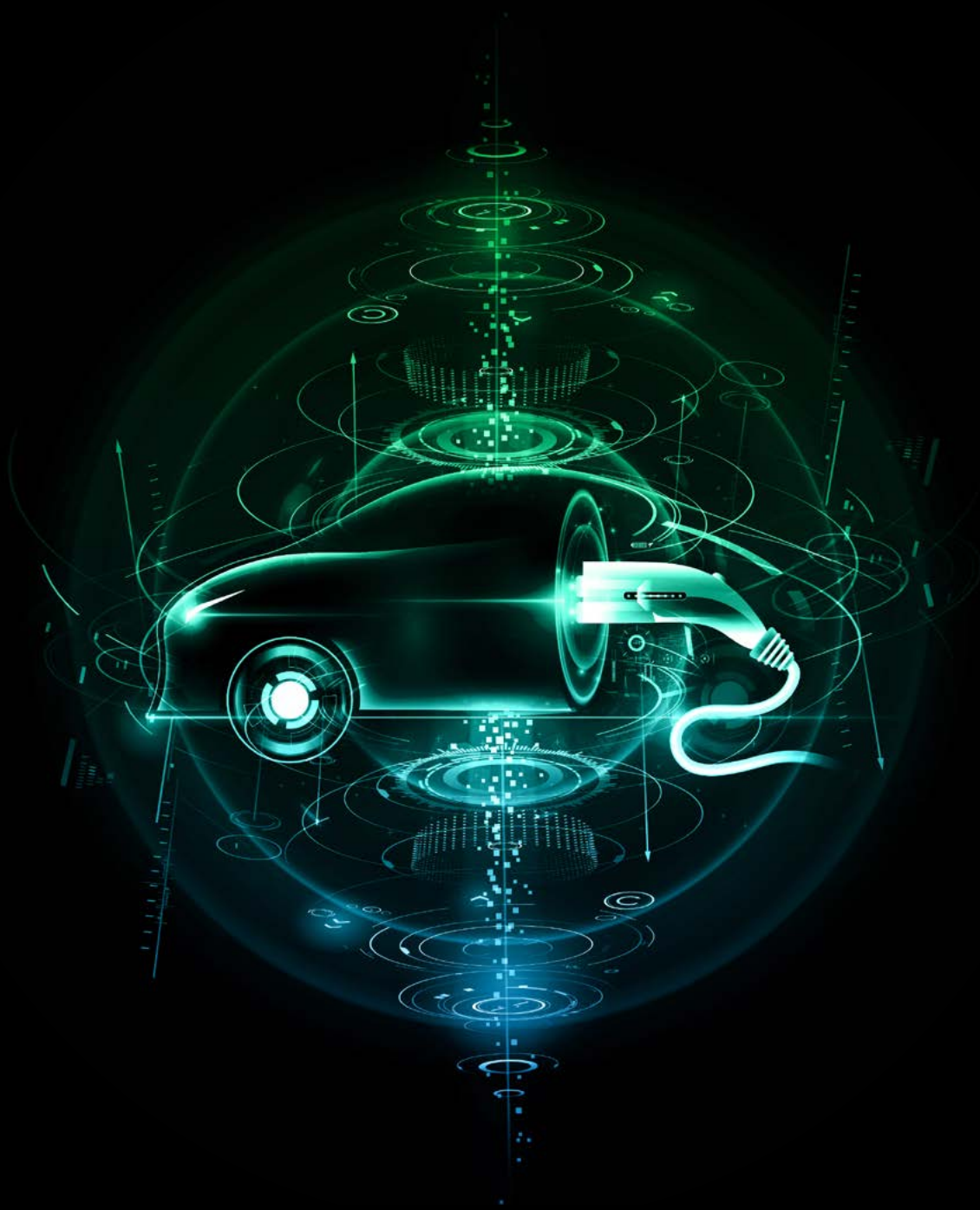


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Insights from Deloitte's 2021 Automotive Supplier Study

The road ahead: Auto suppliers navigate new terrain

By Jason Coffman, Raj Iyer, and Ryan Robinson

To say the global automotive industry has been through the wringer in the past 17 months is an understatement. From pandemic-provoked production shutdowns and an accelerated shift to virtual sales to crippling parts shortages and a planetary climate crisis, manufacturers and suppliers have been fighting one virtual (and literal) fire after another for more than year. And if that weren't enough, the automotive industry is already going through major structural changes as a result of several megatrends, including a shift toward electrification, autonomous driving, connected technologies, and shared mobility. To thrive—or even just to remain viable in the new market reality—suppliers should shift gears and adapt to the rapidly changing nature of their business.

