



AUTOMOTIVE

Top 5 issues in the automotive industry today

Cyclical market fluctuations and the constant search for skilled workers continue to impact automotive manufacturers. In addition to these challenges, automotive manufacturers must also pay attention to the threat of tariffs and global trade wars. This industry-wide volatility is having a major impact on how automotive manufacturers and suppliers do business.

All hope is not lost. The automotive companies that can adjust to these challenges have a much better chance of surviving. And those companies that can manage to also maintain focus on the more “typical” industry challenges, such as changing buyer behavior, the forward progress of innovation, competition for skilled workers, and keeping up with an evolving industry ecosystem, will be positioned to not just survive, but thrive.

Read on for a deeper dive into the top five issues facing the automotive industry today and how automotive manufacturers can respond.

1. Global volatility

Following the March 2018 announcement of US tariffs on imported steel and aluminum, American automakers almost immediately saw the price of those commodities rise—even domestically. Making matters worse, some nations—even US trade allies—retaliated with their own tariffs on US goods.

And this could be just the beginning of an escalating, global trade war. Only a couple of months after the steel and aluminum tariffs were announced, it was made public that the US was considering enacting further tariffs—this time on imported automobiles and parts. China responded by enacting tariffs on a number of US goods, including automobiles and parts.

Not only can these tariffs affect the cost of raw materials and finished vehicles, they can also have a significant impact on components and subassemblies. The automotive supply chain is so tightly integrated globally that some components crisscross national borders multiple times before they finally end up in the finished product. The way these current threats are being proposed would effectively tax a component every time it changes borders, potentially adding an additional “\$2,000 to \$2,500 to the average cost of a vehicle sold in the US,” according to the *Chicago Tribune*.

Obviously, no company wants to pay exorbitant taxes, so automotive manufacturers and suppliers need to look at alternative sources for raw materials, components, and manufacturing. Among such potential upheaval, this might mean that US automotive manufacturers and suppliers move production outside of the US. Not only would this cause major disruptions to the supply chain and workforce, it could even force manufacturers to pull back on R&D as they eliminate unnecessary investments (or pretty much anything high risk) to shore up the bottom line while they weather the storm.

Further complicating matters is the US proposal to roll back current fuel-economy mandates. This is not necessarily a bad thing for automotive manufacturers, as it puts less pressure on them to have to design and implement technologies that improve fuel economy and reduce emissions.

But it could “put America at a competitive disadvantage with Asian and European countries that are moving ahead with tougher rules and stand to reap the economic benefits of the resulting technological innovations,” according to the *Los Angeles Times*.

So, how should the automotive industry respond to all of this volatility? By reassessing all of its options. Manufacturers need to consider relocating manufacturing operations and reevaluating their supply chain and other partners. They need access to a skilled workforce, wherever their operations wind up. They need to balance R&D investments against the prospect of tighter margins and lower profits—especially if higher vehicle prices ultimately translate into lower sales.

2. Changing buyer behavior

It’s difficult to predict exactly how all of this volatility will impact overall vehicle sales. That said, the automotive industry is already seeing changes in how buyers are purchasing vehicles. While sales and leases are still the primary means of vehicle possession, other buying models are becoming increasingly popular with subscription services, such as GM’s Maven™, and car-sharing services, like Flexdrive™.

Meanwhile, ride-sharing services, such as Uber™ and Lyft™, are reducing car ownership—or maybe not so much, depending on which sources you trust. Risk management company, Assurant, argues that ride-sharing services can be a boon to the auto insurance industry if insurers can figure out a way to protect ride-sharing operators from vehicle breakdowns. It’s not much of a leap to see how car subscriptions—with bundled insurance, maintenance, and roadside assistance—could become the proffered mode of vehicle possession for ride-sharing operators. As this plays out, automotive companies might find themselves responsible for massive fleet management duties—either directly or indirectly through partnerships.

