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Voice of the CSCO

Supply chain visibility: The quest for more timely insights

In August 2022, KPMG LLP hosted a cross-industry group of chief supply chain officers (CSCOs) in a discussion about supply chain visibility. Rob Barrett, U.S. Supply Chain Advisory leader, led the discussion. Brian Higgins, U.S. Customer and Operations leader, and Neeraj Verma, U.S. Supply Chain Execution leader, joined to provide subject matter insights.

Key takeaways

- CSCOs seek access to the most recent data and useful analysis to drive greater certainty as a counter to ongoing supply chain constraints and poor visibility.
- Sophisticated scenario planning is helping to inform supply-chain-related decisions otherwise complicated by shifting external factors and internal considerations, with potential benefits for both companies and customers.
- Control towers—data-rich technology environments used to manage supply chain processes and improve decision-making—fill many planning and execution roles. However, a CSCO needs to tap multiple vendors to stand up a control tower that will meet specific organizational needs and goals.
- Organizations should treat the introduction of new technologies to supply chain operations as a business transformation, helping employees recognize the benefits and adjust to new processes and capabilities.

Uneven visibility across the supply chain

The desire to improve supply chain visibility typically falls into two big buckets: managing inventory and managing labor, according to a logistics executive.

Beyond that, organizations have very different requirements, from the frequency of updates to the accuracy of the delivery window—right down to the time the materials will arrive at the dock. There is no industry standard "for the reasonable or possible," the executive added.

Certainly there's a desire for information to be as fresh as possible in order to plan production concisely, several participants said. Not all details need to be updated to the hour, according to one CSCO, but exact dates or more accurate approximations of when materials will arrive is necessary for proactive planning. "I'm just looking for visibility that allows me to at least get closer to that 'best guess.'"

We have seen during the course of supply chain disruptions that our customers have a thirst to know even more than what we've been able to tell them over the last two years.... Being able to provide clients information in real time, even if it's bad news, is really important.

—Supply chain executive

Problem areas persist since COVID-19

CSCOs also said they are looking for greater line of sight into the availability of raw materials, including a clearer view on whether there's enough to produce the desired quantity of goods. The information could help them prepare for a potential spike in demand that would require sourcing contingencies.

One CSCO described how a healthcare company was hampered in the early months of COVID-19 by incomplete information, particularly from international manufacturing. The company is looking to address the information gap to improve capacity forecasting if or when demand dramatically changes, as it did in 2020.

KPMG perspective

Companies have vastly different supply chain information needs and capabilities, from logistics tracking to capacity estimates. But in the last two years, CSCOs across industries repeat the recurring theme: limited visibility has left them flat-footed in their decision-making. Now many companies are working on various improvements including better data collection and analysis, and greater transparency with customers. Recently, finance teams have joined in the conversation. With more detail on the constraints in the extended supply chain, finance and operations together can run scenarios and models to determine what can be produced with the available supply, helping to prioritize customers and markets and, ultimately, optimize revenues and margin contribution.

Scenario planning considerations

Barrett discussed the iterative process of scenario planning in which different factors—demand, supplier commitments, etc.—combined with potential changes to an organization's supply plan impact forecasts and help with decision-making.

Barrett gave the example of an organization trying to determine whether to go to the spot market. Will spending more to secure 10,000 units sooner help move the product to customers? Or is the purchase price variance wasted because five more constraints remain in the supply chain? Scenario planning can provide the necessary insights for an informed decision.

CSCOs are seeking greater efficiencies so their people aren't just chasing paperwork. Instead, they're truly chasing supply availability and getting updates on manufacturing capacity, etc.

—Brian Higgins, KPMG

Managing unclear timelines for continued constraints

One CSCO said his company's integrated business planning process (IBPP) forecast incorporated both unconstrained and constrained demand scenarios with a two-year window. Unfortunately, it remains uncertain how far into the future a forecast should assume production capacity and/or materials shortages, as well as how often to adjust for accuracy as conditions change.

Another CSCO added that his company's integrated model allows optimization and constraint management to plan ahead 12 to 36 months. However, the model is not as well linked to day-to-day execution, including informing decisions on current orders.

In general, CSCOs have been establishing time-based "fences" around constraint assumptions within their forecasts, Barrett said. For example, if certain commodities are constrained for 26 weeks or more, supply chain leaders could build those constraints into the forecast for 12 to 14 weeks and then assume a "slush period" during which they work closely with procurement to determine the most accurate constraint scenario at that point in time.

