Grant Thornton

How tech companies realign supply chain costs

Four smart moves for mid-market companies

Mid-market technology companies need to be creative about supply chain cost management. Unlike large technology companies, they might not have a full chessboard of proprietary facilities that they can leverage to reconfigure for the best cost model.

Instead, mid-market companies might feel like their choices are limited. That has made it hard for these companies to maintain their sales and customer satisfaction levels amid the recent global shipping delays, resource shortages and cost increases. It's also hard for companies to plan for future market demands and customer needs, considering that supply chain challenges could continue or new problems could emerge.

But there are some very important moves that can help them build cost-effective supply chain resilience. Each of these moves is part of building an adaptive supply chain that can respond to the stresses of current and emerging markets, as well as environmental and political changes.

1. Diversify suppliers

Many companies suffered during the pandemic because of breaks in their hard-wired supply chains. As market and political changes created stoppages, tech and telecom procurement teams were suddenly pushed to find alternative suppliers.

While hard-wired supply chains were once cost-effective, it's now clear that they put businesses at the risk of shutdown. To manage the ongoing risks of supply shortages, shipping delays and cost increases, tech and telecom businesses need to continually assess, analyze, and adapt their supply chains. They need to build supply chain diversity.

To build supply chain diversity, businesses often need to make an investment. So, how do you weigh the investments and returns?

- **Realistically assess the risk to your current supply chain.** After a year and a half of pandemic-related supply chain degradation, it is vital that mid-market companies objectively, realistically and continually assess their supply chain risks. Identify the risks and threats to your current supply chain, and quantify their potential impacts and costs. Assess political, environmental and marketplace threats, ranking and quantifying the risks and the potential costs for your business, reputation, remediation, reconstruction, fines and more. This assessment may be difficult to conduct, but it is a key exercise that mid-market tech companies should initiate immediately. The insights it provides can be valuable for surviving and possibly thriving in these challenging times.

  A qualified Supply Chain Officer can assess and adapt the supply chain, while helping to instill the necessary leadership, mission focus and agility. A mapping of supply chains and the risks at each link (such as supply sources, processing facilities, distribution centers or transportation systems) can help prioritize the high, medium and low risks, along with opportunities for improvement.

  With an objective assessment of risks and the potential impacts to the business, you can prioritize supply chain vulnerabilities and the actions that you need to take.

- **The devil is in the details — analyze your costs.**
  Carefully assess and understand the costs of your current supply chain, comparing at least two or three alternatives that would diversify your supply chain. Weigh the costs of each and determine if establishing one or two of these alternative supply chains is warranted as "insurance" against the failure of the current supply chain.

  It's often difficult to factor in unanticipated price increases, shipment delays, resource shortages and other supply chain variables. That's why businesses need supply chain cost comparisons that are accurate and complete enough to identify the best mix of pricing, responsiveness and stability among various sources and shipping options. Businesses should also re-examine the risk and potential cost impact of Just-in-Time Kanban-type manufacturing and supply chain systems. The expense of having safety stock may be worth the risk of not having stock at all.

- **Consider a new and diversified supply chain to grow business where suppliers are located.**
  Assess making a supply chain investment that would open doors to a new market, while improving supply chain diversity and reliability. Leveraging a supply chain investment that opens new business opportunities could result in a large return on investment from expanding business, while also helping to ensure production stability.

  Businesses should also examine onshoring supply chains to lower the variables, costs and uncertainties that foreign suppliers pose. Although the costs of domestic supplies might be higher, the increase in delivery reliability and product quality could offset that cost. To address potential future limits on access to supplies, some U.S. companies are investing in developing their own rare earth supply chains. While such investments are out of reach for most mid-market companies, establishing these domestic supply chains can benefit an entire industry.

- **Expect the unexpected.**
  The COVID-19 D variant has shown that surprises will continue, even with strenuous actions such as lockdowns, the rapid development of vaccines and government economic response during the initial COVID-19 exposure. As the COVID-19 virus rapidly evolves, we can only hope that science and governments respond quickly enough to avoid the deadly impacts experienced during the 2020 pandemic.

2. Diversify technologies

It's common for tech and telecom companies to build their products around one tried-and-true technology platform; however, that can leave the companies vulnerable to unavailability arising from privacy concerns, legal battles, supplier shutdowns and a range of other factors.

Many companies that have experienced delays with receiving rare earth materials, computer chips and other components are looking for alternative sources, materials or components. As with diversifying suppliers, diversifying technologies often requires an investment — so how do you weigh the investments and returns?

- **Mitigate technology sharing issues.**
  Identify where there is a risk of potential inbound or outbound prohibitions on sharing technology or data, and address supplier security threats. It's particularly important for government contractors to understand cybersecurity requirements promulgated by the federal government. Both prime contractors and subcontractors might need to do extensive work to maintain compliance with these requirements.

