What does agility look like for today's auto industry?

Automotive Industry

Modern, cloud-based solutions help organizations thrive despite volatility

The global disruption caused by COVID-19 has taught companies one indisputable fact: Agility is a valuable commodity. It is the secret to resilience and adapting to rapid changes, such as raw material shortages, supply chain bottlenecks, and escalating customer expectations. For **the auto industry**, the shortage of semiconductor chips caused about $210 billion in lost revenue. Over 11.3 million vehicles were put on hold, waiting for the necessary chips. Fortunately, modern technologies can help enterprises fully analyze potential risks like these, giving them the tools to respond quickly and with confidence.

Automotive enterprises need to prepare for continued volatility, as economists predict the pandemic could delay another 7 million units in 2022 and 1.6 million in 2023. It may be 2025 before the wholesale car market reaches pre-pandemic and pre-chip crisis levels. Automakers, dealers, OEMs, and suppliers must turn to creative problem-solving, innovation, and out-of-the box thinking to overcome these jarring setbacks.

The need for agility reaches far beyond supply chain issues. All manufacturers today need highly flexible, cloud-based technology to stay on top of global volatility, including **disruption from the Ukraine crisis**. Customer demands for electric or hybrid vehicles, changes in buying behavior, new user experiences, and assembly line innovations also place added pressures on the automotive industry to be nimble and fast-reacting, with the ability to pivot resources and reallocate funding to pop-up priorities. To support fast thinking and fast action, the commitment to agility must be an enterprise-wide strategy that starts at the top of the organization and is communicated down through channels.

Understanding the need

Despite the progress being made in addressing global volatilities and crises, the current speed of change shows no indication of slowing. This pace will continue or may accelerate as the recovery booms and **pent up demand yields record-high sales**. Preparing for continuous change is a logical step for executive leaders, who should consider the role of agility across every department, process, and decision. An open-minded holistic approach that embraces change is necessary, and must be evangelized by the C-suite.

Unfortunately, the manufacturing industry is known for its traditions, steady rhythms, and continuity—rather than being early adopters of new technologies. Many CEOs and CFOs are risk-adverse, reluctant to jeopardize on-time deliverables and steady cash flow. **Harvard Business Review** recently asked, "Is Your C-Suite Equipped to Lead a Digital Transformation?" and suggested that some leaders were blind to the urgent need for modernization.

Indeed, many were slow to jump on board the digital train before 2020. According to Forbes: "Industry 4.0, as a concept, has been around for almost 10 years now, but not much of it has seen the light. Many Industry 4.0 projects hover in the realm of 'pilot purgatory,' a Dantesque term that encapsulates the fate of most Industry 4.0 initiatives, 70% of which never make it out of proof of concept (POC) to be deployed." Proof of concept projects often absorbed much of the budget, leaving the IT team with disappointing results and giving C-level officers little confidence in digital theories and cloud promises. **Capgemini research** shows that in 2020, only 32% of manufacturers had adopted data-based decision making, while 38% continued to rely on paper-based systems to manage the shop floor.

In the auto industry, businesses that struggled with outdated legacy solutions were slow to adopt modern technology and less equipped to face sudden and drastic disruption.

Lessons learned

In the years since 2020, the value of cloud technology has been proven. Those pondering cloud deployment in 2020 suddenly needed it—and needed it quickly—to facilitate work-from-home strategies. IT teams learned the meaning of agility overnight.

According to a **McKinsey Global survey** of executives: "Companies have accelerated the digitization of their customer and supply-chain interactions and of their internal operations by three to four years. And the share of digital or digitally-enabled products in their portfolios has accelerated by a shocking seven years. Nearly all respondents say that their companies have stood up at least temporary solutions to meet many of the new demands on them, and much more quickly than they had thought possible before the crisis."

The aftermath of the COVID-19 pandemic will **likely be felt for years**, requiring all business leaders to remain vigilant and sensitive to changes in the market as well as in working patterns. While some back-office tasks can be done remotely, assembly line tasks can't be done via Zoom meetings. Workstations may need to be reimagined with robotics, enabling wider automation and requiring fewer on-site team members.

Additional ways to foster agility in your organization

Product innovation. Massive product changes were on the horizon for the auto industry long before the pandemic and will likely remain a high priority in the future. The transformative impact of CASE (connected, autonomous, shared and electric) is widespread, impacting the entire industry and creating ripples through organizations as they keep pace with design and operational changes. Fortunately, product lifecycle management solutions can help automakers and suppliers manage the entire process, from research and development stages to testing validation and engineering change management.

