

SMARTER PERSPECTIVE: PERFORMANCE SOLUTIONS

# Monitoring and refreshing your predictive S&OP models is essential to ensuring Supply Chain Efficiency During and Post COVID-19 Crisis

By Steven Tanzi and Mallory Rittgarn

In this article, we explore the unprecedented circumstances in which businesses typically reliant upon the highly predictive nature of forecasting models now find themselves, and the steps they must take to ensure short- and long-term success amidst the current crisis environment.

The vulnerability of supply chains as we know them has been brutally exposed in the wake of the current COVID-19 pandemic. Following China's initial lockdown directive for Wuhan and other cities in the Hubei province on January 23, 2020, mandatory city- and state-wide closures of non-essential businesses in the U.S. and similar measures worldwide

have weaved together a patchwork blanket of global productivity loss.

Prime Minister Boris Johnson's decision and announcement to shut down all of Britain on March 23rd sent a compelling signal about the seriousness with which world leaders are now beginning to view the importance of flattening the deadly pandemic's curve and may well be a precursor of what we can expect in the days and weeks to come from other leaders worldwide.

Regardless of industry, we are seeing that many of the businesses hardest hit at present are those that have come to rely significantly on a limited number of trading partners. In particular, with such significant growth over the past two decades in value chains that are China-dependent, many in the manufacturing sector are now preparing to enter

their third full month of devastating economic impact.

While there is, deservedly, much focus on what should be done today to stem the virus itself in an effort to return to what is still being referred to as "business as usual," we see things a bit differently. When the fallout from this horrific crisis has ceased—note that we say ceased and not ended—there isn't likely to be a "business as usual." We could call it "business as unusual" or perhaps the "new normal"; but in our opinion we don't believe either term will do it justice. Instead, what we are likely to be faced with are very difficult, and in many cases risk management-driven decisions on where to go from here. It won't be usual and it won't be normal. But it will be different and, by necessity, it will need to be a supply chain designed to be less fragile and susceptible to future incidents of the nature we are now experiencing.

But that's the long-term. In the mid-term, what will be critically important for providers of goods and services both here in the U.S. and globally, is gaining a better understanding of how ordering and consumption habits exhibited throughout this crisis are likely to drive future ordering and consumption patterns. This will be essential for the purposes of determining the volume of goods that will need to be introduced back into the marketplace and the timing of their delivery.

Take for example, the extraordinary hoarding mentality exhibited by consumers in regard to the purchase of consumables such as toilet paper, hand sanitizer, bottled water, frozen and canned foods. How much of what was consumed will have been used when the dust settles? Normal models of seasonal and quarterly ordering patterns perfected over decades of data collection are not likely to be effective in helping consumer packaged goods and other manufacturers determine the product mix and capacity at which their plants should operate over the coming months.

Using the analogy of weather, we can think about it in this way-- When hurricanes, typhoons, monsoons and other severe meteorological events occur on continents across the globe, the National Weather Service and its counterparts use

established weather models to predict the likely path, intensity and duration of those storms. Imagine a situation in which a storm of unprecedented magnitude and impact were to form and sweep over every continent in random progression. Existing weather models would be essentially useless in predicting the behavior and impact of that storm because of its extraordinary nature.

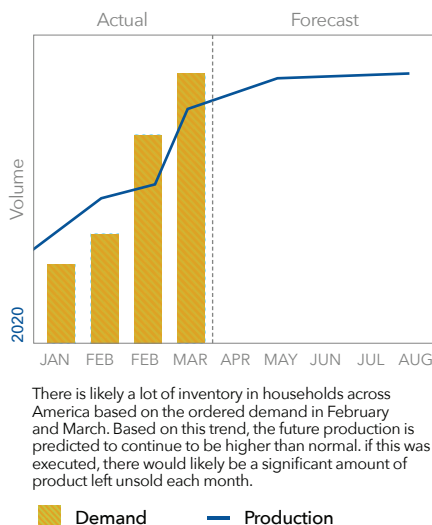
Much the same is true of the COVID-19 crisis and the way that economists and those of us with extensive advisory expertise in business processes and operational efficiency are now looking at the situation. There is a temptation to try to apply existing models to what we are seeing today, but to large extent, that urge must be resisted. Is it logical to assess and compare what is happening here against previous incidents such as 9/11 and the 2008 financial crisis? Certainly. But those comparisons should be done with the intent of developing insights that are also informed by actively tracking current industry data and obtaining anecdotal input from those integrally involved in the subject businesses operations, sales, and supply chain management. This is where identification of additional metrics that are outside the normal course of demand and supply planning can then be utilized to guide decisions during future non-steady state conditions.

