

Supply Chain During Times of COVID-19

How the Critical Business Function is Adjusting to Fluctuations in Demand, Social Distancing Requirements, and an Uncertain Future

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When it comes to impacts of COVID-19 on day-to-day business operations, supply chain functions face their own unique challenges due to the nature of how these departments work (i.e., the need for the physical movement of materials, transportation services required, and the human presence need to run a warehouse). In a recent survey conducted by the Institute for Supply Chain Management, 75% of responding companies reported some level of disruption in supply chain as a result of transportation restrictions due to the coronavirus, and 80% said they believe their organization will experience some impact due to COVID-19 disruptions.

Society's increased reliance on certain products (i.e., paper goods, canned and frozen foods, and medical and sanitation supplies) and a dramatic drop in demand for others has disrupted supply chains around the world. Martin Rowan, Managing Partner at Reveal, a

supply chain optimization services firm that works with SAP-centric customers in the supply chain industry exclusively to maximize the use of SAP, says that working remotely is particularly challenging for the supply chain function, especially since it still has such a high dependency on human interaction.

While centralized functions such as demand or supply planning can be done remotely, “it’s very difficult to work from home if you need to physically move, make, or blend something; very few companies are as robotic and automated as Amazon and many require actual physical interaction to get their products shipped. A supply chain is never just one function or one person; its elements require a cohesive, cross-functional team to work together,” says Rowan.

To do that, many supply chain departments have had to put strict social distancing requirements in place for scenarios where work cannot be completed remotely, which is likely the case for most of the work being completed by employees in this function. “What social distancing and remote requirements have done is forced us to think about how much more we can be doing in SAP because the data can help guide our businesses and processes to be far more adaptive and agile to meet those requirements,” said Rowan.

Which Side of Demand Are You On?

Another challenge, says Rowan, is navigating the dramatic changes in demand. On the one hand there are companies that provide goods that are in high demand due to COVID-19, for example, canned goods, which increased in popularity nearly overnight once quarantine recommendations went into place.

According to Rowan, these companies are finding themselves on the side of demand where they can’t keep up. The challenge they face is how to quickly and fairly allocate their product across their network. These companies need very clear channels and product allocation capabilities to ensure that they don’t run out of product. Rowan says that companies can optimize their current SAP technology in a few ways:

- **Evaluate product demand and constraints within the supply chain to meet volume and fair share allocation rules.** In times like these, it is key to ensure a fair spread across the nation’s

distribution centers or allocate based on priorities due to areas with increased exposure (demand). Improved use of product hierarchies and the ability to aggregate and disaggregate demand across the network will help strategically, while allowing ATP (available to promise) to meet the tactical needs of the actual orders.

- **Utilize the right planning strategies to decide whether a move to make-to-stock or make-to-order will best address some of the changes in the supply change.** It is a good time to review demand and realign planning strategies to meet the new demand patterns. This is a simple master data change with big impacts, when done right.
- **Leverage exception monitoring, which is a capability in SAP that can alert a company when an exception occurs (such as a change in production schedule that will impact the supply chain).** SAP exception engines help organizations react proactively for changes in the process or actual changes in the field. “The more we listen to and are able to interpret those exceptions, the better we can respond accordingly,” says Rowan.

Far fewer companies face the challenge of not being able to keep up with demand, however. Much more frequently supply chain companies are being asked to adjust to a massive downturn in demand due to the economic impacts from COVID-19.

“A lot of people have put things on hold due to the uncertainty that exists and there are more companies just trying to keep the doors open and find a sense of normalcy in the supply chain,” says Rowan. Companies dealing with drops in demand face the challenge of needing to adjust quickly so they don’t overproduce or overbuy materials. One international oilfield services company, Schlumberger, is also dealing with limitations caused by facility closures in China and Europe, critical suppliers for their manufacturing plants.

“[COVID-19] has affected the supply chain with some factories and suppliers completely closing and some working with reduced staffing. Also the logistics of moving material around the world has been impacted with the aircrafts not flying, boats not sailing or not stopping at certain ports, and restrictions in trains and trucks not able to cross borders,” says Venkata Ramana Nethi CSCP, CPIM, Business Process Lead – Operations for Schlumberger. At the same time, Schlumberger’s upstream customers are cancelling and delaying orders due to the recent drop in oil prices.

“Most companies have needed to close the spigot pretty quickly and need to understand which rules they can apply and which functionalities they can use in SAP to make these adjustment—within a number of hours or days in most cases. These solutions aren’t month-long projects. This is about how do we triage our supply chain right now using SAP, the data, and real-time reports to make better decisions in an extremely timely manner,” says Rowan.

What Inventory and Tankers Have in Common

One area that requires urgent attention is inventory. Too much of it ties up cash, something that many companies are in dire need of right now. Rowan says that there are some tools in SAP on the data and analytics side that can be used to quickly look at historical and future trends in terms of how the inventory is going to perform. This allows businesses to make quick adjustments in their data so MRP can adjust and inventory levels that align with current demand can be realized.

Rowan compares this concept to moving a tanker. “Most companies are like large ocean-going vessels. It takes a long time to physically change course. However, the captain of the ship can make radical directional changes by merely adjusting a couple dials to move the multi-ton vessel. It’s the same thing here; if I want make directional changes to my business I need to have the ability to tweak the right rules (dials) within SAP to make quick adjustments rather than try to force the change through manual processes.”

Nethi says that components such as SAP Business Intelligence on SAP HANA and SAP Advanced Planning and Optimization have been the most useful to Schlumberger as of late. The latter has been used to lower the company’s demand drivers in the network and quickly adjust their supply with a much better degree of accuracy. “Despite this, we still take about five days to process these changes and we would like to have a tool like SAP Integrated Business Planning for Supply Chain with a faster turnaround,” says Nethi.

In addition to making changes that reflect the current complexity of the market, Schlumberger is taking steps to mitigate disruptions in the supply chain due to the pandemic. The company’s materials management teams are performing sales and operations planning

more regularly and with more detail to ensure they are re-balancing the supply and demand. “They’re working closely with our supply chain to update them on changes in demand and to cancel and reschedule orders where possible, and more proactively working with our logistic suppliers to better manage the flow for material that may be held up due to the disruption. Resilience is the most important factor right now; companies need to be investigating possibilities to bounce back from supply chain disruptions,” says Nethi.

Schlumberger’s manufacturing locations in the U.S., Singapore, and Europe are using SAP pegging reports and exception messaging tools which they review with planners on a daily basis to ensure they maintain the right focus. Specifically, these locations are using SAP MD4C pegging reports to perform mass reschedule activities by pacing components after purchase order due dates update; enhanced MD73 reports and enhanced MD4C of PIR (Forecast) requirements plans to identify unpurchased major materials to cancel upper level forecast requirements; and MMBE stock status reports to identify potential substitution components in stock at other satellite locations. Without smart material numbers or some other method in SAP the manufacturers struggle to identify what components are potential substitutions.

Rowan says companies that apply a smart use of SAP can use forward trending and historical information to help determine which changes need to be made, then adjust the rules to meet the new demands and then manage proactively by exception. “You don’t often have to make massive adjustments to meet the change, that’s the lesson companies are learning now. It may seem like a big problem now but often just small tweaks in the data, rules, and processes can make that adjustment a reality. That’s what’s so powerful in knowing how SAP is supposed to work.”

Rowan cautions companies against overreacting now, recommending that they keep in mind how human behavior and material flow patterns may change once quarantine and the massive demand fluctuations are over. “Don’t let the cure be worse than the infection.”