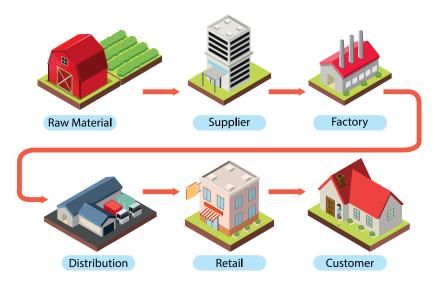
SUPPLY CHAIN: LET'S TALK SOLUTIONS INSTEAD OF PROBLEMS

Prior to the COVID-19 pandemic, most Americans likely gave little thought to the supply chain the products they bought traveled to reach them. Orders were placed and products were received with relatively little fanfare (or delay). Now, as the kinks in the global, interconnected system that supplies our goods continue to produce delays and scarcity, leaders and businesses are spending a lot of time working on something we (perhaps naively) took for granted for much of the last 30 years.



The pandemic and government policies undertaken in response to it created severe disruptions in supply chains. Labor shortages at each link in the chain have slowed down many companies. Highly efficient processes like "lean" and "just in time" (JIT) manufacturing, which had become part and parcel of the steady globalization of recent decades, are highly sensitive to timing and labor disruptions, compounding the problems brought on by the pandemic. Companies that rely on these methods store as little raw material or component parts as possible as a cost efficiency measure, only purchasing more when it is needed. When supply chains and transportation systems are operating normally, this practice is highly cost effective and time efficient. The pandemic, however, gummed up the works.

Another much-discussed aspect of recent supply chain conversations has been the extended length of supply chains—that is, reliance on manufacturers or suppliers far from where the end product is being produced. China, for example, produced 14.7% of global exports in 2020. This reliance on foreign suppliers created more transportation steps in the chain, and the more steps in transportation it takes for the raw materials or component parts to make it to the manufacturer of the good, the more room for errors, disruptions and delays.

Moreover, the price of shipping has skyrocketed. According to the Brookings Institute, the cost of individual shipping containers from Asia to America has more than tripled—jumping from approximately \$4,000 to approximately \$15,000.

Many companies are looking pursuing new strategies, including vertical integration and shrinking supply chains, reshoring, automation, and moving away from lean or JIT manufacturing.

- Vertical integration: Companies are looking to acquire or merge with suppliers to their supply chains. Doing so provides companies greater control and often lowers the overall costs. Strategic joint ventures or other collaborative arrangements like supply clusters seek to accomplish much the same result without merger and acquisition activity.
- Automation: 70% of companies surveyed in a McKinsey Global Survey
 are at least piloting automation technologies in their operations. This
 technology has been shown to increase productivity and allow for the
 injection of more output into the supply chain quicker. Automation also
 fills gaps caused by workforce shortages and provides the opportunity for
 upskilling and increased wages for employees.
- Stocking more inventory: Manufacturers' inventories are up 18.5% from June 2021 in an effort to move away from JIT processes. By stocking more inventory, companies that have products and parts in hand and on demand. The drawback? This practice can force companies to carry costs for longer than normal.