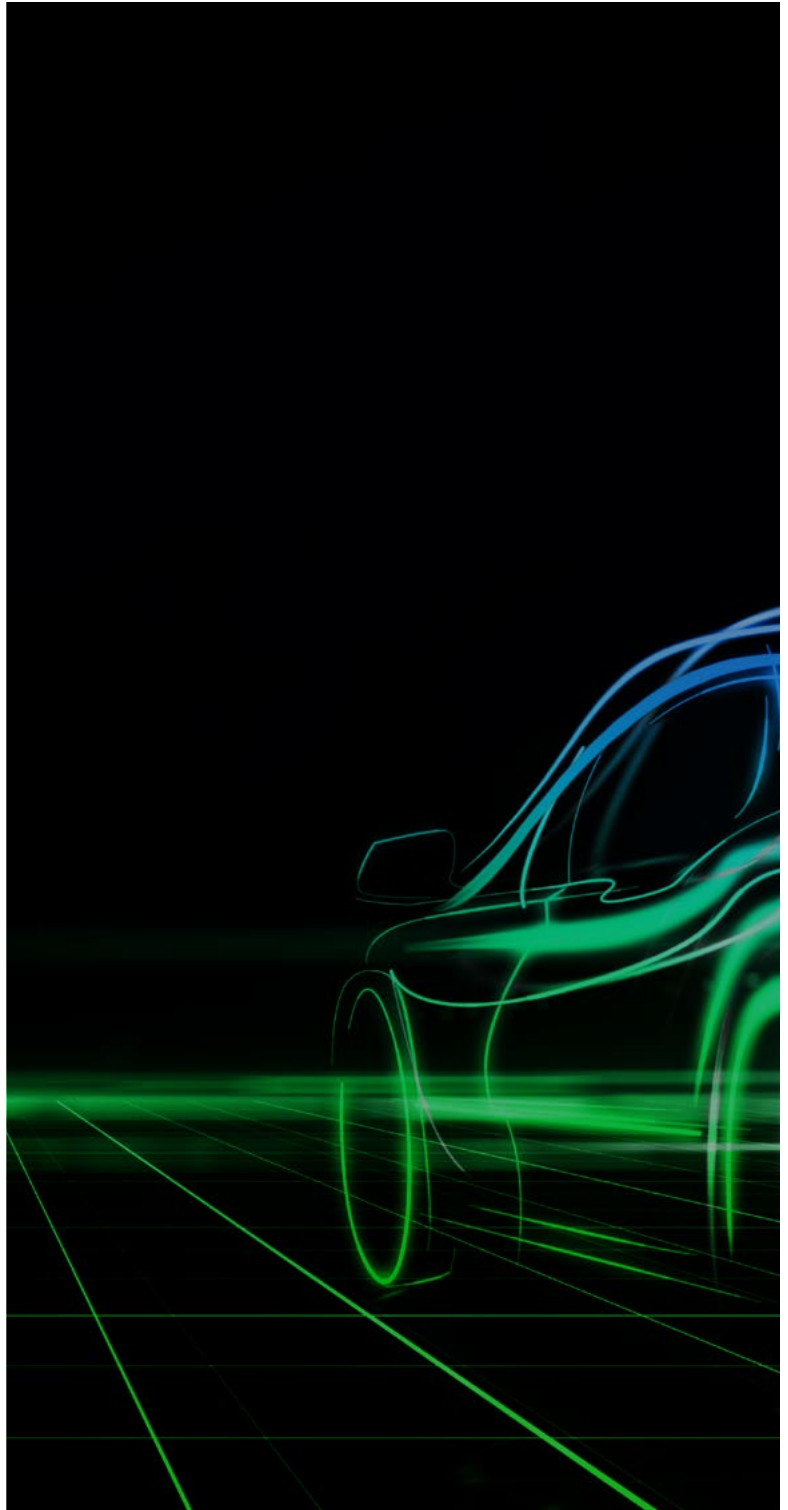


Introduction

As global automotive volumes have risen in the past decade, suppliers have been emboldened to experiment with investments in disruptive technologies, notably electric drivetrains, vehicle connectivity, autonomous drive, and shared mobility. In effect, by doing so, they could disrupt their traditional business models from the inside and potentially set themselves up for future growth. With any or all of these technologies poised for wider-scale adoption, suppliers had the luxuries of time and access to relatively cheap capital to see where these investments might lead.

