



IDC ANALYST CONNECTION



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Unleashing the Business Value of the Digital Supply Chain with Analytics

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

Q. How is the digital supply chain changing the ways that companies run their supply chains?

A. The move to a digitally enabled, "thinking" supply chain holds the potential to be transformative for many companies. Some of those transformative capabilities will happen over time; others will occur immediately. In a 2018 IDC supply chain survey, we asked what the primary driver of digital transformation in their supply chains was. For now, respondents say it is mostly about efficiency and effectiveness — doing the things that they do but doing them better. (One example is eliminating or reducing rote work with automation to improve efficiency.) However, as we move into the future, it becomes about disruption, either by insulating the supply chain from external disruption or being disruptive themselves.

This is quite instructive, therefore, in terms of how digital is changing the way supply chains run. Things that may have previously only been aspirational now become practical. It is fashionable to talk in terms of new business models — how companies fulfill their products, truly personalize products for individual consumers, or deliver experiences rather than just products — and while this is clearly important, these are not the only ways in which the supply chain is changing. It is also about using digital technologies to improve the demand forecast, better understand the relationship between capacity and inventory in real time, or the way in which various constituents collaborate within the S&OP process.

Q. What business benefits will companies see from a highly analytical digital supply chain?

A. Analytics is central and critical to the digitally enabled, "thinking" supply chain that is intelligently automated. Just as we have always said that "you cannot improve what you cannot measure," in the supply chain of today and the future, "you cannot respond to what you don't know." Certainly, data is important; without good data, even a world-class analytics engine is unable to provide the necessary supply chain insights. However, as the data available to the supply chain grows, both from traditional sources like ERP and emerging ones like IoT, many companies are finding themselves with an analytics gap that allows too much data to go unanalyzed and unacted upon. It is IDC's view that the ability to both analyze data and quickly leverage insights

will be what distinguishes the better supply chains of the future. Indeed, the ability to leverage insights with technologies like AI or machine learning are likely to be major differentiators.

The benefits of becoming an intelligent enterprise will be both broad and impactful. In terms of efficiency and effectiveness, and based on many conversations with manufacturers and retailers that judge themselves to be early adopters, the benefits of digital supply chain and broader supply chain transformation efforts are significant and include a 10% systemic reduction for innovation costs, a 30% reduction in new product lead times, service-level improvements by as much as 3 percentage points, and reductions in the duration of supply chain disruptions. Results will vary by company. In terms of potential new business models, it's "greenfield," whether enabling real-time personalization, same-day fulfillment, or products and services integrated into compelling consumer experiences. Either way, the analog supply chains of the past and present will quickly become a competitive impediment.

Q. What impact would digital supply chains have on consumers, and how would they benefit?

A. The consumer is the critical constituent for the supply chain. The consumer rules the world — he or she is ubiquitously connected, craves individuality and personalized experiences, and is intolerant of complexity and latency. Those companies that figure out how to best engage with consumers will be the ones that get more than their fair share of growth. And as older consumers give way to millennials, the challenge only gets harder. IDC has predicted that, over the next decade, 90% of industry growth will be captured by those companies that successfully engage with and provide compelling experiences for consumers.

Engaging with consumers is not just a supply chain problem; it is also about sales and marketing — but the supply chain has a huge role to play in the delivery of the things that consumers crave. If we accept that direct to consumer will become a key capability for the supply chain, even if the precise mechanism is as yet unclear, product manufacturers will have to transition from moving full pallets on full trucks from one big building to another, to handling individual, often personalized items that are shipped to consumers' homes. We can debate the necessity of doing that, but the point is that it's a real possibility, and one that most supply chains are ill-equipped to support. The digitally enabled, "thinking" supply chain isn't a magic bullet in this regard, but it does allow companies to better attack this changing future by better understanding consumers' desired experiences through analytics and insights-driven AI tools.

Q. When understanding customer and consumer needs and sensing changing demand need to be combined with the ability to flexibly customize and deliver both products and experiences, what is the role here for analytics?

A. Analytical capabilities are critical if companies are truly to become consumer centric. Vast amounts of data, both structured and unstructured, are available to manufacturers and retailers, yet much of it goes unused. If we accept that personalization and product experiences are going to become the norm for companies selling to the consumer, then the ability to analyze all data in real time becomes table stakes. Manufacturers and retailers that can analyze all inputs, in real time, are going to be better at anticipating and supporting changing consumer preferences; they are going to be able to better integrate emerging insights into their products and services; and they are going to have a head start in offering the personalized experiences that those consumers crave. At IDC, we expect that the businesses that win in the future will be those that better integrate analytical insights into the products and services they sell.

We expect to see other material changes to traditional approaches. As data sets and supporting analytics become more commonplace and accurate, it is conceivable that short-term demand forecasting will give way completely to replenishment based on actual demand. Recognizing the need for more flexible supply chain capabilities to engage with consumers, manufacturers are already moving away from the restrictive supply organizations of the past decade. The components are increasingly in place, we believe, to transform demand replenishment from a primarily forecast-based function to one that is response based. However, this means a steep change both in terms of data and the analytics that extract insights from it. Indeed, the ability to leverage new, digital technologies to enable multi-echelon visibility allows companies to be more predictive than reactive in terms of demand shifts, perhaps even in real time.

Q. How are companies integrating digital supply chain data and applying analytics onto it for decision making and to create actionable business insights?

A. The digitally enabled, "thinking" supply chain is a critical journey for manufacturers. While efficiency and effectiveness gains will drive the ROI in the shorter term, new ways of doing business and the new capabilities they enable will be essential for the future. The process of integrating and analyzing data and providing actionable insights in a timely way is a function of many things beyond just the analytics themselves.

First and foremost, creating a "thinking" supply chain requires reliable and accurate data, whether from ERP or IoT, but it is also about moving to agile, cloud-based applications that can flex and adapt to changing business needs, as well as having AI-enabled business processes integrated with real-time reactive and predictive capabilities to anticipate future conditions while providing broad and deep reach and using analytics with a focus on decisions and actions. Indeed, at IDC, we have argued that in the future analytics will be so integrated into the supply chain business processes and tools that they will simply be a seamless part of the decision-making process. Not all these things are necessary immediately; the digitally enabled, "thinking" supply chain is a journey after all. But there should be a plan in place for such things if the supply chain is going to be a competitive advantage.

How companies meet consumer expectations for personalized experiences, for example, will require next-generation visibility into the various stages and locations of inventory and the manufacturing agility to make configuration choices in real time to meet those expectations. The ability to view both owned and outsourced manufacturing locations as a single coordinated engine becomes a key capability. Or the ability to flex supply requirements based on the most granular view of demand, microdemand if you will, enables best-in-class service performance.

ABOUT THIS ANALYST

As a program vice president, 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 addresses 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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