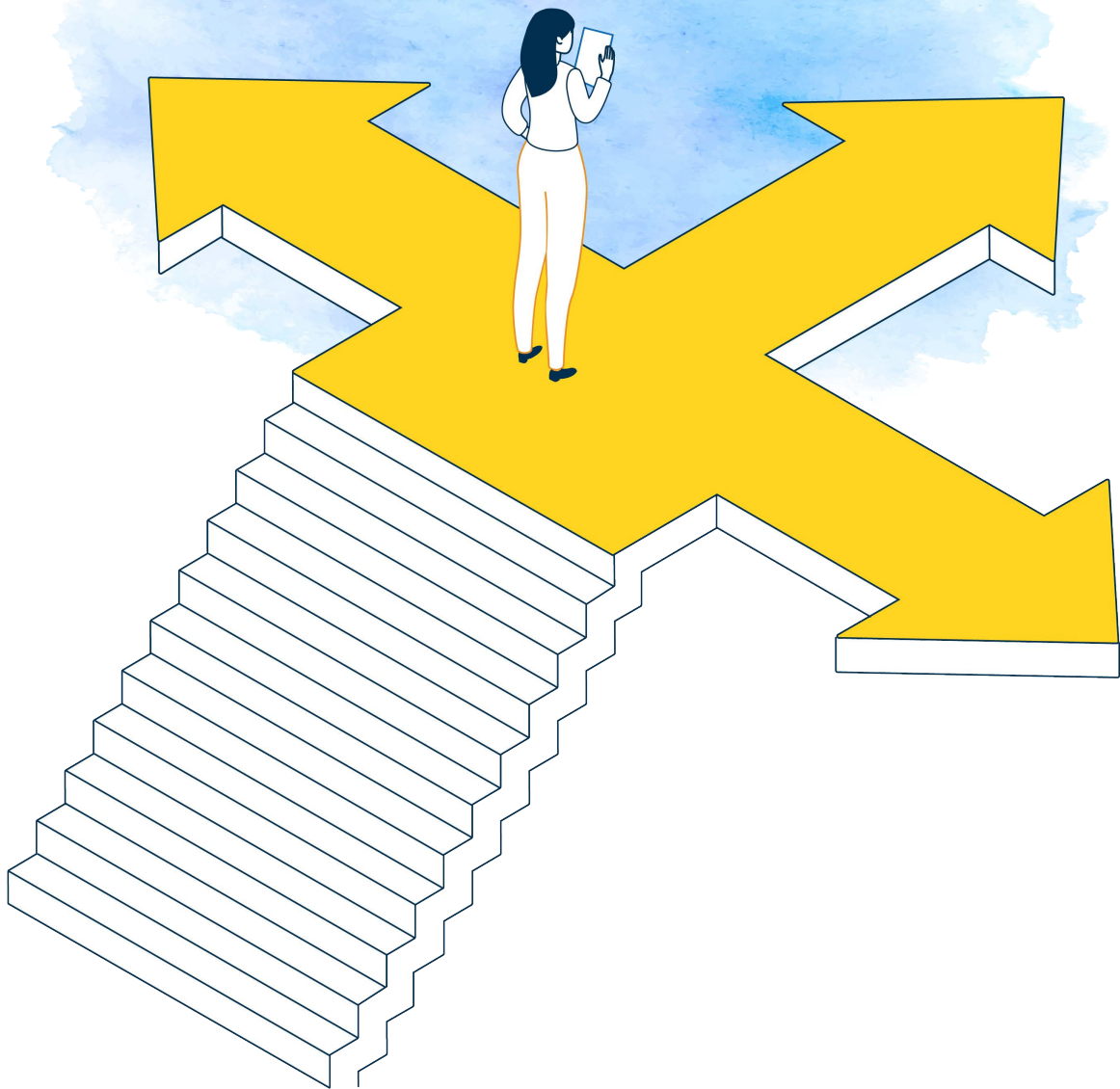




Crossing the Chasm between S&OP and Autonomous Planning



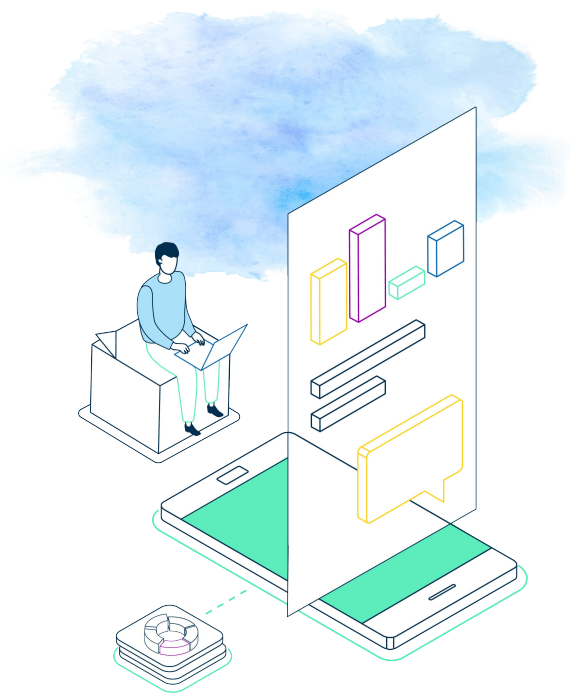


Many if not most companies who have implemented S&OP solutions have benefited from the long-term visibility that it provides. However, they are facing some real issues with executing the plans for the short term, whether it is today this week, this month or next 3 months. As indicated in a recent [Oliver Wight paper](#), symptoms are many. Examples are changes in the plan are not reflected in the S&OP process in time, crisis and emergency meetings are frequent, frustrations between planning and execution people, everyone waiting for senior management to solve the problem, inaccurate commit dates and rush to expedite, unachievable plans and nobody knows why because of wrong assumptions in the S&OP model. The chaos continues simply because S&OP is a rough plan based on high level assumptions. Things change all the time and unless the system is capable of understanding each event and having the ability to model the causes as well as their impact, then it is yet another case of separated silos. But this time it is a “vertical silo” of planning and then throw it over the wall to execution.

Companies are rushing to implement S&OP solutions for a good reason, but they need to think this through and understand what exactly S&OP would provide for them and if it meets the real challenges of dynamic changes in the supply chain and real issues of operations. S&OP assumes materials have a fixed lead-time and they arrive on-time. If not then you fix it. S&OP assumes manufacturing lead-times are fixed. Wrong! They depend on the product mix and shifting bottlenecks. S&OP assumes resources are always operating at (say) 80% or even 100%! Not true; it changes depending on many factors.

To this end S&OP makes a lot of assumptions that are not real. Then how would you expect for S&OP alone to provide accurate commit dates to customers? How do you expect S&OP to provide real financial data when the execution has to deal with using substitute materials which are a lot more expensive or change production plans causing unforeseen additional cost? Moreover, we have the issue of materials not arriving on time or a surprise high priority order arriving that requires immediate preemption of some other orders. All such issues are completely isolated from S&OP process. The best they can do is to tune capacities to give more slack for unforeseen events, not knowing if this strategy causes under-utilization of resources and adds to RM and WIP inventory or possibly delay existing orders?