Another significant change to buyer behavior is a sizeable increase in demand for customization. Today's buyers aren't content with choosing from a limited number of trim packages. No longer can automotive manufacturers rely on improving margins of high-volume production by minimizing the number of available configurations. To meet this new expectation, manufacturers instead find themselves building a greater variety of configurations at lower volumes. Unfortunately, the extra tooling needed to accomplish this puts added stress on the bottom line.

This increased desire for vehicle customization is creating more opportunities for aftermarket parts. When owners can't get what they want from the dealer, they're increasingly turning to other sources for post-purchase modifications and additions. Market Research Future predicts the current, nearly \$530 billion (USD) automotive aftermarket may increase to more than \$660 billion (USD) by 2023. It should come as no surprise that suppliers who traditionally supply solely to OEMs are now starting to invest in supplying the aftermarket as well.

3. Influential new technology

Today's buyers are also looking for vehicles that offer better fuel economy and lower emissions, and they're finding it with battery electric vehicles (BEVs) and plug-in hybrid vehicles (PHEVs). According to McKinsey, 2017 was the first year that over one million electric vehicles (EVs, which are BEVs and PHEVs combined into a single category) were sold. McKinsey goes on to report that "under the current growth trajectory, EV producers could almost quadruple that achievement by 2020, moving 4.5 million units, around 5 percent of the overall global light-vehicle market."

Most buyers might not be quite yet ready for autonomous vehicles, but a wide variety of companies—including the likes of Google®, Mobileye, and Groupe PSA—are pouring a lot of money into R&D on autonomous vehicle technology. Despite the unknown future of user acceptance and still-developing regulations, Allied Market Research predicts that "the global autonomous vehicle market is expected to be valued at \$54.23 billion in 2019, and is projected to reach \$556.67 billion by 2026, registering a CAGR of 39.47% from 2019 to 2026."

Not only are traditional automotive OEMs (such as BMW®) pouring millions of dollars into EV and autonomous vehicle R&D, so are technology companies (like Nvidia®), as well as automotive suppliers (such as Bosch®), and even aftermarket suppliers (like Denso®). Some suppliers (like Delphi Automotive®) and aftermarket parts companies (such as Continental AG) are even **spinning off their EV and autonomous vehicle divisions** into their own companies or subsidiaries so that they can focus exclusively on EV and autonomous vehicle R&D.

While EV and autonomous vehicles are more a technology of the (near) future than the present, connected vehicles are very much part of the here-and-now. Beyond keeping drivers connected with real-time navigation, infotainment, and automated emergency response, the droves of data generated by connected cars are opening new opportunities for automotive companies. McKinsey reports that companies that leverage this data have three primary monetization options: "revenue generation, cost reduction, and enhancement of safety and security." But McKinsey goes on to say that the "players" in this space, have yet to truly capitalize on it.

However automotive companies use this data, they can't ignore the ramifications that come with collecting it. Not only must manufacturers and suppliers ensure their technology is safe and secure from security vulnerabilities, they also need to ensure they maintain the privacy of their customers—especially now that the European Union's General Data Protection Regulation (GDPR) regulations are being enforced. There are even questions about who even truly "owns" all that data coming from vehicles. Is it the OEM? Is it the owner? Does it depend on the kind of data?

4. Dynamic workforce

Until recently, the primary workforce focus of automotive manufacturers has been on maintaining the skilled labor needed for production. The technological transformation of not just automotive industry, but virtually all manufacturing, has expanded the need for specialized skills well beyond front line operations. “Instead of simply replacing line workers with robots, companies need to upgrade their existing workforces to perform new digital tasks,” according to management consulting firm, Oliver Wyman. “Underneath the surface are the innovations that will power the industry going forward: big data, advanced analytics, artificial intelligence (AI), automated back-office processes, and service robots.”

This means automotive companies are increasingly competing against other technology-driven industries for a limited pool of highly skilled workers. Making matters more complicated, companies that fall outside the traditional automotive industry, such as Apple® and Google, are also seeking these same skilled workers for their automotive divisions. Competing against companies that are perceived as “cool places to work” can be difficult when the automotive industry is not traditionally seen this way. Automotive companies have an uphill battle in challenging this perception if they want to attract the right workers.

