

Covid-19 and the future of the supply chain

Business agility has never been more important, and that has been especially evident in the supply chain. Changes in the supply chain were already coming as industries worked to optimize their networks and speed deliveries, but COVID-19 has accelerated the need to address the importance of flexibility.

As COVID-19 spread across the globe, shippers and their transportation partners had to react in record time as demand for certain items spiked, manufacturing facilities shuttered, and borders closed. COVID-19 exposed vulnerabilities in industries' supply chain models, and new challenges likely will emerge as businesses, global economies and supply chains re-open.

Looking at the State of the Supply Chain

The supply chain is facing unprecedented challenges. As a result of COVID-19, demand has bullwhipped in ways no one could have anticipated. Nearly 75 percent of companies reported supply chain disruptions in some capacity due to the novel coronavirus-related transportation restrictions in March, and that number is expected to increase. While disruptions started with an initial supply crisis across sectors, the market moved to a demand crisis, which forced organizations to revisit their 'go to market' strategy and adjust their supply chains. Global stay-at-home policies, coupled with mandatory business closures and general consumer desires to avoid retail establishments accelerated e-commerce, and supply chains have had to create platforms to execute new routes to market quickly.

Even those businesses that had continuity plans have had trouble responding. Plans often address local or regional disruption, but the pandemic has been felt globally and is not restricted to a single

75% of companies reported supply chain disruptions due to COVID-19.

geography or industry, creating additional pressure. What's more, there is no model that could have predicted how consumers would react. Demand immediately spiked for toilet paper and medical supplies as people prepared to shelter in place for an unknown duration. Likewise, demand for disposable gloves shot up 476%, cough and cold medicines went up 535%, and packaged food sales grew 377%.

Some manufacturers have rushed to add labor to meet increased demand. 3M, which has staged hiring fairs to attract new production workers to its mask-making factory in South Dakota, and Prestige Ameritech hired and trained dozens of new employees as it brought idled machines back to production to increase its ability to produce respirators for health care workers.

At the same time, some consumer staples have been taken out of service. A survey by the National Association of Manufacturers taken the first week in March found that more than half—53%—expected a change in operations. Meat processing and packaging plants have ceased operations,



what's more, skilled and unskilled laborers are sheltering at home or being treated for the virus, and logistics operations themselves are being cut.

In normal times, the trucking industry is the backbone of the United States' economy, leveraging its 3.5 million truck drivers to deliver more than 71 percent of all freight tonnage valued at \$10.4 trillion, generating \$796.7 billion in gross revenue. Within the trucking industry, certain segments, such as medical devices, perishable foods and paper products, saw substantial COVID-related increases in truck traffic, according to a study by the American Transportation Research Institute. However, nearly half of the study's respondents described freight levels as somewhat to much lower due to COVID.

Another change facing the trucking industry is a shift in trip distribution where long-haul trips decreased considerably as container imports at ports dipped, but local trips under 100 miles increased by more than 100 percent.

Global air freight capacity has dropped for the first time in three years. Industry-wide cargo capacity declined by 22.7% annually in March due to the reduction in belly hold capacity as the passenger fleet was increasingly grounded, the International Air Transport Association reported.

FedEx Chief Marketing and Communications Officer Brie Carere said the shipper's total air cargo capacity reduction to and from Mainland China from early February to early March is estimated at 40% year-over-year.

Carere added that the travel ban between Europe and the U.S. was expected to impact cargo capacity significantly since approximately 60% of the air freight capacity between Europe and the U.S. are on passenger flights.

Similarly, air freight volumes also dropped, with industry-wide cargo tonne kilometers (CTKs) contracted by 15.2% year-on-year in March, IATA said.

Rail traffic also declined, with Weekly North American Rail volumes are falling at the fastest pace since 2009.

The supply chain trends of 2019 did not position the industry well to handle this scenario. A sustained focus on lean inventories, just-in-time processing, improved asset utilization and integrated and consolidated supply channels, as well as a move towards consumer customization, removed buffers and limited the ability of those within the supply chain to flex and act.

Although agile tools and culture have been emerging in the supply chain ecosystem, Covid has shown that the application and embeddedness were not yet there to enable industries to respond quickly.

Yet even among the challenges, the resiliency of supply chain talent has kept things moving. Successful supply chain experts must possess cross-functional experience in product innovation, customer-facing functions, broader P&L responsibility; knowledge of current automation and systems technologies; multi-channel backgrounds; and a balance of vision, results orientation and a collaborative mindset.

Those within the supply chain have shown how beneficial agile leadership is during a crisis.

