S&OP: A Springboard for Growth

Fascinators – the ornately compelling "headpieces" that women wear to British nuptials – are fascinating. Whether or not you appreciate these pieces of headgear whimsy, they present a perfect example of the challenges of sales and operations planning (S&OP).

After fascinators rose to the top of fashion must-haves around the Royal wedding of Meghan Markle and Prince Harry in London in 2018, the race was on to see who could fulfill the spike in demand while the craze lasted.

Karin Bursa, executive vice president at Logility, points to the significant influence such events – and their spread via social media – have had on the speed at which manufacturers and retailers need to respond to market demands. "When it comes to demand sensing and forecasting, you don't want to wait a month to update your sales operations plan. Or even a week because your competition will make it and sell it while you are still planning!" said Bursa.

Collaborating Across the Global Supply Chain

Your plan has to synchronize across multiple departments and external trading partners. "In a perfect world, there would be frictionless data transfer, and everyone would be marching to the same beat with the same goals. But we know that doesn't happen," said Bursa. "Advanced sales and operations planning processes need to happen both across multiple departments within the company and externally with suppliers and customers. The trick is getting them all aligned and synchronized."

And, even when you get that nailed down, it's not a static situation. "At the beginning of the month everyone should be in alignment with an agreed-to plan," said Bursa. "But very

quickly the plan is impacted by unexpected events. Markets change — this is something we know for sure. It is important you look at the results and understand risks and opportunities." Supply chain teams need to continually leverage advanced analytics to adjust their plans, take advantage of new data, and collaborate with partners. "You can't wait until the end of the month to communicate changes and share the latest insights. It is imperative for supply chains to embrace a mix of continuous and periodic planning to evaluate what's going on and optimize decision-making as quickly as possible. That's a best practices scenario."

Luckily, technology can help. "The process of S&OP has been transformed," said Hank Canitz, director of product marketing and industry strategy at Logility. Back in the day, he explained, it was about balancing supply and demand on an almost entirely tactical basis and, although it has always been a data-driven process, there wasn't a lot of data management technology involved.

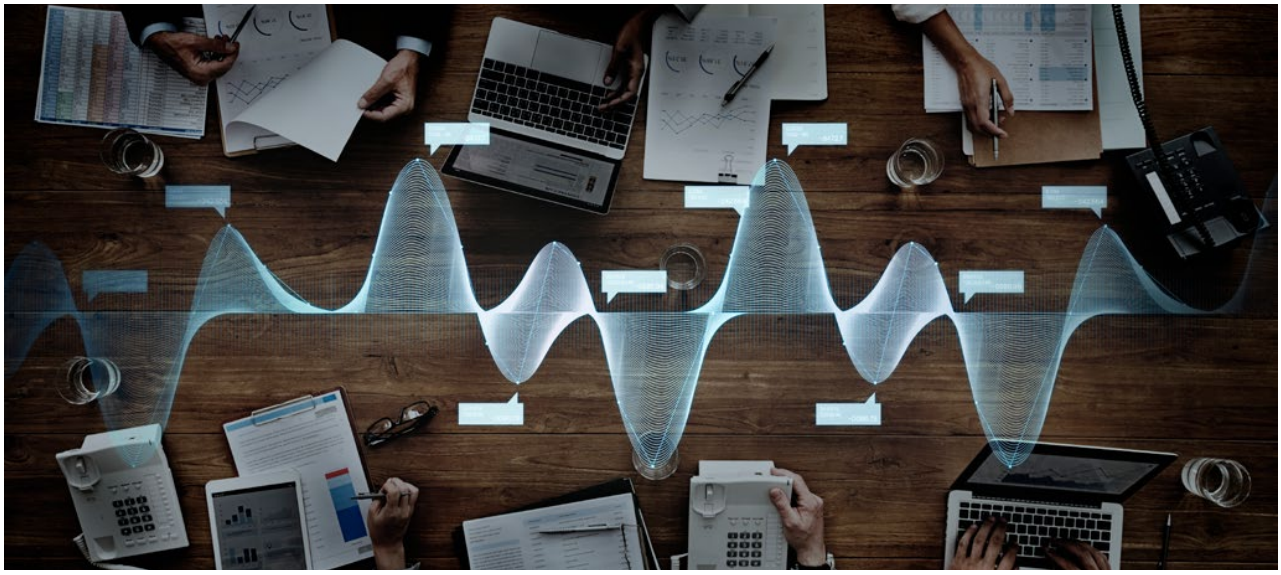
"You were lucky if you had a homegrown system; most businesses made do with Excel spreadsheets. That meant the majority of a supply chain planner's time was taken up working with sales and other departments to gather, validate and crunch data," Canitz said. "Historically, companies have focused on disjointed and cadence-based strategic planning, sales and operations planning, and operational execution processes. It was very difficult to translate operational plans into strategic ones across multiple time horizons."