## So how should companies approach supply chain and risk strategy management in the era of COVID-19?

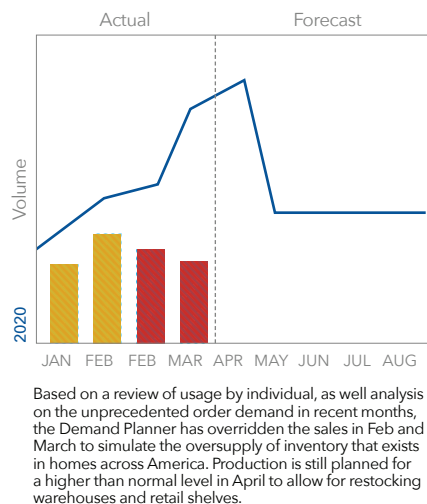
Because sales and operations planning models are largely based on data from past periods, and no comparable event to COVID-19 has ever occurred in the modern era of data tracking, it is our position at Hilco Performance Solutions that those models will have minimal application in the current environment. If, for example, states around the country were to lift their "stay at home" orders and things returned to some semblance of a new normal by the end of June, that does not mean that seasonal planning models for Q3 will be valid. In fact, they will not. Looking at the run on certain consumer products that has taken place over the past weeks, what we're seeing now is essentially a false demand peak in the supply chain. And while the revenue chain has spiked, it will just as assuredly drop again. For products and services that experienced a precipitous falloff in demand, the opposite will be true. We are likely to see, for example, an atypical spike in restaurant traffic when stay at home orders are lifted and those establishments reopen. This could cause some restaurant chains without supply chain priority to experience shortages ranging from fresh fish and produce to daily baked bread.

So, in what months will those customers that bought up an immense supply of soup and green beans come back to their local stores for more of those items? And as they do, will you and your partners have managed inventory and forecasted production accurately? What will your margins look like? Bottom line... are you a step ahead or a step behind the imminent uncertainty that's coming even as things return to "Normal"?

### DON'T INTERVENE



### INTERVENE



Source: Hilco Performance Solutions



## Industry by Industry

It may well be that across certain industries such as consumer products, manufacturers will have too much product saturation in place when the dust settles from COVID-19. In these cases, the most prudent action may be to proactively retool so that when demand crashes they are in a position to preserve revenue and margin by producing something else in an area where supply is struggling to meet demand.

For other industries, it may be the opposite. Airlines, cruise ships, resort destinations and tourism overall are likely to experience huge, pent-up demand from those who still have disposable income and are chomping at the bit to reschedule their cancelled vacations. Here, the challenge will be to understand how quickly operations need to be ramped-up. This will be important for re-engaging laid off workers, as well as for hiring and training new workers at a pace that minimizes the chance for missed sales opportunities. Another area of business decisioning that needs to be considered is the use of legacy dynamic pricing tools. Are these still valid? Do inputs need to be adjusted? And how can customer segmentation models be intertwined to ensure customer service levels are being maintained?

And what about manufacturers of medical masks and instruments that stepped-up production to meet the critical needs of healthcare workers and first responders? Is it possible that an oversupply condition may actually exist when the current crisis ends? If so, should medical mask manufacturers pivot to producing painter's or exterminator's masks instead? And if so, when, specifically, should that pivot conversion begin? Similarly, if an oversupply exists in medical instruments, will it make sense for those producers to re-tool and produce alternatives such as high-end cutlery until demand returns or should they increase capacity in case COVID-19 returns in 2021? What if there's actually an undersupply?

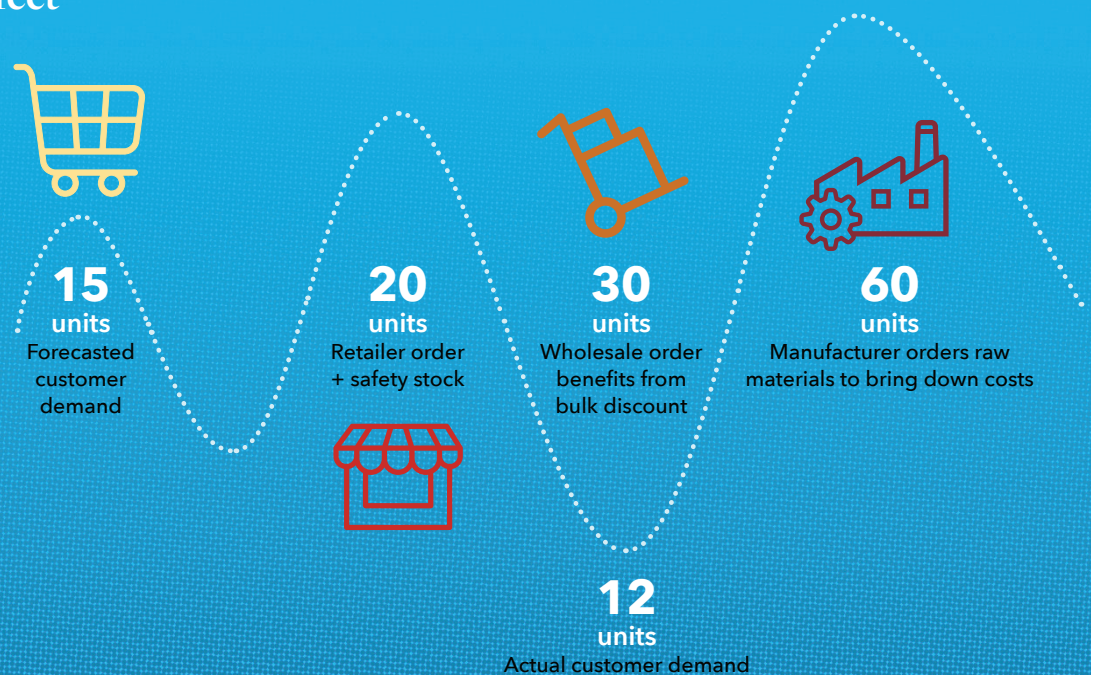
In the absence of existing models capable of assisting with forecasting demand and developing informed S&OP and supply chain planning, now is the time for businesses across multiple impacted industries to work toward identifying the steps they must take to ensure they are able to maximize potential revenue during the remainder of this crisis and as we emerge from its grasp. We suggest that companies hone-in on historical consumption rates, instead of ordering pattern for their products and services. As we have seen unfold over the past

