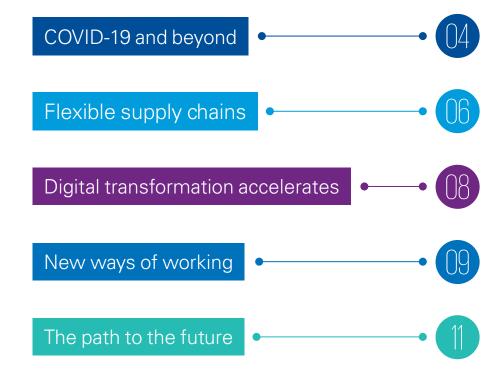






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ForeWord



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Welcome to the Global Manufacturing Outlook 2020: COVID-19 Special Edition: Adversity leads to opportunity.

In this edition, we discuss how global industrial manufacturers are embracing fundamental societal changes that have occurred in recent months. They are using this window of opportunity to implement transformational plans that have long been aspirational.

Becoming more resilient in the new reality is now a core competency, with continued success requiring a rapid response to the uncertain and continuously changing business environment. Within this survey, results suggest that we must re-imagine our world after the pandemic. The economy and the workplace will be very different from what they were previously and organizations are listening to their customers, suppliers, and workforce as they move forward.

Here are a few key emerging themes:

Risk reduction and re-balancing of supply chains: global supply chains are already under severe strain in the wake of trade disputes and a shift towards economic nationalism. While the crisis prompts executives to reduce risk by increasing local manufacturing, in some critical industries we feel cost competitiveness continues to be important.

Technology and innovation: the crisis is accelerating the digitization of business and operating models and businesses need the infrastructure to serve customers, enable employee productivity on-line and protect against new cyber security risks.

Talent and a new working reality: companies need to consider how to transform their workforce models, as remote working has widened their potential talent pool with the right combination of physical spaces, technology and a flexible workforce.

We'll be back with our views around the Future of M&A in Aerospace & Defense, in January 2021.

Methodology



The Global Manufacturing Outlook 2020: COVID-19 Special Edition is based on the responses from CEOs in the manufacturing sector as part of the KPMG 2020 CEO Outlook Survey. a survey of 315 CEOs from around the world. The survey was first conducted in January and February 2020 and a followup pulse survey was undertaken in July and August 2020. Survey respondents were from 11 different sectors, including industrial manufacturing, from the largest economies around the world. 35 percent of the survey respondents companies have revenue of US\$10 billion or more in the most recent fiscal year.



COVID-19 and beyond

The pandemic that emerged in early 2020 is the most serious threat to global public health in a century. It has not only changed (and affected) many lives but has also jolted global manufacturing in ways that are likely to reverberate well into the future. To find out how CEOs are responding to the pandemic in eight major economies around the world, KPMG International surveyed more than 300 people in July and August, including chief executives in industrial manufacturing. The main finding is that, at this unique moment in modern history, companies in the sector are striving as quickly as possible to become more resilient, by adapting to drastic changes in value chains, many of which were unforeseen at the end of 2019.

Agility in the face of extreme adversity often leads to opportunity. CEOs are constantly looking for chances to gain a competitive advantage and have stepped up their search for opportunities in the face of industrial disruption more sudden and widespread than any seen in a lifetime. "Manufacturers are being tested as never before," says Stéphane Souchet, Global Head of Industrial Manufacturing at KPMG International. "The enterprises that do best in these severely adverse conditions will likely be the ones that are most agile across a wide range of endeavors: new ways of working, accelerated digitalization, stronger supply chain, as well as mergers and acquisitions and divestments of non-core businesses."

Manufacturing CEOs have had to adapt rapidly to deal with the challenges of COVID-19. They are protecting their employees, deepening relationships with their vendors and customers, and redefining what success looks like in a changed world. The new reality is very different from the old and is likely to continue changing shape in unforeseen ways well after the pandemic is over.