"Thankfully, technology and processes have improved and become more robust," said Canitz. "Mature organizations have built trust around the process and the recommendations generated by innovative supply chain platforms. Everyone can get behind the plan and help move the company forward." These better plans, which take into account longer-term, strategic goals as well as shorter-term tactical ones, can be much more focused on generating profitable growth. Advanced S&OP technology also empowers supply chain executives to look at the level of risk and take risk-mitigation steps. Businesses then develop a mentality that's more global and more collaborative, as they begin looking across multiple horizons.

All well and good, but it takes deep, thoughtful work behind the scenes. According to analyst firm Gartner, an S&OP system can enable a Stage 4 (or possibly higher) maturity S&OP process, but it will require the support of a foundational Supply Chain Planning system, if the full value of S&OP is to be extracted by the company.

Supply Chain What-ifs Answered

Gartner points to key S&OP system capabilities that include collaboration support, where a company moves more toward a multi-enterprise environment and supporting the socialization of plans and scenarios. Then it's a good idea to have supply chain modeling capabilities, in order to support a way of creating and assessing what-if scenarios. This covers both the necessary analytics to model complex supply chain decisions, and also access to an appropriate baseline supply chain model (a "digital supply chain twin") to help align and enhance planning



decision-making at all levels, including S&OP. Then scenario planning and management can kick in, including the versioning and socialization of scenarios so that relevant stakeholders can manage assumptions, decision inputs and outputs.

"Today, all the parties involved can participate in S&OP based on one flexible system," said Canitz. "They may be looking across different time horizons and geographies or spheres of operation, but they can still manage strategic, tactical and operational functions in concert, so that a strategic decision gets translated into a sales plan or an operational plan and vice versa. Now, you're able to make the best decisions as fast as you possibly can. The digital business world is all about speed and visibility to drive better decisions. You can't wait a month to do something about an event that influences the market. Those days are long gone. You have to act now."

Speed is not the only virtue in S&OP, though. When it comes to a hot-selling item, Bursa said, there will be a series of decisions to be made. "Let's say you don't have the capacity to produce as many as you think you'll need short term. Then you start looking at options to fill that gap. What about adding an extra shift at the factory, or bringing on a contract manufacturing partner," she said. "But then there are longer-term questions, such as: How long is the demand going to be this high? Do we build a new plant? These multi-horizon decisions need to be tightly aligned. Otherwise you expose your supply chain to risk."

Putting a Bead on Risk Mitigation and Supply Chain Resiliency

Risk mitigation is in the top five priorities of most savvy supply chain managers, and a good S&OP system is an important tool. "When we talk about risk mitigation, there are really two aspects," explained Canitz. "There's the event that already happened, and you're trying to mitigate the associated risk by coming up with an optimal response. You're choosing between options such as adding a supplier or moving inventory around. The other aspect is looking into the future and trying to anticipate what could happen. What if there's a major snowstorm on the East Coast that knocks out a supplier for a week? What is your logical response? You figure that out in advance and put it on the shelf, ready for that event, because it might happen. Overall, that second aspect is probably the more valuable."

In fact, Bursa and Canitz argue that S&OP excellence provides a springboard for business growth when its full capabilities are used, not just to anticipate what could go wrong, but when it's helping to identify opportunities. "In the S&OP process, the whole goal is to support better decision-making faster, and to stay within the context of business growth while the team makes decisions about one trade-off versus another, or what-if scenarios that are being considered. We achieve greater confidence in the decisions that are being made, allowing us to align production capacity with changes, or look at the distribution network to prioritize activities and achieve the plan."