couple weeks, consumers ordering patterns are both highly variable and suspect to significant outside influence. Changing the way companies view their demand forecasts from ordering rate to consumption rate can help them understand how much inventory is out in the market and configure their production of products to meet the needed replenishment rates. They should also investigate whether there are other leading indicators that can be weaved into their analysis to help refine that projected demand plan. Some of these may be more obvious than others. For example, companies who manufacture supplies that support the medical field, should certainly factor the predicted infection rates of COVID-19 into their production plans.

From the less obvious standpoint, companies that are further upstream in the supply chain - further away from the end user - can reduce the variability of the bullwhip effect by strengthening communication channels with all partners. If previously, you were meeting with partners once a month, it might now make sense to increase that to once a week. Additionally, if you met only with your tier 1 suppliers, you may now need to meet with tier 2 or 3 suppliers as well.

## The Bullwhip Effect

As each party seeks to take the steps necessary to fulfill the demand of its customers and the requirements of its suppliers, a "Bullwhip Effect" is created along the supply chain.



Of course, all of this is much easier said than done. Sophisticated S&OP models often require data at the most detailed level, and for companies with many SKU's and complexity this isn't likely to be an easy task. As a hedge, however, companies can run multiple "what-if" scenarios to be prepared in the event that they need to quickly shift production. Companies that are more intrinsically nimble and flexible in their operations, will see the most success with this approach.

Toward this end, Hilco Performance Solutions (HPS) advises companies to proactively work toward development of various, well-informed go-forward scenarios specific to their own markets and current business dynamics. Businesses with pandemic plans in place prior to COVID-19 may already be mapping a path forward, but based upon what we are hearing from our industry contacts and customers, many either did not have up-to-date or well-conceived plans ready and are now experiencing a period of uncertainty. Regardless, now is the time for an intensive focus on sales and operations planning, with an emphasis on developing new, predictive business modeling to enable both short- and long-term decision making. And Hilco Performance Solutions is here to help!



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Steven is an experienced executive and consultant who focuses on both restructuring and business performance improvement. He has over 25 years of both industry and consulting experience supporting companies with their transformational efforts leveraging his knowledge of supply chain, operations, maintenance, customer experience, risk, asset management, organizational design, and financial planning and budgeting. He has worked in numerous manufacturing industries and has formal training and experience utilizing Lean on both the manufacturing floor and in back-office business processes to support his performance improvement activities. Steven has a BS in Chemical Engineering from Purdue University and an MBA in Supply Chain Management and Finance from Michigan State University. Contact Steven at 847.504.2468 or [stanzi@hilcoglobal.com](mailto:stanzi@hilcoglobal.com) [hilcoperformancesolutions.com](http://hilcoperformancesolutions.com)



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**Hilco Performance Solutions (HPS)** helps companies to simplify and streamline business processes, and improve operational efficiency to remain competitive and gain market share in an increasingly interconnected economy. Our cross-functional manufacturing experts in the areas of Operations, Supply Chain, People, Mergers and Acquisitions, and Commercial, advise clients toward sustainable revenue growth and cost reduction. By combining advisory experts with reputable industry veterans, we are uniquely positioned to provide the right talent to help you get the job done. While many management consulting companies focus on strategy and sharing leading theory, Hilco Performance Solutions focuses on action, working in the trenches with our clients and translating strategy into results.

Are you providing your customers with the right experience? Do you understand their needs? Is your supply chain adding value to your operations and customers? And importantly, during this unprecedented time period, are you doing everything you can to maximize revenue and margin? The Hilco Performance Solutions team is here to help you answer these and other questions, and to guide you on a path to long-term success.