- 66 Manufacturers are being tested as never before. The enterprises that do best in these severely adverse conditions will likely be the ones that are most agile across a wide range of endeavors 99
- Stéphane Souchet
 Global Sector Head, KPMG International

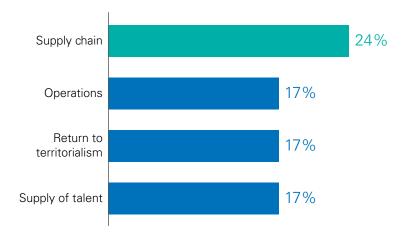




Flexible supply chains

The greatest threat to manufacturers' growth over the next 3 years, apart from the pandemic, is risk to the supply chain, according to chief executives who responded to the survey. This places supply chain resilience front and center in the minds of CEOs. When COVID-19 first emerged, the focus of concern for global manufacturers was China, which comprises more than a quarter of world output of manufacturers. But after factories there began to reopen in late February, China's exports have surged. Western makers of manufactured goods shifted their attention to supply disruptions closer to home, as the pandemic led to widespread factory shutdowns in Europe and the US.

Three of top four threats to manufacturers' growth over the next three years are supply-chain related



Source: KPMG 2020 CEO Outlook: COVID-19 Special Edition, KPMG International

In response to these changing risks, 66 percent of CEOs say they have had to rethink their approach to supply chains. They say they have done so to become more agile, while facing pressure from customers and communities to bring production closer to home and to make their supply chains more robust.

Until recently, some manufacturers may have known little about the location of their suppliers below Tier 1. But after COVID-19 struck and factories abruptly closed and then reopened, many companies began to consider diversifying their supply sources and relying more on suppliers that are close by.

The geopolitical trend toward more territorially-focused government policies is another factor causing manufacturers to reassess where they source their components. But, despite the rise of economic nationalism in the short-term, these trends are unlikely to lead to a long-term "buy where you make" approach to the supply chain. "Companies will continue to look very closely at the cost of inputs, so they will still rely on cost-competitive suppliers," says Grant McDonald, Global Sector Leader, Aerospace & Defense, at KPMG International. "But reduction of risk will likely be important as well, resulting in some rebalancing of the supply chain to create a value framework that also considers supply alternatives and channel simplification."

Jolted by supply disruptions, Tier-1 manufacturers are working hard to get to know their suppliers further down the chain, as they try to identify vulnerabilities. Technologies such as blockchain and data analytics are being used increasingly to gain visibility and accountability in the supply chain. Also, some big manufacturers may extend credit to ensure their suppliers will survive; others may take a stake in them or buy them outright if they are considered vital. "We are likely to see a consolidation among component makers. France, for example, prides itself on having a large collection of homegrown manufacturers in aerospace and transport equipment. This number may shrink in order to strengthen the sector," says Stéphane Souchet.







Digital transformation accelerates

Manufacturers are not just deploying digital technologies to help make their supply chains more flexible. They are also investing in a range of technologies that are part of what has come to be called the fourth industrial revolution. Executives say that the pandemic is proving to be a shot in the arm for the digital transformation of their companies. Ninety-six percent of manufacturing CEOs say that the progress to digitize their operations has accelerated.

"A message of the survey is that, to remain competitive, many companies that have sped up their digital transformation efforts need to move even faster, and those that have not done so need to catch up quickly or face being left behind," says Grant McDonald. One technology to highlight in this regard is 5G wireless networks, which offer major benefits to manufacturers in terms of data speed, latency, efficiency, reliability, capacity and security.

5G is expected to improve the delivery of mobile broadband services, in comparison with previous wireless technologies, and is expected to support a wide array of new solutions. Digital capabilities based on the Internet of Things, artificial intelligence, autonomous operations, virtual reality and drones are among the solutions that employ 5G networks to deliver big gains in productivity and accelerate innovation. Additive manufacturing (also known as 3D printing) is also emerging as a key technology, especially for sectors such as aerospace, particularly in prototypes and low-rate production.

