Logistics Manager
March 2018 edition
Readership: 31,500

Moving with the times

Sales & operations planning seems to be flourishing with new developments around every corner, but some say forecasting is a waste of time. **Alex Leonards** reports...

Propelled by a wave of new technology, social change and escalating customer expectations, the nature of business is shifting. This has lead to the development of new strategies and technologies in sales & operations planning and forecasting.

"The retail industry is more globally interdependent than ever before," says Sue Welch, chief executive of Bamboo Rose. "All of this interconnectedness creates a lot of uncertainty."

She points out that, nowadays, brands and retailers are more reliant on third parties to get their products to market. This means that with every touch point on the product journey, there's a greater risk for something unexpected to happen. And this can lead to delays and prices increases.

Of course, for the UK specifically, there has been a lot of uncertainty created around Brexit. But in a more universal sense, anything from labour strikes to natural disasters can result in costs for tariffs and resources. Welch says that brands and retailers need to account for a wide variety of disastrous events and be prepared to shift their product development strategy as a result.

But it's not just politics or unforeseen events transforming S&OP. One of the biggest changes happening to the market is the emergence of disruptive technologies, like the internet of things, artificial intelligence, and the digital supply chain.

"These digital solutions enable organisations to take down the walls between silos to build a completely integrated planning ecosystem with end-to-end transparency," says Wouter van der Berg, product manager S&OP at Quintiq. "S&OP tools have improved dramatically in recent years, with availability both on-premise and via the cloud.

"S&OP is available on integrated platforms that cover the whole process, including data gathering, demand planning, supply planning and support. Best-of-breed technologies are highly flexible to allow seamless configuration."

He says that the supply chain that we know is currently experiencing significant change, and that the internet of things and artificial intelligence are helping the industry make use of operational data and are merging to transform supply chains from


Les Brookes


Roger Fleury

Improvement innovation

STRATEGY According to Les Brookes, chief executive of Oliver Wight EAME, advanced sales and operations planning / integrated business planning (IBP), has been making waves in the business improvement industry for more than a decade.

"The latest & greatest iteration has recently been revealed," says Brookes. "Enter, enterprise business planning (EBP)."

EBP is an improvement strategy that is deployed worldwide – in other words it's integration on a global scale.

"However, many organisations aren't mature enough for EBP – in fact, a significant portion aren't prepared for advanced S&OP (IBP), or have failed to differentiate between the 'old' S&OP and the new! In a case of mistaken identity, many companies have just adopted the new name, unaware (or unfazed) that IBP is an evolution in strategy," says Brookes. "IBP is advanced or next-generation S&OP, and represents the evolution of S&OP from its production planning roots into the fully integrated management and supply chain collaboration process it is today." He says that, unlike S&OP, IBP doesn't just facilitate improvement, it helps create transformation.

Can AI improve forecasting?

TECHNOLOGY Artificial intelligence seems to have made its way into many corners of business and industry in and outside of the supply chain. But is it something that can be used for forecasting and planning?

"The retail industry is still dipping its collective toe into the water when it comes to artificial intelligence and machine learning, but make no mistake, these technologies will fundamentally change the industry over the next several years," says Sue Welch, chief executive of Bamboo Rose. "Not surprisingly, more retailers and brands are focused on implementing AI/machine learning on the front-end first, and using it to enhance the customer experience."

At the moment the technology is at the front end of a business – perhaps used for customer service, or in products. But not far behind this are the back end improvements, where areas like ordering, fulfilment processing and forecasting will benefit from the technology.

Welch says that these areas will be even more honed as machine learning helps companies process massive amounts of data to make more informed decisions. "Artificial intelligence will add a predictive element to what-if costing that will use past data to create even more accurate scenarios and mitigate risk even further," she adds.

Ardent Solutions' Roger Fleury says that artificial intelligence and machine learning are hot topics but are yet to be effectively integrated into forecasting. "According to a report from Deloitte, machine learning will

end to end.

Roger Fleury, managing director of Ardent Solutions, also identifies digitisation as a significant development for the market. In fact, he believes it's the biggest development for S&OP.

"As with many other areas of industry, the forecasting and S&OP sector is beginning to have a conversation about digitalisation," he says. "Spurred by the focus on Industry 4.0 in the UK Government's industrial strategy and market reports such as Deloitte's tech trends 2018, we're seeing more professionals discuss the potential for automation, artificial intelligence and machine learning in the supply chain."

Although the push for a digitalised supply chain is welcomed, planners and operations managers should avoid adding new technology that improves efficiency by a fraction to an already ineffective methodology. "An interesting trend we're seeing internationally, particularly in the US and France, is for planners to adopt demand-driven material requirements planning (DDMRP) to improve effectiveness," he adds. "DDMRP eliminates forecasting entirely and replaces it with qualified sales to make the supply chain more effective, both practically and financially.

"Adopting the methodology reduces lead times, minimises the amount of stock held by a company and accounts for market variability far more effectively than forecasting does."

