s partners can be mixed and matched, whether it’s to provide Microsoft Office, Google Street View, Amazon Alexa, or more tailored, needs-oriented products. Whatever the package, the OEM owns the relationship and is perceived as offering customers the benefits of membership of a ‘club’ of digital services.

These value-added services differentiate the OEM’s offering, establishing a sustainable digital business outside the reach of the tech industry.
WHERE ARE THE FUTURE PROFIT POOLS?

At present, deriving a profit from automotive digital services is tricky. Most of the connectivity programs launched in the last 5-10 years show little or no profit. Indeed, the largest and oldest connectivity program in the world – GM’s OnStar – recently launched a strategy sweep and has significantly shortened the trial periods for basic, safety-critical services such as eCall for new vehicles. To date, Connected Car business models are generally justified by cross-subsidizing increased hardware sales of infotainment or navigation systems. Boosting monetization is a hot topic.

However, via a consistent focus on ‘real’ customer value, OEMs can realize a significantly higher willingness to pay. Carefully positioned as an intermediary between the driver, the vehicle and third parties, automakers can tap into new sources of revenue. After all, the tech industry has long specialized in doing business as a middleman; as, indeed, have the OEMs when it comes to electrical and electronic hardware. In the meantime, there’s the all-important matter of connectivity services as a loyalty tool.

CASE STUDY: TESLA REMOTE UPDATES

Tesla’s well-known ‘over-the-air updates’ are just one dazzling example of the positive impact of high connectivity competencies on both public brand perception and customer loyalty, allowing not only ‘bug fixes’ but entirely new features to be uploaded to the car via a cellular or WiFi connection to the Tesla company’s backend. Anecdotal evidence suggests it’s a huge hit with Tesla customers.

Source: Consumer Reports, Engadget, Twitter I Illustration credits partly with the given brands/companies
Despite all the obstacles, the race for CarOS supremacy remains open.

A concrete starting point is for OEMs to offer multiple value-added services via a targeted, personalized ‘Collaborate & Compete’ strategy.

Combining value-added services to differentiate the OEM’s offering can establish a digital business beyond the reach of the tech industry: one that’s able to reap future profit pools.

Currently, potential profits are scarce, but OEMs might want to focus on refueling/loading, convenience/wellbeing, parking, functions on demand, service/aftersales, financial services and mobility.

If we can take one thing for granted, it’s that the automotive industry has far from exhausted the potential for digital services.
Berylls Strategy Advisors is a top management consulting firm specialized in the automotive industry, with offices in Munich and Berlin, in China, in Great Britain, in South Korea, in Switzerland and in the USA. Its strategy advisors and associated expert network collaborate with automotive manufacturers, automotive suppliers, engineering services providers, outfitters, and investors to find answers to the automotive industry’s key challenges. The main focus is on innovation strategies and growth strategies, support for mergers & acquisitions, organizational development and transformation, and profit improvement measures across the entire value chain.

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