Process manufacturing is a broad manufacturing industry consisting of consumer products and chemicals companies. These are traditionally low-growth, high-volume, modest-margin businesses that focus on productivity improvement and emerging market growth to fuel their strategic aspirations. For the consumer products businesses in particular, engaging with the consumer is poised to become the single most important challenge. IDC predicts that in the next decade, fully 90% of consumer products' industry growth and market share shifts will accrue to companies that engage more deeply and more effectively with consumers.

Process manufacturers also struggle with volatile demand and calibrating that demand to available supply. Consequently, supply chain planning (SCP) is enormously important to those that aspire to differentiated performance — not just large enterprise businesses but companies of all sizes. New technologies are making modern planning systems much more capable and accessible, and companies should be reevaluating their existing tools.

The following questions were posed by Infor to Simon Ellis, program vice president for IDC Manufacturing Insights, on behalf of Infor's customers.

Q. What are key SCP challenges that process manufacturers face? How do the various process manufacturing segments prioritize SCP applications today versus a decade ago? What are the business drivers?

A. Ultimately, it's about understanding and then calibrating to demand. At IDC Manufacturing Insights, we have long observed that process manufacturers deal more with demand complexity than supply complexity. For consumer products segments, it's about how well they can forecast and then deliver to demand. For the chemicals segments, it's about allocating fixed feedstocks into the most profitable mix of demanded end products.

While underlying business drivers remain similar, today's process manufacturers face SKU proliferation, resource limitations, and global supply disruption at levels not previously seen. It is the role of supply chain planning, whether looking at demand, supply, or sales and operations planning and integrated business planning (S&OP/IBP) integration, to make sense of the broader supply chain so as to deliver against key business objectives. Indeed, tying these things together into an integrated planning "whole" is a top priority for process manufacturers.
Modernization is also an important driver today because solutions that were selected and deployed in the past may not include capabilities that are available now. Improved technology, better algorithms, and the ability to leverage disparate data sources in the cloud make modern applications much more capable than they were in the past.

Q. **Is S&OP/IBP a top investment priority for process manufacturers? If so, why?**

A. S&OP/IBP has been one of the top 2 supply chain investment priorities for process manufacturers over the past few years for two main reasons. First, S&OP has not always lived up to its potential because it has proven tricky to implement, with companies often failing to get the kinds of benefits they expected. The need and the understood value, however, are still there. Consequently, companies continue to look for better tools and better ways of implementing those tools.

Second, in today's complex supply chain environment, navigating without S&OP is akin to flying blind. S&OP is not just a "nice to have." It is both a competitive advantage and a tool to drive improved profitability, especially as companies are expanding and growing. A good S&OP tool, well implemented, can make a huge difference to the operating capabilities of a process manufacturer.

Q. **What role do modern digital technologies play in the SCP space for process manufacturing?**

A. Supply chain planning has not yet been a strong focus for modern digital technologies, with that "honor" falling more to the execution phase; yet it is a place where those technologies can and will play a significant role. If we simplify supply chain planning to consider just demand planning, supply planning, and S&OP, it becomes obvious immediately that technologies such as big data and analytics, cloud, mobility, and even the Internet of Things are important and potentially game changing. As these technologies become embedded and enable new capabilities, process manufacturers should at least be reevaluating what they have and what is newly available. Indeed, in our most recent supply chain predictions document, we postulated that "by 2020, 50% of mature supply chains will use cognitive computing/AI and advanced analytics for deployment-based planning and to eliminate sole reliance on short-term demand forecasts."

We did not specify process versus discrete manufacturing in this prediction, but the relative importance of demand planning to process companies means that a lot of companies in the 50% cited will be of the process variety. It's a provocative prediction, certainly, but it's the kind of out-of-the-box thinking that we believe digital technologies will enable for supply chain planning. Increasing adoption of S&OP in the cloud, more sophisticated supply planning programs driven by better visibility, and more comprehensive data analytics are just a few ways that digital can transform planning.

Q. **What are some of the leading or best practices in SCP?**

A. Early practices so far tend to be in analytics, mobile, or cloud-based network environments. Capturing real-time demand, whether B2C for a consumer goods company in a retail store or B2B for a chemicals company in a factory, is the best way to improve forecasting, and we already see mobile capture and advanced data analytics capabilities driving better demand forecasting.

Understanding supply constraints is being transformed through the use of cloud-based commerce networks that provide visibility into a supplier's factories or into inbound shipments. The ability to layer an accurate picture of supply onto a real-time or near-real-time demand picture drives better business performance.
Q. **How do you see the role of SCP varying between tier 1 and tier 2 process manufacturers?**

A. There has been a common myth that smaller manufacturers are held to a lower standard by their customers than larger manufacturers. This is not true. While smaller process manufacturers likely have less to spend on technology, or at least they have historically, they are still expected to perform at high levels. Therefore, it is incumbent upon them to be judicious and clever about how they invest in supply chain planning technology. It is also likely that their supply chain is just as complex and far reaching as the supply chain of larger companies. Indeed, if smaller process manufacturers think that they are too small for a modern supply chain planning suite, they should think again — they’re not.

When tier 2 process manufacturers look for SCP technology, they are likely to be extremely discriminating and seek the best value overall. The growing availability of cloud options is a boon to the tier 2 players, and we expect to see best-in-class supply chain planning tools available to these smaller companies at affordable prices. While cloud may not be all that much less expensive for tier 1 process manufacturers, the ability to scale easily to business needs makes it very appealing to the tier 2 companies.

Tier 2 process manufacturers still have to be able to accurately gauge demand and understand supply and supply constraints. They should be reconciling through a modern S&OP process. In this regard, they are no different from their larger competitors.

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**ABOUT THIS ANALYST**

As a program vice president for IDC Manufacturing Insights, Simon Ellis is responsible for providing research, analysis, and guidance on key business and IT issues for manufacturers. He currently leads the Supply Chain Strategies practices at IDC Manufacturing Insights, one of IDC’s industry research companies that address the current market gap by providing fact-based research and analysis on best practices and the use of information technology to assist clients in improving their capabilities in critical process areas. Within the Supply Chain practice, Mr. Ellis is directly responsible for the research in the Supply Chain Planning Strategies practice while also managing the Supply Chain Execution Strategies practice.

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