Amber Salley, a Research Director on the Supply Chain Technology

Research team at Gartner, said it's exciting to see how the ability to digitize the supply chain allows users of advanced S&OP technology to build more resiliency into supply chain planning, and adjust to unforeseen changes. "There's more ability to connect planning horizons with the execution piece," she said. "It also helps take plans coming out of transportation, warehouse and other enterprise systems, and incorporate those into the overall plan. With a digital twin that you can run alongside your physical supply chain, you're moving beyond modelling – that's really just planning. The digital twin allows you to do something more dynamic. You can take all the information you're getting and say, given these conditions, how will the average lead time change? You get a better prediction of the actual, so you can plan better."

AI and Machine Learning Make Planning Easier

Decision-making gets smarter when it's augmented by cutting-edge analytics, machine learning and artificial intelligence (AI). Bursa said it's not just about the level of detail of data available, but what you can do with it. "It's driven by what computer systems can perform these days. It wasn't previously possible to do these simulations and performance analyses quickly. Computers just weren't big enough, and the software solutions weren't viable. With the capabilities we have today, you can solve these problems in a matter of seconds. We've come a long way."

Gartner's Salley said AI is here to stay. "We're seeing buildup in the use of AI and machine learning in the planning environment. Four or five years ago, it wasn't common to have strong support for AI, but now every S&OP vendor has it. Where they differ is in the different types of AI — for example, purely machine learning, or cognitive computing. Another difference is how they're building platforms to ingest all these data streams, from internal enterprise to downstream data, such as Point of Sale (PoS), weather and social media information."

Among the most important roles of S&OP technology vendors is helping their clients make sense of the data, because too much, she said, "can be crippling."

Salley points to the ability of Internet of Things (IoT) devices to gather and pass forward data from machines on a factory floor that can send alerts when they need repair, so the downtime can be scheduled into the manufacturing plan. "More customers are saying things like: How can I use machine learning to update what's happening on my shop floor on a more frequent basis?" she said. "For every shift, they want to know who's coming in and what machines they have certification for, as well as more awareness of the flow of orders and the underlying demand." These are all sources of information that couldn't be aggregated into the S&OP process until recently, and the opportunities to improve operations are almost endless. One printer-manufacturer Salley pointed to is able to update its robotic shop floor every ten minutes depending on demand.

"Today the supply chain planning capabilities we have are so much more interesting because of AI built into the solutions, which not only look at all the data (which humans can't), but then spin up the best scenarios for you to look at – here are the best three; pick one," said Canitz.

So why is adoption of sophisticated S&OP technology slow?

"Leading companies are moving quickly to boost the effectiveness of S&OP," said Bursa. "They're gaining alignment between demand and supply and beginning to incorporate financial information for tracking ROI, and the tradeoff scenarios to evaluate for risk mitigation and so on. There's a maturity curve that comes with S&OP. Many are making progress, while others are just starting."

Advice for Beginners

Salley at Gartner says it can be intimidating at first to harness the power of advanced S&OP capabilities. Her advice for a supply chain executive considering deploying the technology is to first invest in something that helps get good data coming in. "If you don't have good control of production and planning, you're not going to get very far," she said. "Many businesses have been using homegrown systems for forecasts for years, and they need to upgrade those in addition to adopting technology that can support the S&OP process. My advice is: Make sure you have a strong foundation."

When assessing potential S&OP vendors, Salley advises buyers to think about how the systems will be a good fit for your specific business. "If you want this to be a truly global process, and to use it all over the world, then you need to establish if the technology comes in different languages. Do they have offices all over? And a semiconductor company, for example, is going to need specific semiconductor experience."

You should then be asking yourself what your company's appetite is for experimenting with machine learning and AI. "There are over 40 vendors in this space, and wading through those can be a challenge," said Salley. "It's not going to be a case of one size fits all."

Resource Link:
Logility, www.logility.com