Today, the time to experiment with one or more of these disruptive technologies is quickly coming to an end. Suppliers face a variety of new challenges, not the least of which includes a very near-term goal laid out by several countries to completely transform the way vehicles operate and the fuel they consume. And while a decade seems to provide a long runway, 10 years roughly equates to only two vehicle cycles. When measured in terms of the magnitude of change needed for the task ahead, this really isn't a lot of time.

Compounding this problem even further, the industry has run into a massive financial jam resulting from a combination of economic shutdowns in 2020 and 2021 and the continuing semiconductor crisis, with the risk of other raw material shortages looming large on the horizon. Unfortunately, with no end in sight, the continuing chip shortage is challenging businesses to sustain operations in the face of mounting costs and severe revenue loss. Under such uncertain conditions, suppliers should begin to consolidate their investments into truly viable technologies while recognizing the importance of these bets relative to the significant valuations new technologies are encouraging in the market. Making these more meaningful decisions about which road to follow could have ramifications for the next decade—and potentially beyond.



Just around the bend: Continued growth for new and legacy segments

When it comes to predicting the rise and decline of specific parts segments, a crystal ball is hardly necessary. Not surprisingly, analysis conducted for this study suggests component clusters tied to electrified vehicles (EVs) are growing at a frenetic pace, while parts that EVs make obsolete, such as exhaust systems, transmissions, and everything that supports propulsion using an internal combustion engine (ICE), are either stagnant or declining.

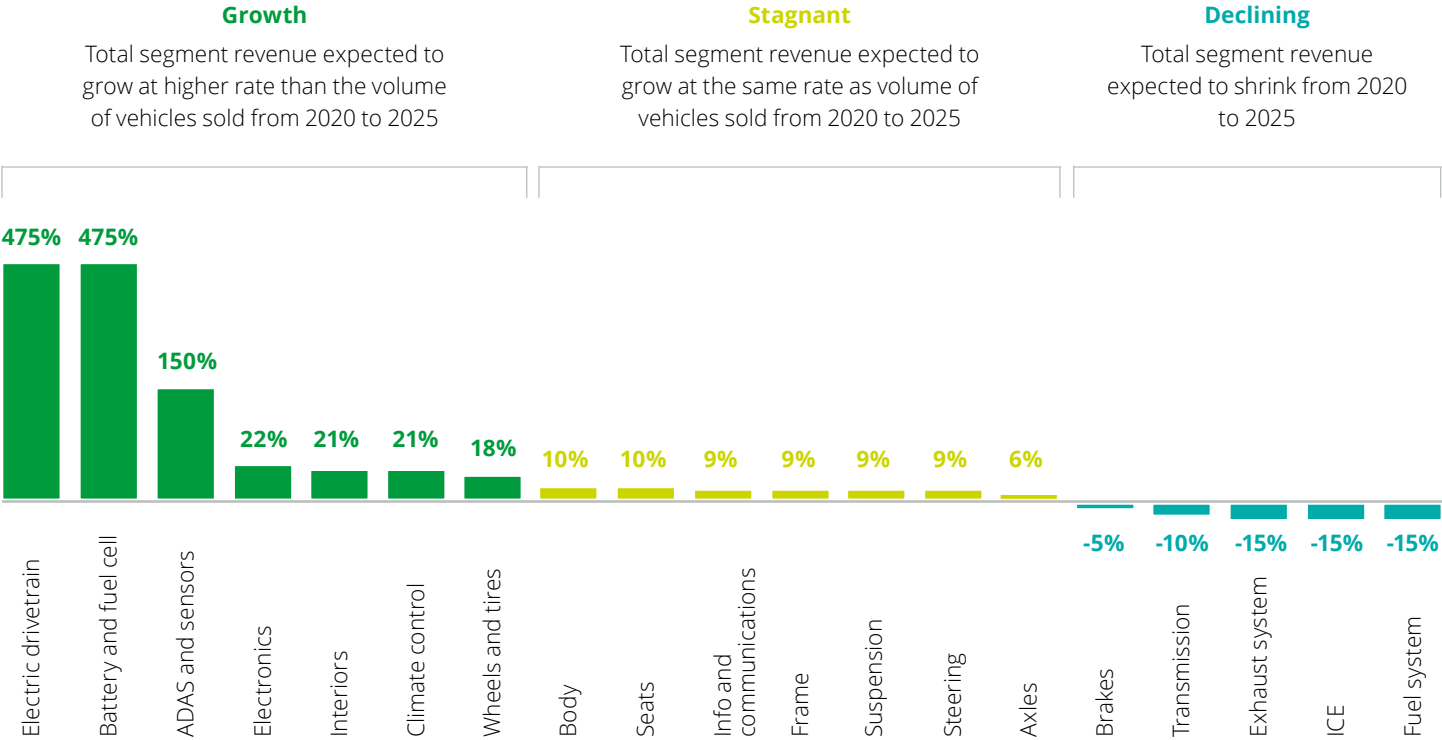
Recent analysis of financial data from nearly 300 of the top global automotive suppliers makes this point even clearer. In projections for the 2020–2025 time frame, segments seeing exponential growth include electric drivetrains (up 475%); batteries and fuel cells (up 475%); and ADAS¹ and sensors (up 150%) (see figure 1).