- **Address supplier security threats.**
  Analyze possible threats for cybersecurity theft or intrusions from your suppliers, especially when developing new technologies. Consider diversifying your suppliers, if there are security risks or connections outside your company that could create a conflict of interest or competitive alliance threat.

- **Weigh your research and development investment.**
  An investment in using an alternate technology for research and design can open up options for lower-cost solutions. Likewise, alternative materials or energy sources for production can provide dividends in creating new cost-effective products or even new lines of future business.

- **Consider where you could adopt other technologies.** New technologies in your supply chain or production process can enhance your agility and resilience. Advancements in blockchain, robotic process automation, and data analytics technologies all offer potential improvements in supply chain management and costs:

  - Blockchain can streamline transactions and enhance security to reduce manual work
  - Robotic process automation not only automates systems, it improves your ability to estimate and plan for reconfiguration and re-tooling if needed
  - Data analytics for your supply chain, inventory and market demands can give you a clearer picture of emerging risks and possible impacts, which informs more accurate cost planning and supply chain modeling

To determine if and when technology could improve operations or costs, companies should follow these technologies and others unique to their markets. Right now, new processing technologies and equipment can reduce waste, operating costs and capital investments in chemical manufacturing and pharmaceuticals. Continuous-flow manufacturing improves the production of active pharmaceutical ingredients, while additive manufacturing (or 3D printing) can accelerate or expand production for complex components.

3. Ensure supplier quality and consistency

Automation, analytics and other technologies can help not only streamline and stabilize your internal supply management but also strengthen external points in your supply chain. By working with your suppliers, you can implement technologies that give you control and visibility to better prepare for or avoid evolving cost risks.

As you develop better modeling for your supply chain, inventory and market demands, you can design systems that take advantage of input from key suppliers. So, what can you ask your suppliers to provide?

- **Automated source inspection can ensure more consistent quality assurances.**
  As you think of diversifying your suppliers, consider which partners can provide the data to help improve product quality and the reliability of deliveries. Both can reduce the cost of poor quality or missed customer shipment dates.

- **Digitized design tools can help you implement new products with less expense.**
  These tools can also feed into better quality control processes.

- **Production and logistics updates can save many hours of manual follow-up or lost production time.**
  This realized savings can be another benefit that helps justify supplier diversification, versus suppliers who offer a lower price up front, but with less transparency or consistency in delivery.

Suppliers can improve their own supply chains and production processes by automating source inspection, adopting digitized design tools to help implement new products with lower cost, and leveraging GPS tracking technology and analytics to monitor system activity.

Better modeling of your supply chain, inventory and market demands can help both your company and your suppliers better understand the dynamics of your respective systems and identify strengths and weaknesses. Companies might even use this data to negotiate supplier contracts that build in performance-based incentives to financially reward desired performance.

4. Refine supply chain risk management

When tech and telecom companies diversify suppliers and technologies, while also ensuring supplier quality and consistency, they take important steps toward reducing their supply chain risks. Often, they also gather important information about those risks.

Enterprise-level supply chain risk management can help companies use the information they gather to adapt their supply chains quickly as conditions change. Supply chains need to be flexible, adaptable and agile in order to be resilient. Supply chain resilience is now a critical factor that determines how well a company will operate, and even whether it will survive.

Here are some important supply chain risk management steps that help to build resilience:

- **Prioritize customers.**
  Prioritize the most important and profitable customer segments.

- **Identify all risk exposures.**
  Map supply chains and identify the high, medium and low risk elements to understand system dynamics and risk exposures.

- **Simplify models.**
  Streamline supply chain and operating models to reduce complexity.

- **Build transparency.**
  Digital transformation in the supply chain — especially for manufacturers — can enable transparency and insight in the upstream (raw materials and sourcing) and downstream (distribution, logistics, delivery and service) of your company's supply chain, all the way through customer use.

- **Recalibrate costs.**
  Recalibrate your labor, assets, capacity and working capital investments.

- **Strengthen relationships.**
  Shore up your supplier and third-party relationships to mitigate further disruption.

- **Examine supplier stability.**
  Evaluate supplier solvency and manage any other risk factors.

"You have to know your risk profile, and your risk appetite, You need to identify the weakest links in your supply chain and plan your adaption strategy to build a flexible, adaptable and agile supply chain. It's what companies need, to survive in the current high-risk business environment."

David Bates,
RISK-GPS Advisory Services Director, Grant Thornton LLP

Find the right alignment

Each technology company has a range of moves open to them. While there are some key options that companies should always consider, the most cost-effective choice will depend on the unique aspects of each technology, supply chain, market and environment.

If the events of the past two years have illustrated anything, it is that the ability to respond to people's needs quickly, in sufficient scale, and with a high level of quality and reliability is of utmost importance to customers and businesses. Resilience, adaptability, and agility to respond to ever-changing business, political, and environmental conditions benefit not only companies, but nations and entire populations.

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