



# Positioned for Growth: Manufacturing Supply Chain

Industry Outlook and Best Practices for  
Addressing the Industry's Most Pressing  
Issues to Prepare for Growth



## Overview: Global Supply Chain Disruptions

Positioned for Growth is a new series covering the topics that have the greatest impact on the manufacturing industry. Each eBook provides insight into how U.S. manufacturers can identify growth opportunities despite facing a challenging economic environment. This dives into the challenges manufacturers have faced as a result of disruption throughout the global supply chain.

The pandemic continues to influence global supply chains with major delays in shipping and supplier deliveries due to COVID. On top of the pandemic, the geopolitical conflict in Ukraine is creating new challenges for manufacturers in terms of raw materials like grain, energy, and metals, being distributed abroad as well as global shipping challenges. Odesa, Ukraine, one of the world's largest shipping terminals, has been shut down due to the conflict, thus further exacerbating supply chain and shipping delays.

Additionally, shipping containers are getting stuck in the wrong places, especially when it comes to Los Angeles and Long Beach where lots of containers are waiting on the docks to be unloaded or shipped elsewhere. There's also a shortage of chassis to get containers moved around and the typical container is spending almost 20% more time in transit than it did before the pandemic.

All of these delays are causing shortages in raw materials and supplies not getting distributed globally. Oil and gasoline prices are also rising, which impacts both marine shipping and land shipping like trucking and trains. Trains are significantly more fuel-efficient compared to alternatives in their ability to move the same product across large spaces, which could be a good option in the U.S. However, train tracks are limited and only reach certain destinations, which means more transferring of bulk containers to get to the final locations.

## Impact on Manufacturers in 2022

Shipping challenges impact manufacturers from all sides. On the production side, it slows down manufacturers' ability to get input materials, creating a longer lead time on how long it takes to purchase the materials needed for manufacturing and get them to production facilities.

Shipping delays are also causing significant challenges in manufacturers getting products out to customers. Moving finished products and materials is taking longer than normal because of the shortage in shipping space on terminals and boats as well as the lack of drivers and chassis to move containers by truck. Transportation is starting to cost a lot more, both in terms of fuel prices and wage prices of the people working transportation roles.

Manufacturers are also seeing some cutbacks in production. There's limited capacity with only so many workers to support production. It's almost impossible to hit 100% production capacity and there's been a long-term decline in industrial capacity. The capacity utilization numbers haven't reached the level before a recession after a recessionary period since the early 90s and even at that point, there had already been a significant decline since the 70s and 80s. Overall, the drop in production capacity in the U.S. has been a long-term trend and the current pandemic certainly isn't helping. It's getting difficult for companies to meet their obligations and deadlines because of supply chain interruptions.

Because of the difficulties in getting enough workers and getting products shipped, manufacturers are forced to increase prices. Most manufacturers and retailers don't want to pass down those increases because they know that can prompt customers to look to other sources where they might be able to save money. At this point, however, the inflationary conditions are forcing manufacturers to pass on some of those prices.

## Addressing Supply Chain Disruptions

### Rethink Supply Chain Strategy

It may be time to think about adjusting the supply chain. Just-in-time models worked for a long time and were great because they helped manufacturers keep as little inventory as possible, which saves money in terms of storage warehousing and not having extra inventory sitting around not needed. However, with all of the supply and shipping disruptions over the past two years, it may be time to add a buffer to just-in-time practices.

Keeping lower inventory can help save money in the long term, but in the current economic climate, manufacturers may need to think about a hybrid model. By keeping a little extra inventory, manufacturers can ensure they have what they need to continue production if additional interruptions occur or if demand suddenly skyrockets.

Manufacturers need to make sure they have a little extra in case there are more disruptions or in case they need to make adjustments based on limited supplies or difficulty in transportation.

### Diversify the Supply Chain

When rethinking the supply chain, manufacturers need to get strategic about diversifying where they can get materials from, whether it's changing up how many suppliers they have or the geography of those suppliers, or both. Nearly 90% of electronics and electronic parts come through one of the ports in China, where there have been a lot of interruptions due to strict zero-COVID policies and shutdowns over the past two years. COVID will continue to cause similar disruptions as China continues to pursue a zero-COVID policy. Food manufacturers may be able to look to other countries to get grain and meat rather than solely sourcing from Asia.

Reshoring can be a good strategy for a lot of manufacturers as it would let them bring some of their production back to the U.S. to avoid major international shipping issues, depending on where they get the inputs for their production processes. Reshoring may also help reduce the burden of the supply chain on the intermediate pieces and help get the supplies needed for production.

## Modeling for Relevant Scenarios

As manufacturers think about planning for the future and their forecasting process, scenario planning becomes a critical tool to help plan for various economic events like continued COVID outbreaks or sustained inflationary pressures, and rising geopolitical tensions.

### COVID Shutdowns

Manufacturers need to watch out for continued shutdowns and temporary disruptions in supply and movements across the globe in terms of ports, transportation, and production. As shutdowns continue, manufacturers will face more challenges in getting needed supplies and production materials.

Sourcing production materials from countries with lower vaccination rates and shutdown policies are going to be riskier perhaps than in other places. Manufacturers might be able to adjust where they get materials to avoid some of that and may be able to build up just a little bit more supply to have some extra flexibility and cushion.

### Geopolitical Conflict

A long-term conflict in Ukraine will impact the world in many ways, including continued pressure on oil prices as well as a limited supply of a number of raw materials. Ukraine and Russia are some of the world's biggest grain producers, which is likely going to impact the availability of different foods across the world and the prices of those foods. Additionally, there are significant sources of base metals, like iron, nickel, copper, and a number of rare earth metals used in the microchip production sector.

### Sustained Inflation

Currently, inflation is expected to peak sometime in the first half of the year, but there is a chance that if the conflict in Russia and Ukraine continues to grow, it could put longer-term pressure on inflation, and the U.S. could see longer-term rising prices. That said, there are some big opportunities for manufacturers to pivot and invest in long-term growth. Manufacturers should think about reshoring and whether they can bring any part of the supply chain to the U.S. Or, if manufacturers have a significant presence in another country, bring more of the facilities closer together so they are unlikely to be interrupted by various supply chain disruptions.



## Long Term Considerations for Manufacturers

Every manufacturer right now should be examining their recruitment practices and strategies for maintaining current staff. Long-term, manufacturers also need to consider their approach to workforce strategy and potentially invest in increased technology in production facilities to supplement workers. Manufacturers that are strategic and proactive with their technological investments will be well-positioned to navigate continued labor shortages or supply chain disruptions.

Right now, with oil prices being so high, manufacturers may be incentivized to become more fuel-efficient if for no other reason than just to save money. Investing in more fuel-efficient alternatives may also be a valuable marketing tool for companies as they become more conscious of their potential impact on the world.

Finally, manufacturers should all be considering reshoring or putting some effort into thinking about the long-term operations for production both to save some money, while also improving the impact on local communities, whether it's more investment in the neighborhoods and people or a reduction in environmental impact.

# Manufacturing companies planning in 2022 are in uncharted waters.

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**From increased inflation and labor market shortages to supply chain challenges and ongoing COVID, the question on every business leader's mind is, "how will we navigate these ongoing sources of uncertainty?"**

Our scenario planning solution was built using Prevedere's AI Engine, which can be integrated into any data lake or data warehouse or imported into most BI and analytics tools, including Microsoft PowerBI, Tableau, SAS, Excel, and many others.

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