Despite these eye-opening figures, the industry and investors shouldn't write off the importance of legacy component clusters just yet. Simply put, fossil-fueled engines are not going away anytime soon, so there is still a lot of mileage left in these parts (see figure 2). Not only will internal combustion engine vehicles continue to be sold in significant numbers for the foreseeable future, but the market for replacement parts to keep these vehicles going well into the next decade is also expected to be very robust. In addition, hybrid powertrain systems, including both an ICE and electric motor, should continue to play an important role for consumers that still see a fully electric vehicle as a step too far.

So far, consumers have been slow to accept the idea that an EV could fully satisfy their transportation requirements. Data from the 2021 Deloitte Global Automotive Consumer Study released in January suggests that nearly three-quarters of US consumers still want a "traditional" ICE installed in their next vehicle.¹ However, we have seen some cause for optimism in the last few months. For example, a survey of US consumers conducted in August 2021 suggests that the number of people who want an ICE-powered vehicle dropped to 64%.² In addition, the Biden administration's new infrastructure bill that earmarks \$7.5 billion to expand electric vehicle charging is expected to help address a long-standing consumer concern about EV range anxiety.³

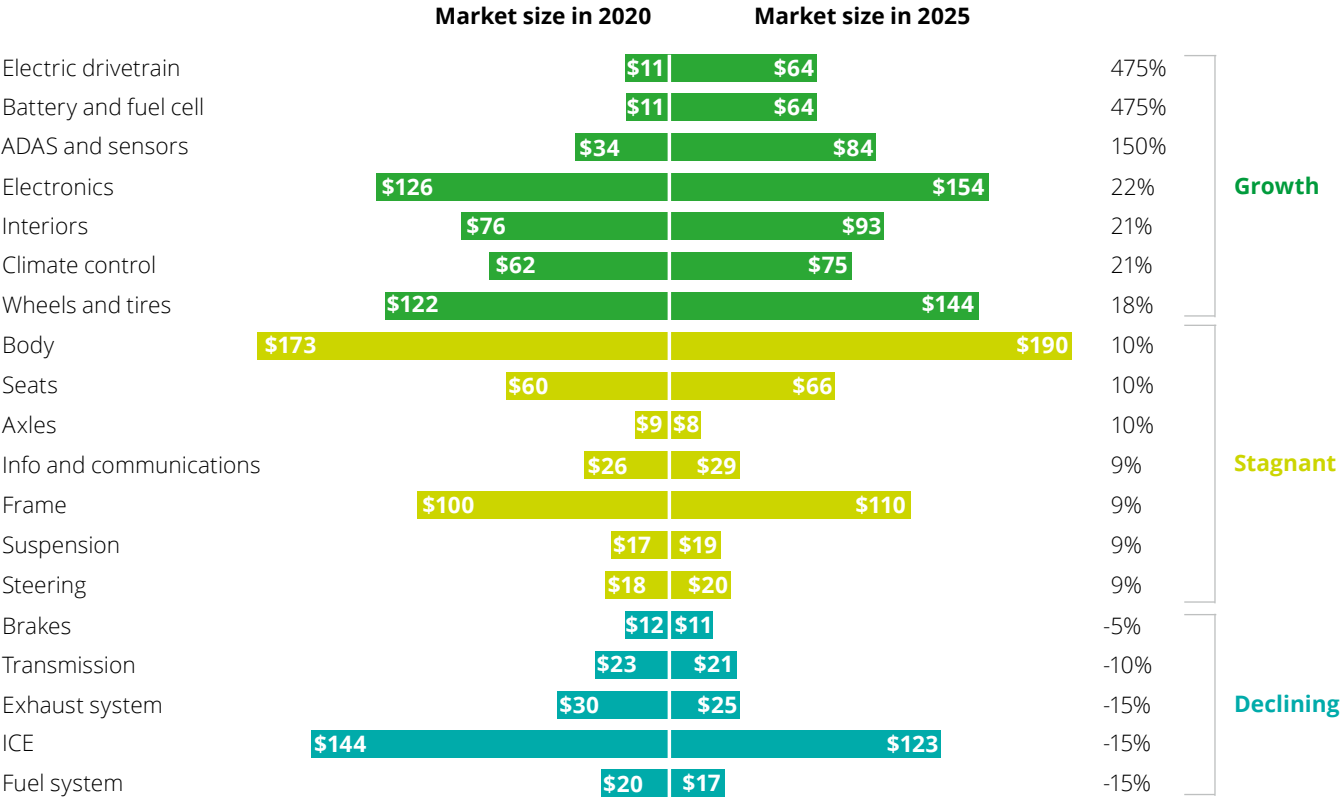
In yet another promising sign of things to come, we see a very robust pipeline of EV launches from multiple global OEMs scheduled over the next three to five years.⁴