Impact of the pandemic on manufacturers' digital transformation

Progress has accelerated by a matter of months

48%

Progress has accelerated by a matter of years

48%

Progress is the same as before



Source: KPMG 2020 CEO Outlook: COVID-19 Special Edition, KPMG International





New Ways of working

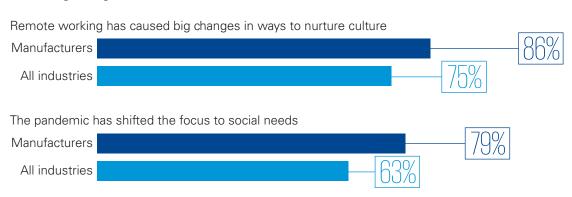
The focus on digitization is clearly reflected in executives' strategic choices. Almost three quarters (72 percent) of chief executives in manufacturing are prioritizing investment in new technology, approximately three times the number (28 percent) who are prioritizing investment in workforce skills. This picture might exaggerate the disparity in priorities, in part because workers will need to be trained in how to use the new technology. But there is no doubt that executives are concerned about the impact of the pandemic on the workforce. Talent risk is seen as one of the most serious threats to the organization's growth in the next 3 years, as noted earlier.

Remote working makes it hard to address this risk when it comes to attracting talent, which is often in short supply. It is difficult to evaluate job candidates through online videos and to train people remotely. For most manufacturers, there are severe limits to the ability to work from home, because factory workers need to be on the production line and R&D teams need access to equipment and laboratories to develop new products.

It is also difficult to instill the company's values. Eighty-six percent of CEOs in the sector say that remote working has led to significant changes to policies that nurture their company's culture, compared with 75 percent for all industries. This becomes very important when organizations try to keep their best people; loyalty may tend to erode in a remote working environment. Strengthening bonds between employees and their employers depends more than ever on corporate leaders sticking by their workers and vice versa.

A stronger focus on culture and social issues

Percentage in agreement



Source: KPMG 2020 CEO Outlook: COVID-19 Special Edition, KPMG International





Shift in values

The impact of the pandemic on the lives of employees and customers has led not only to significant changes in companies' styles of working and transacting. It has also shifted chief executives' attitudes toward their companies' broader role in the community. "Many firms are beginning to appreciate that their competitiveness depends on developing stronger links to society, not just on narrow financial indicators. After all, a healthy workforce depends on the resilience of support systems in their communities," says Grant McDonald. "If working families are struggling to find childcare or are dealing with school restrictions under COVID-19, this will affect their productivity."

To demonstrate compassion toward employees, vendors and customers during the pandemic, 79 percent of manufacturers' CEOs say their response to the pandemic has caused their focus to shift towards the social component of their environmental, social and governance (ESG) program. This compares with 63 percent among chief executives as a whole. An increase in charitable giving is one way to show compassion, but stakeholders are raising their expectations of companies' social commitment in areas such as flexible working and racial and gender equality.

One way to demonstrate that the shift in values is genuine is to reconsider why the enterprise entered business in the first place. More than three quarters (76 percent) of chief executives say the company's purpose dictated their approach to the pandemic response with their stakeholders. An even higher proportion (86 percent) say they feel a stronger emotional connection to their mission since the health crisis began.

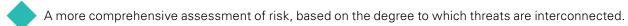


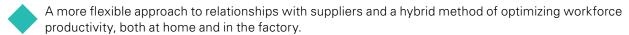


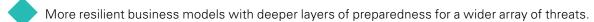
The path to the future

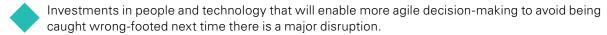
The shock of the pandemic is causing manufacturers to reassess the risks they face, affecting the management of the workforce, the supply chain, their customer relationships and their operational strategy. Big disruptions, such as these, tend to open executives' minds to consider new ways to approach their business.

These novel approaches include:









"COVID-19 is not the only threat manufacturers face to their market position," says Stéphane Souchet. "In fact, it has jolted them into considering the way threats are interconnected and caused them to adopt a broader strategy to enhance competitive advantage. This encompasses the supply chain, operations, finance, and their stakeholders. Technology is just one tool, albeit a very important one, to strengthen resilience. By taking a more agile and flexible approach, they will be ready for any future disruptions.

The implication is clear. A stronger, better prepared and more resilient organization is likely to thrive, once the pandemic has passed.

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Designed by Evalueserve.

Publication name: Global Manufacturing Outlook 2020: COVID-19 Special Edition

Publication number: 137143-G Publication date: November 2020