This is especially important right now, as “baby boomers are retiring from all sectors at a rate of 10,000 a day in the United States, taking their institutional and technical knowledge with them into retirement,” according to *IndustryWeek*. So, not only do automotive companies need to find skilled workers to replace those who are retiring (more than 25% of today’s manufacturing workers are over the age of 55), companies must also find ways to capture the institutional knowledge of the retiring workers and make this information available to the incoming workforce.

And this incoming workforce—the majority of which are millennials—come with their own unique set of expectations of the workplace, such as flexible benefits and recognition of a work-life balance. Having a workforce that’s predominantly millennials can also influence major business decisions. For example, the World Economic Fund states, “the millennial generation views climate change and conflict as the most critical issues we face.”

For an industry that’s responsible for a significant portion of greenhouse gases, automotive manufacturers need to reconcile the concerns of its workforce against the large carbon footprint of its manufacturing processes and products.

Millennials also expect a tech-savvy work environment. According to *Forbes*, “in order to attract and retain talent, businesses need to adapt workplace culture to accommodate the progressive, tech-driven approach millennials have, as well as the generations that will follow them.” *Forbes* outlines four technological areas where companies should focus: education (e-learning), communication (social networking, instant messaging, blogs, etc.), artificial intelligence (“automation of routine and mundane tasks”), and project management (interconnected tools).

Finding skilled workers for the automotive industry has never been easy. These trends indicate that it’s already getting even harder.

5. Automotive ecosystem

The four issues outlined above (growing global volatility, changing buyer behavior, the evolving vehicle experience, and a dynamic workforce) all have major influences on the automotive ecosystem. As far as growing volatility is concerned, the potential impact of tariffs on the cost of vehicles is largely affected by where components are sourced from. So, as the industry attempts to mitigate the impact of tariffs, suppliers might move significant portions of their operations to other countries.

Changing vehicle ownership models and increasing demand for customization could result in fewer vehicles being manufactured and purchased. This in turn could impact the aftermarket supplies market. Fewer vehicles on the road could mean less demand for aftermarket parts. On the other hand, fewer vehicles on the road might mean there are more older vehicles on the road, which could in fact, increase demand for aftermarket parts to help keep those older vehicles running.

Meanwhile, changes in vehicle design can directly impact the automotive manufacturing supply chain. For instance, the skyrocketing demand for EVs is in turn creating a growing demand for lithium-ion batteries. While the balance of lithium supply-and-demand is under some debate, the general consensus is that lithium prices will continue to rise.

And as to bridging the skills gap, automotive companies will need to look far and wide for skilled workers. This is especially a growing problem in the US, where there's a scarcity of workers with the needed science, technology, engineering, and mathematics (STEM) skills. Adding to this challenge is if a supplier moves operations to another country to avoid tariffs, the company will likely experience a huge disruption to its workforce. It's unclear how willing companies will be to transplant workers or even if workers would want to make the move.

All of this is transpiring in an environment where the automotive supply chain has been steadily consolidating—from mergers and acquisitions, as well as companies spinning off divisions to focus on niche technologies. Together, it adds up to a lot of potential changes happening in a small span of time.

To reduce the risk of supply chain disruptions from these changes, manufacturers need to have excellent visibility into the supply chain. This includes staying on top of other supplier options—especially when a manufacturer is getting a particular components from a single source. Manufacturers also need to be able to onboard new suppliers quickly, so they can respond to market changes with minimal impact to production. And with the ability to analyze ecosystem data, manufacturers can better ensure profitable margins.

Be prepared

There are a fair number of “what-ifs” and “maybes” about the direction of the automotive industry. Some of these scenarios will play out over a span of years, such as the future of EVs and autonomous vehicles. Other scenarios can have immediate repercussions, such as an escalating trade war. The best automotive manufacturers and suppliers can hope to do is stay on top of the issues and market trends, and make sure they are prepared to respond to whatever might come next.

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