

PREPARING FOR THE FUTURE

the **ultimate guide** for OEMs in the automotive industry





Times were tough for the traditional automotive market long before the coronavirus outbreak, but there are reasons to be cheerful. Across the industry we see evidence of manufacturers pivoting to a driverless future and, for those that make some tough decisions now, the future is bright.



Earlier in 2020, more than half of Germany's automotive suppliers were planning to cut jobs. This was chiefly down to the challenges posed by autonomous vehicles. The fallout has long been expected, the so-called Tesla effect well documented and government legislation worldwide, while not perfect, moves apace. From plans for truck platooning in the Netherlands, Belgium and Germany, to the UK government's adaptation of the existing motor insurance framework – all signs point towards a driverless future. The urgent question for established OEMs is: 'what can be done?'.

Worryingly, there is still much debate on how far away total transition to EV and AV actually is.

Industry experts have expressed disbelief – which borders on denial – that the revolution is just around the corner. Bryan Salesky, chief executive of start-up Argo AI, whose autonomous vehicle technology is being used by Ford and Volkswagen, told *The New York Times* that driverless vehicles are “way in the future”. The delay, he said, was down to unpredictable human behaviour on the roads while autonomous vehicles are tested. Right now, prototypes of autonomous vehicles need to have driven millions of miles to demonstrate that they are safe.

This is a fair concern – but we've overcome far bigger problems in a shorter timespan. As best-selling author and clean energy adviser Tony Seba said in 2016, it only took 13 years for New York commuters to abandon their horses for cars.

The truth is out there

So why the denial? Much of it can be explained by psychology and the human brain's ability to comprehend change. Our brains are biased. We prefer simplicity and often revert to the same old thinking because that is 'what has always worked.' In the stone age - that was the type of thinking that kept us alive. If we had run fast from predators successfully once, we would repeat the same action again and again to stay safe. We will always prefer the simpler solution, which tends to be the one we have chosen previously. Today, when faced with the idea of transformative change, we balk. We see these cognitive shortcomings reflected all the time on the stock market. Only a few people shorted the stock market before the bottom fell out of real estate – and, likewise, when McKinsey & Co predicted in the mid-80s that 900,000 people would be using cellphones in 15 years – they were proved catastrophically wrong. It was, in fact, closer to 109 million.

The early stages of grief, they say, are shock and denial. We recommend that, sooner rather than later, OEMs skip right through to the final stage – acceptance. AV is coming, and much sooner than the experts predict.



1) Say goodbye to the family car

In the not too distant future, no one will buy cars anymore. When management consultancy Kearney interviewed 150 key executives from OEMs across the world, key findings included the consensus that car ownership will become “less relevant than car-sharing services and platforms” and that changing consumer behaviour will cause a “paradigm shift toward mobility as a service.”

Once fleets are fully autonomous and people can book lifts to and from work, for example, they won't even require a car. They'll call up a cheap vehicle from A (and how these will eventually look is anyone's guess – but expect them to change too) and get to B in style. Creating public transport systems and even the future HS2 – will be far less attractive.

Those who do have cars will replace them far less, thanks to the increased reliability of autonomous vehicles. Rather than 30,000 parts that might be vulnerable to breaking down – AVs of course – just have far fewer. There is a lot less that can go wrong in an electric car as there are fewer stresses and strains.

The Kearney report made three other predictions for the market:

- Autonomous driving threatens the very existence of mid-level automakers as the market develops along three segments: premium, low-cost, and drones
- The industry will split in two—those who manufacture vehicles and those who provide consumer services
- Revenues from pay-per-use services will outperform optional equipment revenues from 2025 onward





2) Threat of technology companies

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Are OEMs approaching autonomous driving solutions in the right way? We know that Google, Apple and other technology companies are heavily invested in the driverless car market – and that they are approaching solutions in a very different way to OEMs. While OEMs search for ways to integrate connected lifestyles with existing mobility – technology companies are doing the exact opposite – the lifestyle comes first. According to Kearney, “These well-known game changers with names like Google, Apple, and Uber want to integrate mobility with an existing connected lifestyle to realize the dream of a self-driving device. The ultimate device—its size and shape, its comfort level, what it runs on, the materials it is made from—will emerge from their intense focus.”

Google et al see this future clearly and this is the threat they pose to OEMs – many of whom just see capturing the autonomous market as a series of improvements made to vehicles that already exist. In this scenario, according to Deloitte’s paper *The Future of the Automotive Value Chain*, OEMs could be reduced to hardware platform providers – manufacturing white labelled vehicles for technology giants. This will be sustainable and provide some profitable margins only if those OEMs provide robust entertainment platforms and/or sustain their brand image.

3) Threat of legacy

Established players have grappled with a wide range of problems, leading to factory shutdowns and layoffs all over the world. Falling demand from China, Brexit, tougher tariffs on emissions and a need to push investment into electric vehicles and AV while maintaining cashflow slows everything down for big brands. Innovation suffers when progress is slow and products cannot serve the mass market – RIP Toyota RAV4 EV, and Honda EV Plus.