Waste of time?

Forecasting is often a vital cog in the wheel of a business, and a valuable part of S&OP – but some argue that it isn't worth the investment. To be fully exploited, the process needs to be managed strictly. Without dedicated time and effort, forecasting can produce inaccurate results. "I believe it is absolutely true that forecasting has become a waste of time," says Fleury. "There is a fallacy that forecasting will help businesses achieve better sales and operation planning however, this is akin to pedalling faster on a bicycle without getting anywhere quickly."

He says that traditional forecasting relies on bringing together data from multiple sources. This usually involves spreadsheets, and combining these with variables such as historic sales data and predicted batch sizes. "The problem is that even small inaccuracies in this data are easily magnified in the final estimate and, as typical lead times get shorter, it becomes more difficult to produce accurate forecasts ahead of time," adds Fleury. "Business leaders have to accept that uncertainty and variability are the new norm — that forecasting cannot help in this regard — and plan accordingly."

Maintaining accuracy in forecasting is of course absolutely crucial – it needs to be managed properly, otherwise it's easy for mistakes to be made.

"Statistical forecasting is based on algorithms; forecasting tools take elements of history to fit out a projection of the future, but history doesn't always repeat itself," says Les Brookes, chief executive of Oliver Wight EAME. "Unless someone is managing the tool – correcting history to reflect real demand – the system will project incorrectly."

He says that accurate statistical forecasting relies on making history truthful. "There will always be some errors in the forecast, but how this is managed is dependent upon the culture of the organisation," adds Brookes. "Getting to this single set of numbers, so the business operates with one agreed agenda for success, relies on establishing the principles of 'truth as we know it.'"

Additionally, Brookes says that one of the most common problems when it comes to forecasting is that organisations consider statistical forecasting to be a non-value-added administrative process for the IT department to manage. "But, the IT department has little or no knowledge of the broader business to apply any useful/meaningful interpretation of the data," he says. "This is why demand planning must be led and managed by those who have the greatest understanding of what's happening at the point of consumption and generation; sales and marketing." Sue Welch, chief of Bamboo Rose thinks that forecasting is a critical part of running a retail organisation, but understands why some feel it's a waste. For her, it becomes a waste of time when a business doesn't have the ability to tie planning into execution, where she believes the true ROI lies. ■

Improved planning for Fox's

CASE STUDY Fox's Biscuits has improved its forecasting, manufacturing and promotions planning practices after implementing new supply chain technology from FuturMaster.

Implementation of the technology has helped the biscuits manufacturer boost its service levels and manage up to 150 deliveries a week to retailers including Tesco, M&S and Aldi.

Before introducing the FuturMaster technology into the supply planning process, the company's product range presented a number of challenges. "It's crucial for us to produce exactly the right volumes and get sell-through with retailers," said Bill Dales, demand planning controller at Fox's. "The demand planning software predicts what's needed in terms of sales units to shift for the coming days, months or year. This helps us plan ahead and make sure we can deliver on what's promised."

The company has limited storage capacity, and has to consider the perishable nature of its products. In other words, it doesn't want to produce too much too soon.

There are a team of eight people at Fox's that use FuturMaster as a process tool and for trend analysis. The technology is able to fine-tune weekly booking forecasts using retailers' Epos data to go back two to three years to work out what sells, and at what price.

These forecasts are then used for procurement purposes and to set budgets for purchasing and labour requirements up to two years ahead.

become a valuable tool in helping businesses automate their financial forecasting, so it's possible that operations planners will seek to adopt the same technology in the future," he says. But, Quintiq's Wouter van der Berg, says that AI and machine learning are already a big part of the forecasting process. "At Quintiq, we call this the self-learning supply chain, using data from machine learning to gain insights about demand, historic data, and predictive planning," he says. "Excel sheets and ERP systems that merely execute predefined rules have long been unable to cope with the amount of data that needs to be processed today."

For him, it is vital that companies shift to a more dynamic environment.

"This will allow them to learn from the supply chain, adapt to its complexities, predict possibilities, and act autonomously," he says. One of the big forecasting benefits AI has is the automatic plotting of the impact of promotions on the demand curve. "In the past, these kinds of inputs were manual; however, if they were supported by a good AI algorithm, the actual impact of the event could be forecasted far more accurately," he adds. "Such technologies have helped our customers increase delivery performance from 40 per cent to 80 per cent, even to 90 per cent." Wouter van der Berg says: "For most, it was a struggle to let go of rigidity in their processes. We showed them that with agility, we could create significant value for their business – which we did."

Looking to the future and beyond, Scott Moon, principal at Tompkins International, says that artificial intelligence will require forecasting techniques to include prescriptive data elements to sense assortment demand and shifts in desires. "Historical demand based forecasting will finally evolve into true predictive forecasts where subtle assortment trends are quickly recognise and item level forecasts adjusted," he said.