Digging Into Consumer Confidence

Shelter-at-home laws, business closures and social distancing have dramatically affected every sector of the economy, from manufacturing to consumer spending. The emotional and social impacts of COVID-19 have created another layer of uncertainty and concern in addition to the physical and industrial constraints. The virus and the measures taken to protect public health are inducing sharp declines in economic activity and a surge in job losses, causing tremendous human and financial hardship across the United States and around the world. A record 20.5 million Americans lost their jobs in April. Half of all Americans say they or someone in their household has either lost hours or a job because of the coronavirus.

Multiple sectors saw significant disruptions. American manufacturing and overall industrial production experienced the most significant decline since 1946 in March as factories across the country shut down late in the month to prevent the spread of COVID-19. The travel industry, which includes businesses such as airlines, hotels and restaurants, will shrink by 50% in 2020, which would mean a significant loss of jobs and revenue.

Many domestic and international airlines temporarily cut up to 90% of their flight capacity due to the coronavirus pandemic. Warren Buffet recently sold his entire position in American Airlines, Delta Air Lines, Southwest Airlines and United Airlines, saying "the world changed for airlines" due to the travel shutdowns.

This generation has never experienced a global pandemic of this scale, and people don't know what to expect. They remain concerned about their jobs, families and health as well as the future..



Three waves of response across the supply chain

Wave 1: React and Sustain

- Regulatory: Shelter at home; non-essential business closures; no large group gatherings
- Financial: Managing cash flow and company solvency
- Operational: Maintain critical supplies and resources, including staff, shift to meet new, regulated or socially pressured demand, such as medical supplies
- Human: Manage fears and balance survival instincts; help transition to remote work, furlough employees and adjust labor as necessary

Wave 2: Restart, Ramp-up or Power-down

- Regulatory: Work within new constraints, identify potential impact scenarios and response plans
- Financial: Prioritizing relationships and needs, prepare for a potential 'second wave'
- Operational: adjust work and production to handle limitations, such as unavailable supplies and limited labor; explore potential business re-engineering
- Human: Social distancing becomes less stringent based on local guidelines and individuals' comfort levels; businesses adjust physical locations and workspace layouts to create more distance; companies manage post-lay-off and labor shifts

Wave 3: Reimagine

- Regulatory: Developing local and global response plans
- Financial: Create strategic scenario plans, identify supply risk areas and adjust financial investments accordingly
- Operational: Train employees and diversify skillsets for the labor pool; develop and implement risk mitigation strategies by expanding suppliers, establishing alternative channels and creating supply chain control towers; invest in supply gap modeling and mitigation planning, such as 3D printing; investigate the potential for nearshoring/re-localization

- Human: Invest in agile leaders; develop and execute business continuity plans for remote and limited labor pools, modeling and adjusting to potential disruptions of the future; identify how desired skillsets have changed; determine the skillsets needed for future growth.

Restarting the Supply Chain

As companies, manufacturers and retailers bring businesses back online, the supply chain will transition from Wave 1: React and Sustain to Wave 2: Restart, Ramp-up or Power-down. Supply chain leaders taking part in leadership roundtables hosted by Korn Ferry's Supply Chain Center of Expertise said they are giving their entire supply chains a rethink, moving away from the lowest-cost system and turning it into a more dynamic and risk-mitigation structure. A one-size-fits-all linear supply chain that "plans, sources, makes, delivers and returns" products to customers and channels in the same lean and operationally efficient way is no longer adequate for success.

The transition from reaction to restart will require thoughtful evaluation as companies look at their most-exposed nodes, the impact of failures they have experienced and ongoing risks. They will need to examine their financial situation, determining operational longevity based on cash on hand, as well as any additional cutting required to remain solvent. This is the ideal time to identify other resources to help scale the business, either up or down, and improve cashflow.

In addition to understanding their own liquidity and business positions, companies will also need to look downstream to analyze customer needs to size and enable their supply chains properly. They will have to examine their supplier and transportation networks to determine their financial health to determine associated risks. Collaboration will be critical to deciding on how all parties might work together to mitigate the effects of the crisis.

Companies will also want to examine their suppliers' and transportation providers' performance now versus pre-COVID-19 as well as their confidence in their ability to work together, moving forward.

As businesses align their resources with demand, they will want to determine the supplier capacity and, possibly, identify an alternative supplier network. Companies may find value in multi-sourcing arrangements to mitigate the risk of disruption. It is also wise to develop back-up plans for all critical components.



Workforce and talent optimization is a critical element of restarting the supply chain. Companies will have to adjust labor to meet demands. This may include training, up or downsizing further, outsourcing or partnering with outside providers. As part of a plan, companies can assess and adjust their footprint or network as well as their global and local needs, resources and labor to create a phased-in strategy.