KPMG perspective

Organizations can introduce greater efficiencies by determining the firmness of partner commitments: are they constrained commits, or simply an acknowledgment of the request? In the current environment with orders changing multiple times before fulfillment, the paperwork has been overwhelming. KPMG has worked with a number of companies, especially those in direct materials businesses, to eliminate purchase orders. Instead, a forecast commit can be converted into a purchase order in the ERP that a supplier can then ship against without the need for inefficient PO revisions as circumstances change.

The supply chain control tower

An overwhelming number of vendors, each with its own specialties and focus areas, exists to support supply chain control towers, Barrett said. Most companies choose an "anchor" vendor that can check a lot of boxes and then add additional vendors to augment those capabilities. The challenge is to pick the right mix to meet unique needs.

> No one vendor delivers all control tower capabilities, so there's some assembly required…. It's like it was before ERP, where there's a whole bunch of specialized vendors and they haven't come together in an integrated suite.
>
> ***—Rob Barrett, KPMG***

Three types of control towers

There are typically three ways organizations build control towers to augment core ERP and other systems for internal execution.

- ***Planning:*** Harmonizes disparate systems and sites for centralized planning
- ***Collaboration:*** Extends processes to trading partners across the end-to-end supply chain
- ***Visibility:*** Increases line of sight to in-transits, inventory, capacity, and storage utilization

One participant described standing up a "frontward-facing" control tower for customers to gain greater visibility. The capability has yet to be tested but would provide some users with line of sight all the way from manufacturing to delivery.

Four layers of capabilities

Additionally, there are typically four layers of capabilities within those control towers.

- ***Visibility: What is happening?*** This bottom descriptive layer includes all the systems and connections to suppliers, customers, and other parties to gather demand, inventory, logistics, capacity, and other information.
- ***Process management: How is the process performing, where are the disconnects, and what may happen?*** Here's where people become involved to manage and oversee information, applications, and relationships for more predictive capabilities.
- ***Analytics: Why is this happening, what are our options, and what is the impact?*** With robust data from the previous layers, organizations can develop more prescriptive analyses and recommendations, such as root cause analysis, cost to serve, and pricing strategies.
- ***Cognitive support: What action was taken, and do I need to intervene?*** Few organizations have started using this layer, which uses developing technologies such as machine learning and artificial intelligence (AI) to support autonomous decision-making.

An exchange participant said his company made progress identifying the right vendors and consolidating information on one dashboard. However, he described the ongoing challenge of acting as an integrator of logistics data that has no common parameters from one source to the next. Barrett suggested that there are a handful of vendors out there with solutions designed to make the inconsistencies in data "less painful."

> Where we are struggling is the lack of standardization of the input itself. It's very hard to connect together because the language is different.
>
> ***—Supply chain executive***

KPMG perspective

A control tower provides end-to-end visibility across the supply chain and better aligns supply and demand, but there's no complete solution on the market. Companies have to choose among myriad specialized vendors and even then will still have gaps to fill. For example, KPMG maintains a repository of approximately 50,000 external signals that can inform demand sensing or planning activities and built a predictive supply chain risk management tool that incorporates geopolitics and location factors, among others.

Supplier relations

Several CSCOs said they've gotten pushback from suppliers when they ask for more visibility during renewal negotiations for service-level agreements (SLAs).

One said his company worked with outside counsel to develop contractual obligations for information sharing. Another said his company has had to do a lot of its own supply chain mapping to uncover hidden common sources among their suppliers.

> We thought we were doing a good job building redundancy, and then we find out three of our suppliers were actually all buying from one supplier. We were kidding ourselves.
>
> ***—Supply chain executive***

The same executive said his company has had success negotiating volume guarantees for specific time periods. And yet, there's a lot of give and take as suppliers in return ask the company to commit to more stringent volume agreements.

A control tower designed for collaboration can support rapid, fact-based decision-making in concert with extended business partners. However, according to KPMG's Verma, the full value of new technologies cannot be realized unless the organization provides employees with clear goals and prepares them for new processes.

> Organizations have taken a very heavy technology-focused approach to improving supply chain visibility, but it really turns out to be a much larger business transformation and change management program than a technology implementation.
>
> ***—Neeraj Verma, KPMG***

KPMG perspective

Companies and suppliers can benefit from collaboration, and information sharing is a two-way street. CSCOs can ask what transparency or other value they can offer in order to help the supplier become a better partner. In many cases, greater access to information can help suppliers plan and, ultimately, provide the deeper visibility companies are looking for. Control towers can help participants across the supply chain and are most valuable if incorporated into the business and operations, rather than simply introduced as new technology.

Additional insights

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