Figure 1. Automotive component segment growth (2020–2025)



Source: Deloitte analysis.

Figure 2. Automotive component segment size in \$B (2020 versus 2025)



Source: Deloitte analysis.

How did we get here?

Clearly, there is no shortage of change in the industry today. In Deloitte's last supplier survey in 2019, we noted four forces bearing on the industry: volume headwinds, shared mobility, traditional value chain disruption, and vehicle content disruption.⁵ This year, we believe that supply chain is displacing shared mobility from this list of four forces. There are also new forces at work right now, including COVID-19, the advent of remote work and its impact on suppliers and the workforce, and city-center disruption, that will likely slow shared mobility over the next five years. The volume and mix of EVs across the globe have also grown, spurring high-tech products and services to emerge as alternatives to traditional business models.

Even in long-entrenched segments, change is happening. For example, we believe that the current environment in the semiconductor space will help force suppliers to finally tackle some of the big issues that have been percolating just below the surface for decades.⁶ These include a nearly complete lack of visibility across the supply chain, aging IT systems that prevent a free flow of information, and an erosion of trust between manufacturers and their suppliers.

The semiconductor crisis, in particular, continues to be a major concern for stakeholders across the supply chain. Several manufacturers have recently been forced to shutter North American vehicle assembly facilities due to the chip shortage.⁷ Supply concerns also extend to other commodities necessary for the production of EV batteries, including lithium, cobalt, and nickel.⁸ No resources? No batteries. No EVs. At the very least, raw material supply constraints may keep EV prices high, limiting market penetration.



Challenges and opportunities

Supply chain challenges are increasingly daunting, with suppliers and relationships constantly shifting and leaders often unsure which tools or technologies might help forecast areas of risk. After all, no single application can anticipate tariff battles, much less global pandemics. “There’s not a piece of software you can buy and immediately get a highlight of all your supply chain issues,” one industry executive noted. COVID-19 has dramatically altered logistics around the globe as governments, industries, and companies compete for materials and products and strive to shore up vulnerabilities. “The pandemic has changed a lot of scenarios, a lot of situations globally,” said another respondent. “Logistics are probably not going to go back to normal.”

And as if issues with shipping of physical goods, both domestically and internationally, weren’t complicated enough, strategic realignments, partnerships, and recent M&A activity have contributed to a more complex supply chain in some cases.

But many leaders hope to emerge stronger from this challenging year. The ongoing COVID-19 disruption continues to highlight the need for accelerating investments in supply chain resources and solutions. Some companies see opportunities to bolster resilience by acquiring “marginal players that didn’t make it through COVID-19,” as one respondent put it. Companies are already moving to build or rebuild relationships with key suppliers: “If we’re thinking about a supplier that is strategic to our business objective and business goal,” another respondent said, “then we want to invest more with them in terms of economic planning capital and ensuring that they understand our road map and how we want to proceed.” And some leaders are looking to vertical integration to shore up weak spots and avoid having to rely on independent suppliers or, worse, competitors.

Making decisions that count

Despite recent setbacks in the industry, we believe that now is still the time for suppliers to plan for the future. With a wave of new technologies either available today or looming large on the horizon, suppliers should focus on adequately preparing for what's to come.

Supply chain effectiveness: New thinking applied to old problems

When it comes to supply chain footprint, there is ongoing friction. Suppliers are forced to contend with a variety of issues at multiple levels, notably global-versus-regional tensions, complexity, visibility, and talent scarcity.

Global-versus-regional: Suppliers should focus their attention on several issues, including economics, trade, and geopolitical tensions, that can lead to the adoption of nationalistic agendas. All too often, such policies collide with globalized industries, such as automotive, which have expanded over several decades to encompass manufacturers, suppliers, and distributors around the world. Trying to untangle these longstanding (and profitable) relationships completely would be difficult, to say the least. Having said that, suppliers should strive for more regional self-sufficiency, minimizing production uncertainty while strengthening their ability to wind down a dependence on costly expedited freight due to the fragility of a global supply chain.