Put simply – OEMs have the impossible task of servicing current demand and preparing for a future that is speeding towards them faster than their ability to adapt, while major overheads and legacy costs – like huge fixed investment and pensions – need servicing.

4) Start-ups have fewer barriers to market

Traditional car models are made using roughly 30,000 components. Running factories and the infrastructure needed to support such complex supply chains doesn't come cheap either – a major reason why most of the world's car brands are owned by just 14 companies. In the new world order, there will be far fewer barriers to market for start-ups. Tesla won't be the only brand worrying OEMs, because, free from the shackles of legacy business, new players will be able to bring products to the market in record time. And those new players will approach their businesses in a wholly different way – because they are not reliant on the

traditional pyramid-style value chain. One to watch is Arrival, which is to provide 10,000 purpose-build electric vehicles to UPS. With modular skateboard platforms, Arrival says it can build any van and its factory in three months. They promise to be profitable from thousands of units.





HOW CAN OEMS PREPARE FOR THE FUTURE?

1) Embrace the hub and spoke value chain

A 2018 report by commercial property specialist Colliers said that the key to longevity for car retailers was in pivoting to the hub and spoke model. The automotive industry – while it has started to show signs of this shift – is still slow in dropping its pyramid structure. At the top of the pyramid sits the OEM, the layer below is made up of tier one suppliers (production partners and systems suppliers) and lowest tiers are made up of raw material and component suppliers. But with connectivity and technology at the heart of autonomous vehicles – the hub and spoke logic is far more effective. The finished vehicle sits at the epicentre of the wheel – and each spoke that contributes to its creation is equal. This will not be a comfortable shift for the traditional OEM as it might not retain control of the customer relationship, no longer the gatekeeper. As Kearney warns: “For decades, the OEM held that responsibility [of the customer relationship]. That might not be the case 15 years from now.”

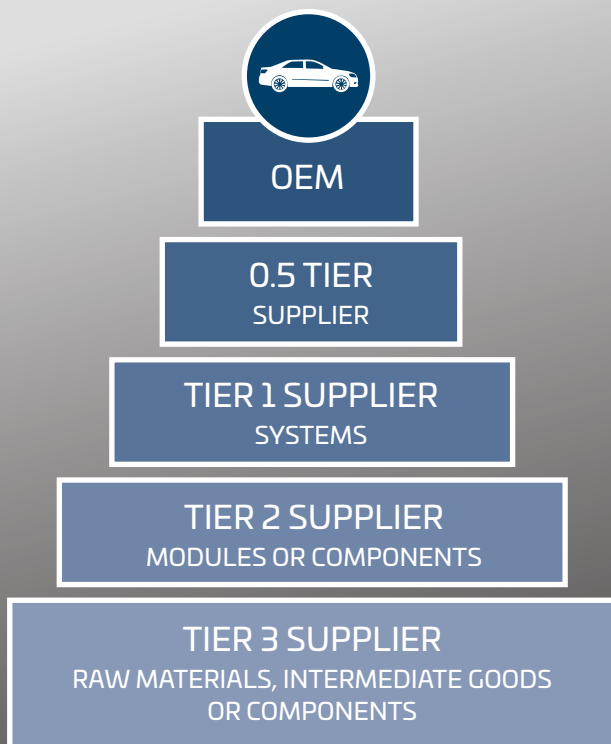
2) Pivot fast to a niche

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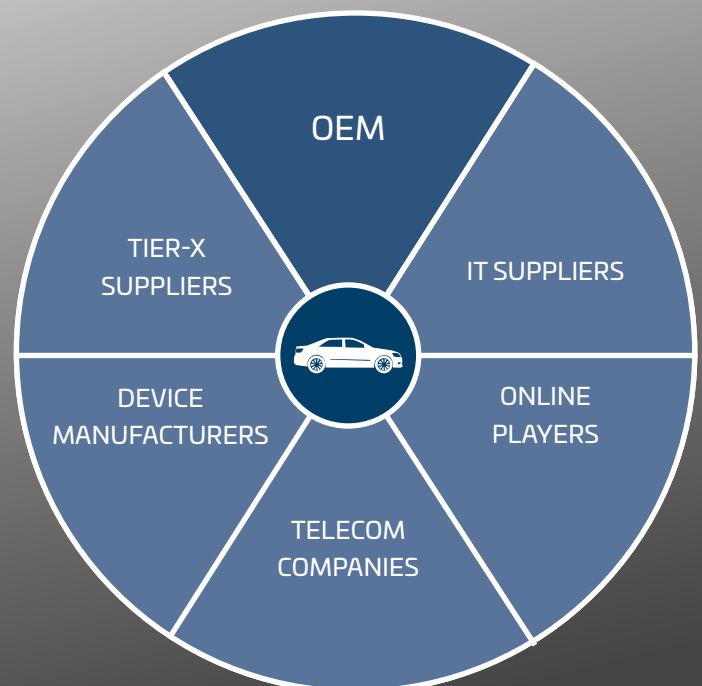
Last year, the *Daily Mail* reported that smaller car manufacturers were able to buck the trend due to sticking and developing their niches. This is something larger brands will find almost impossible to do due to sheer size. But UK sports car brand Ariel has a three-year waiting list and the UK’s hydrogen-electric Riversimple won £1.25 million in government funding to produce a fleet of new vehicles. As the AV revolution takes hold and fewer people want to own cars – there will remain a market for the niche investment, cars for people who truly love cars. This could be especially important for luxury OEMs such as Bentley. If pivoting fast to a niche, OEMs will need to ensure they have the right partners alongside them and that they might not be best served making the technology themselves.

