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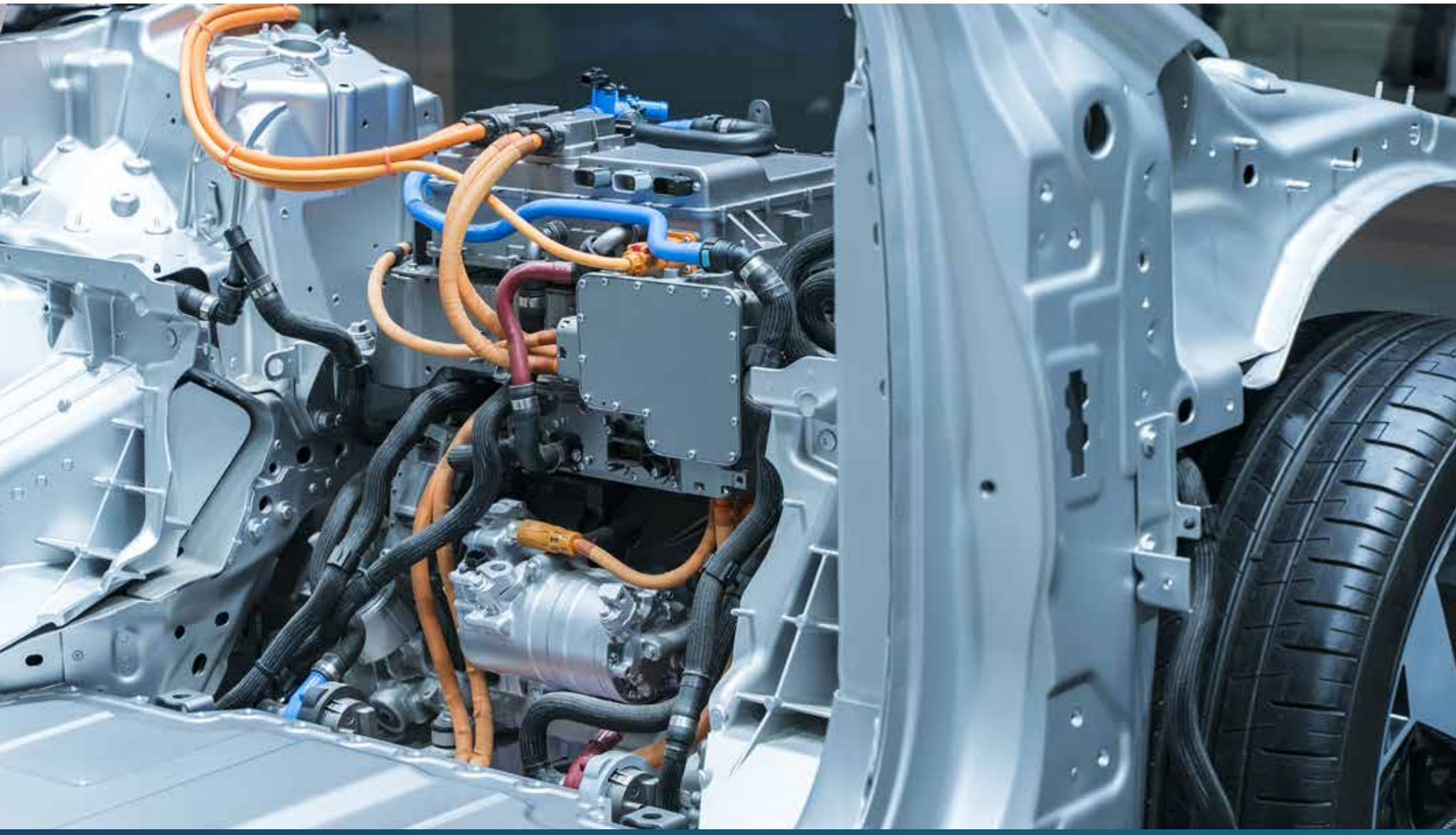
The Future of the Automotive Workforce and Supply Chain

[White Paper]



A White Paper that explores what major issues the automotive industry is experiencing, and what can be done to mitigate its effects.

The automotive industry has been experiencing growing pains for years, pains only exacerbated by the pandemic. Sales have been steadily declining since 2018; according to the International Energy Agency (IEA), total global car sales declined from 92 million in 2018 to 88 million in 2019. And when COVID-19 struck, this figure dropped to 73 million in 2020.

However, the pandemic isn't the only negative influence. Rapid modernization, labor shortage, and tightening environmental restrictions are causing Automotive manufacturers to re-evaluate their future and re-write the fabric of car manufacturing.

I. WHAT ARE THE MAJOR ISSUES?

When considering the future of the automotive workforce and supply chain, three glaring issues stand out: the labor shortage, over-dependence of offshore suppliers, and rapid modernization. If automakers want to remain competitive long-term, all of these need to be addressed in the not-so-distant future. In fact, we're already seeing the consequences of all three issues in 2021.

