

DEMAND DRIVEN SUPPLY CHAIN

A true demand driven supply chain (DDSC) has always been the holy grail of operations managers around the world.

Even when forecasts are finely tuned, an unexpected spike, or drop, in demand can wreak havoc on production schedules, leading to problems such as stock-outs and lost sales; inventory pileups, markdowns, and write-offs; poor capacity utilisation; and declining service.

Today, these margin-sappers are increasingly avoidable thanks to recent advances in technology, like cloud computing, which can finally make the DDSC a reality.

In fact, recent research by The Boston Consulting Group, has shown that some companies with advanced DDSCs carry 33 percent less inventory, improve their delivery performance by 20 percent, and reduce supply chain costs dramatically.

So what is DDSC? In essence, it is a system of coordinated technologies, processes and behaviours that sense and react to real-time demand signals across the network of customers, channels, employees, suppliers and supplier's suppliers that make up a supply chain.

In the past, matching supply and demand across the supply chain has been extremely difficult given the lengthy reaction times and the inherent challenges that arise from communicating across the various IT platforms in a company's chain. Even more difficult given that those supply chains are increasingly extended and are supported by a complex web of interdependent partnerships.

But all this is now changing: advances in cloud-based technology are able to support more mission-critical activities like supply chain operations, through increased levels of security, better communication standards and solid 24x7x365 availability.

This means that, in addition to reducing IT infrastructure requirements, there is increasing confidence to allow cloud technology to be used to share real-time data across complex and extended supply chains. In effect, this allows the vertical integration of organisations, without the costly and inflexible physical or structural requirement to be part of the same company.

The advantage is that all participants in the supply chain can react early to changes in demand, and based on the same view of demand, which reduces risk of the dreaded 'bull-whip' effect. It is analogous to a car driver being able to slow down steadily based on seeing brake lights several cars ahead, rather than having to react to the car just in front.

The supply chain impact can be startling. By sharing real-time point-of-sale demand information with suppliers, so that they can optimise their scheduling in good time, a leading provider of cloud-based technology for SCM has seen retail on-shelf availability increase from 90 to 99 percent, with stock levels plummeting by 40 percent.

Given this good news and the fact that the supply chain software press is alive with the work that is happening at DDSC pioneers Cisco Systems, General Mills, Pfizer, PepsiCo, Procter & Gamble, and Kimberly Clark, it is surprising the overall pace remains slow.

This is because although developments in cloud technology are key, implementing advanced DDSC still remains hard work for many organisations. Through its work in this area Boston Consulting Group has identified a number of key success factors:

Focus DDSC where it delivers most benefit: Segmenting products according to specific characteristics can help companies determine the categories in which the benefits of a DDSC offset added costs.

Categories typically include high-margin products, high-tech or other products with a high cost of obsolescence, food or other perishables for which freshness is critical, products with highly variable demand (such as consumer durables), and products with rapid inventory turnover (such as fast-moving consumer goods).

Revisit data collection, quality and analysis: Most companies trying to implement a DDSC will need to collect and share data on inventory levels more frequently and increase the degree of data granularity they analyse. Data quality, including the quality of master data, is paramount as the granularity of decision-making increases and the data is used outside the organisation.

Align metrics and incentives: The ultimate goal of a DDSC is to ensure the best service at the lowest cost. To this end, the performance targets and incentives of all supply-chain players must be aligned so that everyone is marching in the same direction.

Change the organisation and employees' behaviour: To work, DDSCs require major organisational and behavioural changes. Most companies are reactive order takers: when a retailer orders five cases of soda, that's what the supplier sends. With a DDSC, the supplier's employees can take a more proactive role, suggesting a larger or smaller order if consumption data show the need—or even contacting the retailer before an order has been placed if POS data show that inventory is getting low.

And all this is made much easier if flexibility is built into the supply chain in procurement, manufacturing and logistics. This includes a responsive supply base, short changeover times, access to temporary labour and external capacity, the ability to produce small batches cost-effectively and access to multi-modal transport.

With the ability to access end-to-end data and analytics capabilities across the supply chain, cloud-based technology is poised to unleash the potential of the DDSC. This could revolutionise supply chain management in a wide variety of industries, including retail, consumer products, automotive, and aerospace and defence.

But only companies that truly understand the profound changes they must make to their organisations will reap the full benefits - and achieve a sustainable advantage in today's fiercely competitive global economy.