SOURCE: AT KEARNEY

EXISTING VALUE CHAIN



HUB-AND-SPOKE VALUE CHAIN



3) Invest in software

Hardware is about to take a backseat. If we assume that the way to reach mass consumers with EV and AV vehicles is to bring them transport that keeps them connected – OEMs must place focus on technology and in particular – connectivity. Critical components such as sensors and navigation systems need to be prioritised. A typical consumer, who may not even own a car anymore, cares most about how their car connects them to the world. Can they hold conference calls in luxury? Can they sleep from London to Scotland in comfort? Can they play Super Mario World with their children? Blackberry saw this opportunity years ago, successfully transforming themselves into market leaders in battery and vehicle management with QNX software for EVs and AV cars. There is an opportunity for OEMs to do the same, becoming “data and mobility managers” and setting the standards “offering a rich portfolio of products and services.” Innovative ‘outsiders’ will have to play by OEM rules, and the OEM’s branding will play a decisive role, according to Deloitte. Another scenario painted by Deloitte’s report is somewhat bleaker, where “the car is a mere means of transportation and brand attractiveness has diminished.” In this future, Apple, Uber and other technology disruptors control the relationship with partners and customers who will be happy to travel by fleet transport. OEMs need to decide where their future lies now – not later – to avoid being trampled by the inevitable.

4) Make friends in clever places

No OEM is an island. Supply chains have to change. The challenges of globalisation and more recently, the coronavirus pandemic, have already threatened the long-established and narrow supply chains of OEMs. Whether or not OEMs embrace hub and spoke models over the more traditional pyramid supply chain – OEMs must embrace dual sourcing at the very least. They must also decide their specialisms. They cannot and will not survive by placing themselves at the heart of production any longer and must find suitable partners. The EV and AV industry of course, will be serviced by a host of new players creating software and services. Define those relationships now – not later.



5) Create superior customer experiences

In McKinsey's 2020 report *The Road Ahead for E-Mobility*, the recommendations are that OEMs must focus on delivering superior customer experiences to boost businesses and help improve the public's perception of driverless technology.

There are five essential touchpoints OEMs must get right:

1) Websites and branded channels

Customers must be able to receive personalised experiences when browsing potential purchases. Each touch point, whether online, in store or on social media, must provide a frictionless and exciting experience for the customer. Currently, McKinsey notes, configurator technology on OEM websites is complex and doesn't communicate user journeys to customers effectively. EV players by contrast have pared configurators right back, offering only a few options – but asking customers exactly how they might use their vehicle to ensure they pick the right one.

2) In-store

Customers must have the opportunity to ask questions of trusted advisers and experience driverless technology in store. OEMs must consider the entire journey – from a customer's first steps into the store to their departure. As McKinsey's findings show that current EV owners mostly live in cities, OEMs should focus efforts on establishing a "superior in-store experience" in city centres.

3) Driving

Continue to offer test drives to customers so that they can experience EV and AV vehicles. Test-drives should be offered proactively at dealer outlets and via an OEM's marketing channels.

4) Charging

Offer a charging experience that is seamless. It will be essential for OEMs to work with governments and key producers of charging infrastructure to allow customers the ability to charge anywhere at any time.

5) Service

This has to be able to be provided remotely – customers will expect first-class communication via their vehicles and dedicated apps. Among McKinsey's recommendations are that OEMs consider "building a close-knit network of certified service providers in addition to their own outlets to quickly execute guaranteed services, such as battery changes or other critical battery services."

The choice ahead for OEMs, whether servicing luxury, mid-price or low-cost markets is simple. Don't leave it too late. Either integrate and develop valuable partnerships now, while asserting what your value and USP will be in the future transport ecosystem – or die.



Sarginsons Industries is a consultancy and foundry that leads with Design for Manufacture principles to collaborate seamlessly with suppliers, OEMs and external parties. If you need to discuss lightweight solutions for your project, get in touch with us today.



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