Complexity: Beyond the global-regional issues that suppliers face, there is great complexity within the industry that affects suppliers in two ways. First, precision in and coordination with suppliers, manufacturers, and retailers keeps the industry motoring ahead. If any one of the three legs of the industry falls short, the ramifications are immediate and impactful for the other two. Parts shortages, demand swings, and other examples of volatility that we've seen in the past year offer a cautionary tale for the automotive industry: It's "all for one; one for all," whether the players realize it or not.⁹

Suppliers also should manage a second level of complexity around the reduction of complicated OEM production as they chase less buildable combinations to improve quality and margins, both of which can affect a supplier's business model and bottom line.

Visibility: Your data can be your greatest asset if you have visibility into how it's working for you. But suppliers should figure out their data issues right now. How they position themselves to take full advantage of their data, making use of more reliable demand forecasting across the manufacturing value chain, can be vital to a successful future. This can require considerable effort to help ensure a proper flow of data and other essential information to facilitate real-time decision-making and greater transparency to help manage perceived risks and rewards for the business.

Suppliers can also benefit from improved visibility into on-vehicle product performance. This requires working directly with OEMs to develop data transparency to help manage performance, quality, and warranties, which, in turn, can foster clearer insights into the customer experience—a win-win-win experience for suppliers, OEMs, and customers.

Talent scarcity: Suppliers are facing unprecedented shortages of both white- and blue-collar talent today and into the future. On the white-collar side, there is an acute and growing need for software talent, particularly as it relates to advancing EVs.¹⁰ On the blue-collar side, the manufacturing industry has been relentlessly challenged by a persistent skills gap and the more recent difficulty of returning workers from COVID-19 lockdowns. Compounding these issues is a need for attention paid to diversity, equity, and inclusion (DE&I) across the automotive sector. Recent study results suggest nearly half of women working in the auto industry would choose another sector if they had a chance to start their career over.¹¹

When it comes to the skills gap, the numbers are daunting. According to our latest survey, 77% of manufacturers expect ongoing difficulties in attracting and retaining workers in 2021 and beyond. Advanced technologies, such as automation and artificial intelligence, can help, but won't solve the problem outright. In fact, US manufacturers expect this problem to continue and anticipate having 2.1 million unfilled jobs by 2030.¹²

The pandemic is also complicating efforts among workers at assembly and auto parts plants in the United States. For example, a requirement for all factory workers to wear masks has been reintroduced shortly after being relaxed and will remain in place until further notice due to the threat posed by the Delta variant of COVID-19.¹³

Defending growth by protecting margins

While the global pandemic has strained the automotive industry in general, there are some tangible yet unintended benefits that have emerged in the past year. For one, functioning during the pandemic taught suppliers how to operate in an even leaner way than they thought possible. This included improving cash conversion cycles by focusing on working capital and liquidity, margin enhancement through direct and indirect material cost management, and portfolio assessment to either improve operations or divest underperforming assets. These actions will not only support the goal of surviving the pandemic, but also position suppliers to thrive as the supply chain returns to its normal operating rhythm. This is still, after all, an industry based on producing vehicles at scale and shepherding them through the distribution and retail systems.

Pivoting to consolidation

Discipline gained from experience emerging from the last recession during 2008 and 2009, along with access to cheap financing and government support payments, have been critical tools for companies up and down the value chain. But not every supplier will ultimately survive the pandemic-induced problems that began in 2020. The new reality that suppliers must face if the semiconductor shortage drags on is that fewer and fewer will likely emerge intact from the crisis. Even before the chip crisis hit, some suppliers of ICE-related parts were already weighing the option of doubling down on their core competency to become the sole (or one of very few) providers in their segment to preserve margins. Some consolidation is inevitable, but it is also a safe bet to suggest that companies that successfully weather the pandemic could potentially emerge even stronger when the crisis subsides.

Expanding through partnerships, strategic alliances, and joint ventures

Synergistic partnerships and strategic alliances are another way that suppliers and OEMs are managing capital deployment requirements while continuing to invest in efforts to support future growth. This strategy has become increasingly attractive to companies looking to dilute both the cost and risk of developing new technologies.¹⁴ It can also help companies that have fallen behind the technology curve to catch up with their peers. There are also significant cost savings possible through the use of common components, systems, and platforms. However, this strategy may also mean exposing a company to potential risks buried deep within a strategic partner's supply chain. To successfully navigate these issues may require new thinking around the ownership and use of intellectual property (IP), data-sharing, organizational structures, and competitive positioning.