Reimagining the Future

With disruption comes opportunity, and companies can harness this opportunity to build a better future. COVID-19 has exposed inherent risks in existing supply chains, and now companies can develop mitigation strategies for the future. There are several steps companies can take to protect their supply chains. That starts with documenting the challenges and root causes of the past few months' disruptions, pinpointing where the supply chain failed and what they could have done differently to prepare. Do companies need to balance inventories with their geographic locations? Are there new challenges that have come up in more recent weeks that they need to address? What are their top priorities moving forward? Will they move manufacturing closer to its final destination, driving nearshoring/re-localization? How will customer expectations shift? The need for rapid responsiveness and the ability to pivot on demand will remain central. There are several technologies, including the Internet of Things, quantum computing, advanced analytics, artificial intelligence, 5G and robotics, that can improve information flow and enable companies to make rapid changes and mitigate risk. Some technologies, such as 3D printing, can increase a company's capabilities and flexibility.

The use of digital supply networks and supply chain control towers can connect the supply chain for greater visibility and optimization. Visibility inherently leads to agility.

Changes to workforce management experienced during COVID-19 are expected to continue. The majority of those—69%—taking part in a Korn Ferry study on the virus said their workforce was already enabled to work virtually. Going forward,

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companies will need to enable their workforce to work across roles or responsibilities and meet critical path requirements and to develop and implement responsive communication plans to allow the full labor pool to participate in identifying and mitigating risks.

To accelerate change, companies will want to:

- Begin integrating circularity principals and approaches into their supply chain,
- Adopt new technologies or tools that improve visibility into data and improve responsiveness, and
- Take the opportunity to cross-train or level-up the skills of your critical labor force.

Understanding Supply Chain Risks and Weaknesses

The ramifications of COVID-19 have proven that many companies were unaware of vulnerabilities within their supply chains. Those risks included a lack of visibility, lean inventories, human resources issues, a lack of customer collaboration and the inability of partners to shift on demand.

One of the most considerable risks has stemmed from a lack of end-to-end transparency. Visibility is critical to understanding inventory—what is available and what is in transit—and for spotting disruptions in real-time. The ability to get out ahead of an issue is increased if it is spotted early. Utilizing a supply chain control tower that consolidates information and planning into a single platform can help increase visibility.

However, there are still limitations. It is difficult to gain good insight into second- and third-tier suppliers' capabilities, stability and financial security. That can get even more difficult with fourth-tier suppliers but emphasizing communication and data sharing can help.

Business failures will result from the sustained economic disruption, and small businesses, in particular, may have to close their doors and sell their assets. These suppliers will need to be re-sourced, re-validated and integrated to ensure quality and continuity are maintained. The international aspect of requalifying suppliers is made even more challenging by global travel and communication restrictions, as well as the concerns some may have of traveling while COVID-19 is still present. Some ways to overcome this risk



are working with local suppliers, utilizing video tours, or tapping into third-party or cross-supplier validations. Personal networks may also come into play, with managers tapping into their alumni and partner networks for local resources.

The future will bring more digitization and automation, and companies need to assess if they are prepared to acquire, train and deploy these new skillsets. Everything from manufacturing to warehousing is likely to have increased automation with requirements for individuals to be tech-savvy. Moving forward, the supply chain structure will change with an increased focus on end-to-end visibility and a need for speed, transparency, accuracy and flexibility with risk management being critical.

Examining the Network

COVID-19 was a trigger event that caused companies to refocus on their supply chain. The significant global disruptions, particularly in China, may cause companies to right-size their operations and move to nearshoring. There could be targeted merger and acquisition opportunities as well as greenfield expansion and joint ventures as companies optimize their networks.

In an April survey of 878 North American manufacturing and industrial sector professionals by Thomas, 64% of companies reported that they “are likely to bring manufacturing production and sourcing back to North America,” to avoid similar difficulties in the future. If that happens, it could have a significant impact on labor needs, driving demand for factory and warehouse employees as well as truck drivers. It could also increase demand for technology to aid in material flow and efficient production lines.

Embracing the Positive

Despite the challenges associated with COVID-19, there are bright spots to be found. Companies can identify how their strengths and skills through this crisis positioned them to bring something unique or new to the market. For some, it was the ability to shift production quickly or operate without certain materials; for others, it was the ability to manage cash flow to ensure they could re-open.

Companies also can use this time to take an in-depth and detailed look at their customers and clients and how they responded to the crisis. This can uncover ways to meet their needs better, opening up new opportunities.

Questions companies should ask themselves as they prepare the workforce of the future:

- Will the move towards significant strain upon e-commerce be a permanent shift?
- What skillset will the workforce need to address these shifts?
- Is there a need to invest in data to improve sensory capabilities around demand signals?
- How fast and how deep do the changes need to be made around moving towards a localized supply? Who can make this happen?
- What does the leader of tomorrow’s supply chain look like? And what qualities should they have?



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