The pandemic contributed significantly to the growing labor shortage, with many workers finding new jobs, or exiting the workforce entirely. According to CNBC, the U.S. is expected to add 11.9 million new jobs through 2030, only slightly more than half the 22.6 million jobs added in the 2010s. It's critical that automakers start building a strong, skilled workforce now in preparation for the coming years.

In 2021, the semiconductor chip shortage brought the Automotive industry to its knees. Largely, this shortage can be blamed on two factors: the pandemic and the over-dependence on offshore suppliers. Relying heavily on offshore suppliers can cause inefficiency, stagnation, and shortages, all of which can have significant implications for manufacturers.

The final, and arguably most significant issue is rapid modernization, particularly, the rise of Electric Vehicles (EVs). A number of modernization efforts, including the proliferation of EVs, self-driving cars, and increasingly strict environmental restrictions, are forcing automakers to redefine their business and entirely rethink the concept of transportation.

1 | THE LABOR SHORTAGE

The labor shortage has become an increasingly hot-button topic. It's a complex and fickle issue, with no easy, catch-all solution. This is largely because, at the root of the problem, are larger-scale cultural and demographic changes. According to the Bureau of Labor Statistics, job growth will be stunted over the next 10 years due to a sharp decline in the nation's active workforce coupled with an aging population. Additionally, young people who are preparing to enter the workforce are opting for more specialized courses of education, rather than the pursuit of vocational degrees or moving straight into the workforce.

Several different industries and occupation groups will experience significant decline, including office and administrative support, sales and retail, and production. More than half of the industries projected to face the toughest losses are in manufacturing, where competition and new technologies have rendered many jobs obsolete.

As said by Dan Hearsch, a managing director in AlixPartners' automotive and industrial practice, "There really are no 'shock absorbers' left in the industry right now when it comes to production or obtaining material. Any type of shortage or production interruption affects companies around the globe, and the impacts are amplified due to all the other shortages. That's why it's critical that companies be armed with good information and analysis, and that they follow through."

In order to survive, manufacturers across the board, need to pursue the limited supply of high-tech workers and reskill their current staff.

2 | OVER-DEPENDENCE ON OFFSHORE SUPPLIERS

The trouble with off-shoring resources boils down to disjointed communication and too many uncontrollable variables. From global catastrophes to natural disasters, and human blunders, off-shoring creates unnecessary complications and unknowns. Reshoring isn't a criticism of any nation or its people, it is simply a matter of improving the countries economic and physical safety. It's becoming a substantial enough worry that President Biden has released an executive order on American Supply Chain Resilience and other governments are creating similar mandates to rekindle the discussion on reshoring.

The problems with over-dependence on offshore suppliers became extremely apparent during the initial onslaught of the pandemic, as well as with the debilitating semi-conductor chip shortage this summer. When the pandemic struck, international travel and shipping came to a halt, and manufacturing facilities all over the world shut down. This caused massive shortages, delays, and lay-offs, most of which businesses are still recovering from. It was no longer safe to produce and distribute goods internationally, but many businesses did not have the infrastructure to continue doing business within national boundaries. Should another global disaster like the COVID-19 pandemic strike, those who have reshored their suppliers will reduce their overall risk.

The semiconductor chip shortage continues o be a major hurdle for manufacturers, auto-manufacturers in particular. Automakers are scrambling to get supplies of the chips, which, according to CNBC, have extremely long lead times due to their complexity. The shortage is far down the supply chain, causing a ripple effect throughout the entire network.

The shortage is now expected to cost the global automotive industry $210 billion in revenue in 2021, and AlixPartners is now forecasting that 7.7 million units of production will be lost in 2021.

Many manufactures rely on offshore suppliers to produce semiconductor chips, so the shortage has impacted them profoundly. Automakers that source the chips from onshore suppliers, and those that have begun producing the chips on their own, have experienced fewer disruptions within the supply chain, thus minimizing the consequences of the shortage.

In the post-pandemic world, it's become clearer than ever that reshoring suppliers wherever possible is an effective way to strengthen the country's supply chains and minimize personal risk from economic or environmental catastrophes.

3 | RAPID MODERNIZATION AND ELECTRIC VEHICLES

Rapid changes within any industry can have serious consequences for businesses lacking the resources and flexibility to adapt. The pressure to modernize has mounted significantly over the last few years, but the pandemic kicked things into high gear. Very quickly, the conversation has gone from "modernize to get ahead", to "modernize to stay afloat". All industries are feeling the pressure, but for automotive manufacturers, one aspect of modernization is causing major strife: electric vehicles.

As demand for electric vehicles and eco-consciousness has risen, automakers are being forced to completely re-haul their design and manufacturing process, and reimagine what the automotive industry looks like. Some major automakers, like GM and Ford, are already investing heavily into new technology:

- GM is investing $20 billion on electric and self-driving vehicles by 2025 and to an all-electric future lineup. They plan to have 20 new EVs globally by 2023. The automaker recently announced new investments in EV production, including $2 billion to build electric Cadillacs in Spring Hill, Tennessee. A GMC Hummer EV will be built starting next year at GM's Factory Zero Detroit-Hamtramck Assembly Center.

