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How can manufacturers ease supply chain pain?

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For more than a year, companies have been confronting supply chain snafus. The hitches are particularly acute for manufacturers, which typically require sizeable volumes of numerous components. We spoke with some experts about how to ease the pain.

"We're trying to keep our supply chain short by working with local vendors — but they often have their own issues," said Gail Friedberg, CEO and co-founder of Zago Manufacturing Co., which produces components like self-sealing screws, nuts and bolts. "We have also sourced additional vendors; and we've always treated them right, paying them quickly so we're first in line."

The company also tweaked schedules. "We're ordering out longer, from six months to a year, instead of the traditional three months," she added. "We build anticipated delays into our production schedule, and we consider that when we quote deliveries to customers. But we are not stocking more inventory."

Manufacturers have faced a host of overlapping issues. "It's been one wrinkle after another," said Blair Robbins, an EisnerAmper partner. "First, the COVID pandemic created a lot of issues, then you had backlog at the ports, and then we faced the threat of a national rail strike."

Previously, companies could get around threats – such as the rail dispute – with alternatives, like using trucks to transport products. But still-high gas prices and a shortage of drivers could stall that option, he added. "When we meet with manufacturing and other clients, we talk about the need for a 'Plan B' alternative," said Robbins. "With ongoing port delays and other challenges, one option is to use air freight, but that's a lot more expensive and it's usually feasible when only a few components are involved."

Another strategy to deal with supply chain disruptions involves changing the mix of product offerings. "Using price promotions and other incentives, manufacturers and other companies are trying to move the goods they've got in stock, while they wait to replenish low- or out-of-stock products," he added. "Also, in an effort to cope with supply chain snarls, some manufacturers are moving away from the low-inventory 'just in time' approach to a higher-inventory 'just in case' game plan."

In a bid to avoid stock-outs, some manufacturers are also turning to long-term supply contracts. "For the longest time, many manufacturers didn't enter into formal contracts with suppliers," explained Robbins. "Instead they cultivated relationships with suppliers. But now I'm seeing some of them signing two-year purchase commitment contracts in the hopes of being shielded from price increases, while increasing the odds that they'll have access to raw materials or components. But commodity prices can go down as well as up, so down the road they may be paying above-market prices for their purchases. And they'll be committed to making those purchases regardless of the actual demand for their products at the time. So some will win, but some will lose."

Accountants to the rescue?

When NJBIZ asked Wil Knibloe – a principal in advisory services at Crowe LLP – about the supply chain crisis, he channeled his inner Charles Dickens and replied, "For manufacturers, it is the best of times, it is the worst of times."

Many manufacturers and other companies "are having some of their best years, ever," he explained. "But they're also running themselves ragged chasing parts and labor. And the situation has been exacerbated across manufacturing and other industries by a shortage of people entering the trades."

Another Crowe advisory services principal, Bart Kelly, illustrated the challenges, noting that, "Two of our clients – a $2 billion residential floor installation company, and one of the largest commercial floor installers – are looking at lead times of up to 28 weeks, compared to their historic six-week leads. There's a great deal of uncertainty, and companies are hoarding supplies, and using 3PLs [Third-Party Logistics providers] and other outsourced solutions to store whatever excess inventories they can get."

But the inventory scramble can have unexpected consequences, he added, pointing to recent announcements from Target Corp. and other retailers whose profits took a hit because they had a glut of inventory, which had to be unloaded at fire-sale prices.

"Many companies have to do a better job of coordinating, communicating and planning between their sales and operations divisions," said Knibloe. "Too often, they operate as separate silos. And in manufacturing and other companies, buyers often do not coordinate their internal forecasts with vendor-suppliers. That has to change."

The challenge can be exacerbated by "knee-jerk reactions," Kelly added. "Faced with supply chain kinks, many manufacturers, retailers and others are putting in highly inflated orders for every kind of component, which not only bruises their cash flow, but also means that they are overstocked with some parts and understocked when it came to others."

Advisers like Crowe are trying to help with performance improvement services, Knibloe noted. "We help companies to think through their planning, ordering and pricing strategies. We also counsel them to consider the long term. Right now they may need to go bigger on inventory, but they don't want to get their levels too high — because once this supply chain crisis is resolved, they may be saddled with excess inventory, and then it becomes a balance sheet issue."