Reimagining a globally integrated supply chain in the near and long term

Automotive is truly a global sector. Suppliers today should consider how continuing international trade tensions can muddle the already complex nature of reimagining a fully globally integrated supply chain. This can't happen overnight; there are certainly near- and long-term challenges to consider. Applying the lens of time can provide some needed insights for suppliers to address along the way.

In the near term, suppliers should consider several issues affecting their businesses. First, they should protect their margins. Falling margins will impair their bottom lines. They should also consider where their materials are sourced. This became especially evident in 2020 and 2021, as a scarcity of raw materials slowed production up and down the supply chain. This trend is expected to continue as concerns mount over the availability of core materials required for battery production, including lithium, cobalt, and nickel.

Suppliers should also try to renegotiate contracts wherever possible to repair near- and longer-term issues emerging from the semiconductor crisis. GM, for one, is trying to mitigate future impacts of shortages in the semiconductor industry by seeking longer contracts with suppliers and direct partnerships with chip suppliers.¹⁵ Volkswagen is following suit by purchasing chip supplies from manufacturers without a middleman.¹⁶ Hyundai Motor Co. is trying a different approach by developing its own auto chip for a new vehicle it plans to introduce in the next year.¹⁷

Every manufacturer likely has some skeletons lurking in its supply chain. Now is the right time to eradicate inconvenient or expensive elements from production. Unfortunately, until this point, suppliers have largely ignored these looming challenges because of increasing global volumes of vehicle demand over the past 10+ years. But when we take a closer look at the forward demand curve, suppliers find themselves in a vastly different position than when they were entering the last upcycle.

In fact, it is reasonable to suggest that most suppliers were likely better positioned when the pandemic hit than they were when they entered the 2008–2009 recession.

In the longer term, suppliers still have much to do. At the top of the list should be retiring obsolete tools and technologies. This is not a new revelation per se, but deserves fresh attention today as new technologies rapidly advance in the industry. Now, as always, timing is important, because suppliers don't want to get caught on the fence with some parts of their business still clinging to old technologies. Each company should assess for itself when is the right time to drop this dead weight, what is the right process for doing so, and how to manage any related complexities.

What's next for suppliers?

Suppliers should make some important decisions about their future right now. With the window rapidly closing, now is not the time to be indecisive. Suppliers have several strategic options based on their positioning today in growth, stagnant, or declining segments (see figure 3).

With an eye toward the future, they should expand or defend their current positions or pivot toward something new. The key question for suppliers is how much wiggle room they have in providing short-term shareholder value versus positioning their company for long-term success.

Figure 3. Automotive supplier strategic option framework

	Growth	Stagnant	Declining
	Electric drivetrain, battery and fuel cell, ADAS and sensors, electronics	Wheels and tires, climate control, frame	Transmission, ICE, brakes, acles, exhaust system, fuel system
Expand	<ul style="list-style-type: none"> Develop and acquire cutting-edge technologies to preserve leadership position Leverage nontraditional financing sources to fund growth and innovation Use partnerships to close talent gaps and drive skill development (e.g., software and engineering) 	<ul style="list-style-type: none"> Shift investments toward growth segments and focus resources on high-return product areas 	<ul style="list-style-type: none"> Invest in developing markets with fewer technological advancements Look for synergistic consolidation or M&A opportunities to drive scale and efficiency
Defend	<ul style="list-style-type: none"> Acquire competitors to increase base and maintain growth in shareholder value Form or expand alliances with strategic partners 	<ul style="list-style-type: none"> Acquire or merge with peers to improve scale benefits and maximize cash flow in stable or declining segments 	<ul style="list-style-type: none"> Harvest remaining shareholder value within lagging businesses by consolidating and leveraging scale
Pivot	<ul style="list-style-type: none"> Spin off growth (or nongrowth) businesses in order to focus strategic priorities and resource allocation Reevaluate capital and operating structure to provide flexibility 	<ul style="list-style-type: none"> Align on long-term strategic direction and divest business units or products not aligned with future vision 	<ul style="list-style-type: none"> Divest businesses to competitor or private equity buyer to allow for more radical overhaul and reallocation of capital

Source: Deloitte analysis.