- Ford plans to spend more than $11 billion on electric vehicle development by 2022. The Dearborn automaker recently announced it will add 300 jobs at its Rouge complex to support battery assembly and production of the new F-150 hybrid and fully battery-electric F-150 that is slated for release in 2022. The all-electric Mach-E is coming later this year, and an electric version of the Transit commercial van is scheduled to come out in 2022.

While major manufacturers have the capacity and resources to tackle these new changes, the real consequences will fall onto the suppliers and workforce. Experts say the job losses will not only be among hourly plant workers but also among those who work in roles such as engineering, product development, and purchasing. Simpler design and more flexible platforms mean less engineering, and fewer parts mean less assembly work. Electric vehicles don't need oil changes, meaning less revenue for dealerships and mechanic shops.

While the benefits of modernization for businesses and consumers are numerous, it's important to understand the risk and potential consequences to ensure that the transition is smooth and causes minimal disruption to the nation's supply chain and workforce.

II. SO, WHAT CAN BE DONE?

Now is the time for businesses to start reevaluating their supply chains, business plans, and workforce models to ensure that they stay ahead of the curve, and don't get lost in the fray. As outlined in the previous sections, modernizing your business's technology and supply chain, and optimizing its workforce is key to long-term success, regardless of how the market changes.

1 | DIGITAL TRANSFORMATION

Ideally, most businesses will already have their digital transformation well underway, but many are focusing their modernization efforts internally, when they should also be thinking bigger, like building a more modern, agile supply chain. According to Supply & Demand Chain Executive, "a modern, well-designed supply chain gives organizations the ability to make predictions about the future, come up with a range of scenarios and adjust accordingly, not just to lower costs but minimize risk, maximize resilience and meet multiple business objectives".

With automakers specifically, not only do they need to modernize their internal technology, but they also need to modernize their product, messaging, and business model. Consumers want more connectivity, are focused on active safety and ease of use, and are increasingly using digital sources in making their purchase decisions. They care about the product they're buying, and they care about how and where they're buying it. Staying on the cutting edge of technology and culture is essential to staying competitive in such a tumultuous market.

2 | WORKFORCE OPTIMIZATION

A major part of the modernization movement, particularly within the manufacturing sector, is that the demand for more skilled workers is increasing, while demand for lower-skilled workers is decreasing. As the industry becomes more digitized, line workers will be expected to have more skills in robotics, data-driven systems, and robotic process automation. To continue to drive efficiency, the sector must reskill many of its workers to be high performers in a digital and highly connected business environment. Targeted hiring and taking a carefully considered approach to skills assessment will be crucial to generate value from these cutting-edge technologies.

Already, automakers are making huge investments in reskilling their current workforce and attracting highly-skilled workers. In 2017, Audi pledged half a billion euros over several years to retrain workers for digital, and hire professionals fluent in robotics and app development. Likewise, CNN reported General Motors' intention to hire 1,100 new employees for its self-driving car R&D startup in San Francisco.

For the Automotive industry to thrive during the next decade, they must focus on retraining workers and building a formidable, modern ecosystem in the United States that can employ American workers with appropriate compensation and worth-while benefits.

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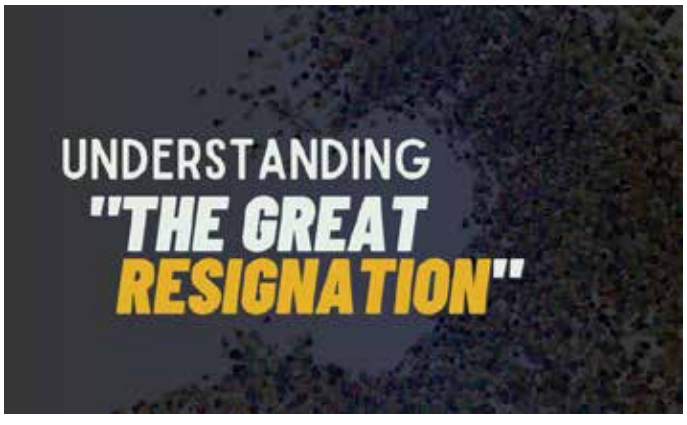
To learn more about transforming your workforce and revamping the supply chain, check out the following resources we have developed.



The Great Resignation and the Importance of High Retention in 2021

The labor shortage is real and it is critical to understand the causes, its relation to the Pandemic, and how businesses can maintain a strong workforce. This resource also features the "Pandemic's Domino Effect on the Labor Market" Infographic.

Learn more here.

The 2021 Semiconductor Chip Shortage: What, Why, and What's Next

The Coronavirus pandemic has been the primary cause of the chip shortage. What are the possible solutions for a crisis like this?

This resource also features the "Keys to Building a Resilient Supply Chain" White Paper.

Learn more here.

Beyond Wages: Understanding the Modern Worker

The modern worker is evolving and wages are not the only method to attract new talent. Learn what options employers have to build a strong workforce. This resource also features the "Reskilling: Leveling Up to an Agile Workforce" White Paper.

Learn more here.