Most planning models utilize algorithms that consider lead times and production schedules, added Kelly. "But lead times can be a variable, because you're dealing with outside suppliers. So, supply-chain professionals have to be more thoughtful when it comes to how much they trust their vendors' stated lead time and be flexible enough to build in some buffer to the order-production calculations, instead of cutting their time right to the edge."

Some advisers are taking other steps to ease manufacturers' supply-chain blues. "Analyzing a company's inventory management can make a difference," said Alan Markowitz, a Marcum LLP partner. "For example, are clients overbuying or underbuying inventory? We also go deep to see how clients are managing their cash flow and inventories; and whether they are properly aligning their forecasting and buying activity to maximize efficiencies. It all adds up."

For Patrick Enright – senior vice president of academic affairs, workforce development & student success at the County College of Morris – the crisis has hit home. "We work closely with more than 30 manufacturers, and they are very busy, while their cost of materials has significantly increased. And if you want to buy something with a chip in it, it's going to be delayed."

When CCM launched a new welding program, "our order for welding units was delayed for months, so we had to rent some," Enright added. "It's costly but you have to do it. Going through this has sparked talk about creating a new industry focused course on supply chain training, aimed at people who already have a bachelor's degree and want to add to their skill set."

Some local help

"Manufacturers have increased collaboration and communication substantially since the pandemic, largely with the help of their local MEP [Manufacturing Extension Partnership] centers," according to Alan Gung, NJMEP copywriter and media specialist. "That is why there is a need for a more centralized national supply chain database, so businesses can continue operations without any disruptions and the communication of needs and potential support can be standardized across the nation."

NJMEP has been working with U.S. Sen. Bob Menendez, a Democrat, and other legislators to develop and implement a National Supply Chain Database, he added. "This would offer manufacturers key information to be a resource in their decisions for retooling in critical areas to meet product demand. This National Database addresses the need to have an extensive and centralized database to minimize future U.S. supply chain disruptions."

Bringing more manufacturing to the U.S. would reduce the risk of supply chain disruptions, observed Gung. "The main issue we saw over COVID was the semiconductor shortage. If the U.S. has a strong semiconductor industry, consumers wouldn't have felt that burden. The same goes for masks. Surgical masks were mostly produced overseas. Now that [mask] manufacturing came back, regardless [of whether] countries close their borders to us we can stand on our own."

Storm of the century

It's not unusual for supply chains to develop some hiccups, and "generally, they involve either price disruptions or delivery delays," said Sanchoy Das, an NJIT professor of Mechanical and Industrial Engineering. "But we are in the unique position today of experiencing both pricing and delivery disruptions simultaneously. This drives a multiplier effect and a level of disruption that exceeds what companies have planned for."

Manufacturers can take some steps to mitigate the pain, however. "Technology can be leveraged to create more visibility across supplier networks, functioning like an early warning system," he noted. "Also, companies typically concentrate their purchases among one or two suppliers as a way to increase their economy of scale — but today it may be better to set up relationships with multiple sources, and even across geographies, as a way to increase resilience and reduce sourcing risk."

At the same time, Das thinks that manufacturers may edge away from the low-inventory "just in time" approach that's held sway for many years, "and may go back to the future with higher on-hand stock as a buffer. That generally means higher carrying costs, including paying for more warehousing space, but the buffer may be worth it. To mitigate the investment, more companies may move to 3PL (Third Party Logistics providers), instead of saddling themselves with facilities that they may not need once the supply chain wrinkles are worked out."

This concept of balance is second nature to Das. The author of "Fast Fulfillment: The Machine that Changed Retailing," he provided advisory services to a large, New Jersey-based logistical facilities operator. "I've been working with them on the tradeoffs between operational efficiency and economic efficiency," he related. "For example, they have the option of building facilities in Pennsylvania — where land is less expensive but the distance to centers like New York is longer, or in locations like Exit 8A off the N.J. Turnpike or in Secaucus. The latter two are more costly, but they are also closer to New York and a port like Newark. Today, with more shopping being done online, speed is more important than ever, so these kinds of considerations are even more critical."