The two are not necessarily mutually exclusive, so finding the right balance can help lead to a successful outcome. We have seen traditional suppliers start to reposition their focus to align with disruptive trends affecting the market more effectively, but it is just as easy to get caught and not be able to steer clear of a rut. Organizations that can continuously assess their strategic options and shift gears in this dynamic market through innovation, technology, alliances, and flexibility ultimately have a greater chance of success.

In both the near and long term, suppliers should adequately prepare their organizations for a future that is arriving faster than expected. Where there was once time and money to “disrupt yourself” and create “optionality,” now suppliers should pivot and execute on targeted strategies that align with rapidly changing industry conditions. There has never been a more exciting, technologically advanced time in the automotive sector—and yet, time is perhaps the scarcest commodity of all right now.

Acknowledgments

The authors would like to thank Shannon Helmer, Kelly Warner, Gregg Geller, Srinivasa Reddy Tummalapalli, and Dinesh Tamilvanan for their significant contributions to this article.

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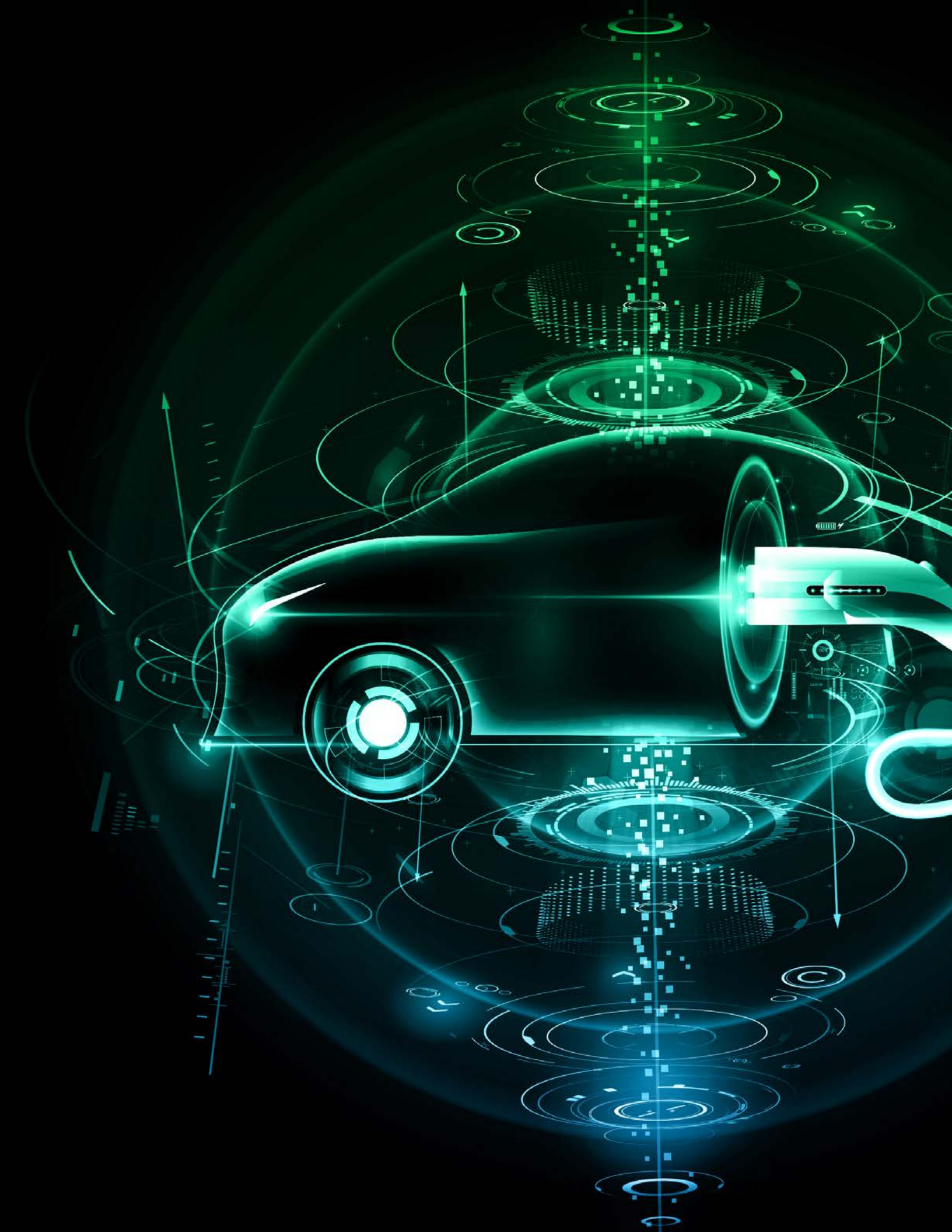
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