Collaboration. Design changes involve engineers, industrial designers, shop floor operations, procurement, and supply chain. With collaborative tools, it becomes possible to share ideas and designs while managing the impact of changes across the business. Collaboration can also extend between companies, as the **Center for Automotive Research** highlights: "Globalization, along with increasingly complex collaborative relationships in automakers' home markets, has made it necessary for the automotive industry to reevaluate and change the way it manages collaboration."

Customer experience. The user (or driver) experience has undergone a major transformation, as even mid-priced vehicles now come equipped with a growing range of luxuries. Upscale perks that are often standard features include heated seats, camera-assisted parking, and collision avoidance sensors. These types of major changes, with growing semiconductor complexity, demand unprecedented levels of business agility enabled by modern technology. Cloud-based solutions, which are fast and easy to implement, provide flexibility and scalability, making it possible to launch new business entities, operational processes, models, and partnerships that can bring these new capabilities to life.

Greater emphasis on regional hubs. The shortage of chips prompted an outspoken reaction from industry observers, many of whom suggest that enterprises should not rely on an extended supply chain for critical parts and components. Debate will continue as manufacturers and suppliers worldwide struggle to balance nearby suppliers with less convenient suppliers that offer greater inventory or lower prices. Solutions that provide full visibility and augmented analytics help executives manage these high-level issues while also providing the ability to examine "what if" scenarios and project possible outcomes. Enterprise leaders need confidence in their data and reporting tools before they make major investment decisions.

Enhanced supply chain visibility. For forward-thinking manufacturers, **turning to technology** to help manage the supply chain is a tactic every automotive OEM and supplier can employ. Supply chain planning tools can help manufacturers monitor inventories, deliveries, shipping routes, expected deliveries, and the impact on sales orders if a delivery is delayed. Insight into these issues helps manufacturers prepare, find alternatives, and set realistic expectations among customers to build a resilience strategy.

Business intelligence. As companies set recovery strategies, data insights **will be essential** for making sense of shifts in the industry, and of the financial impact those changes bring. Many organizations are entering uncharted territory, unable to rely on previous strategies or historical plans, and as such:

- New reports will be needed.
- New KPIs must be determined.
- New ways of predicting and measuring outcomes will enable those at the C-level and throughout the organization to improve awareness and make the right decisions.
- Augmented intelligence, artificial intelligence, machine learning, and digital platforms will be critical.

Only advanced solutions can tackle these challenges. Organizations will need to realize the value of smart analytics, machine learning, and AI, and will need to invest in solutions with these features built in.

Adjusting safety stock level. In the past, just-in-time strategies kept a minimum safety stock of raw resources, reducing capital tied up in the warehouse. Many are reconsidering the strategy, upping minimum safety stock levels to avoid suffering stock-outs. AI-driven analytics bring the accurate forecasting needed to plan for the appropriate inventory levels.

Talent acquisition and retention. Talent **recruitment and retention** will play a significant role in the strategic agenda to compete and thrive in 2022 and beyond. All roles have evolved. Soft skills like team collaboration, problem-solving, data management, and customer service will be just as important as the ability to operate machinery. Furthermore, as CASE transforms the industry and as Industry 4.0 and IoT drive the fusion of IT and OT (operational shop floor technology), digitally fluent talent will rapidly become the cornerstone of competitive advantage. Modern cloud-based solutions are easy to use, intuitive, and can automate routine processes, allowing personnel to focus on more advanced needs and providing a positive, fulfilling user experience.

Engineer-to-order and make-to-order. It's becoming more and more important for manufacturers to adopt mixed-mode manufacturing processes and to collaborate with customers on specifications and design details. Highly configured products and configure, price, quote (CPQ) solutions help streamline the processes for product personalization and customer approvals.

Sustainability. Environmental ramifications will continue to have a significant impact on industry trends and direction. "Circular industrial sustainability" and "carbon neutrality" are two recent terms in the manufacturing lexicon, appearing with increasing frequency in discussions about the future direction of the automotive industry. However, it's important to note that EVs present their own environmental challenges. The highly destructive and toxic mining of critical rare earth elements remains an issue, as does the massive numbers of toxic batteries and the increasing demands for electricity.

Conclusions

With COVID-19 disrupting the global supply chain, enterprises have learned the value of an agile response to changing conditions. As companies begin to prepare for the next normal, agility will still be important. Rapid change seems likely to continue or even escalate. Preparing now makes sense. Adopting advanced, modern solutions, deployed in the cloud, will help companies respond quickly to new pressures as they arise. Highly agile, flexible cloud solutions can help enterprises thrive in a constantly-disrupted world.

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