To address these issues there is a need for an integrated environment of both planning and execution as a continuum not separated processes that are surprisingly advocated by many pundits! Disjointed S&OP and S&OE solutions deploy different models and different assumptions. Two different systems having separate assumptions cannot possibly provide a smooth flow of operations. Deploying this strategy is simply “automating” an inferior process and practice. A human brain plans and then constantly gets feedback in execution of the plan. If you decide to eat, the brain plans for having food. What, where and how to get it. As you execute, i.e. walk to the refrigerator,



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open the door with your hand, look with your eyes, pick up what you need and put the food in your mouth, every step is being monitored and orchestrated with the brain in real-time until the task is done. Imagine if you were to do this with separate processes? Your brain is thinking of having food now but you may execute that 8 hours later. By the time your brain is informed that you missed having food, it might decide to ask for more food to be consumed, but then the food may no longer be available. Thus, the hunger lingers on!

Having S&OP and S&OE in a unified environment allows synchronization of operations while it is being planned and executed in real-time. Accurate assumptions are made that lead to accurate and reliable commit dates and financials. Trends and deviations are monitored and “learned” by the system so that corrective measures are taken using **self-correcting and self-improving algorithms**. By having a continuum of planning and execution, the outdated processes of the 80’s can be changed to a much more agile process of planning and execution on a continuous basis rather than having S&OP process separated from the S&OE and execution. The integration of the two in one has many benefits of efficiency, faster decision making and of course much lower cost of operations and much higher customer service levels.

Perhaps you have already implemented a S&OP solution and wrestling with some of the accuracy issues and manual adjustments that are inevitable to make the plans work. At this point having a S&OE solution that can truly represent a digital twin can help to give you a much better visibility into your execution of plans which is really where the focus is or should be. This does not mean that you have to provide detailed data right away. It means that the S&OE solution is capable of adding better and more comprehensive modeling capability to make the S&OP plans more reliable and accurate; removing much of the guess work and manual planning. It will reduce the time to plan and implement the plan and provide accurate feedback to S&OP process to make the right assumptions. It will also help with all the execution surprises of late arrival of materials, surprise orders, equipment breakdowns and unforeseen disruptions due to weather, floods, tariffs and order cancellations amongst others. It may not be the optimal strategy but it bridges the chasm.

On the other hand, if you are looking to implement a S&OP solution, ask a simple question: How do I execute the plans, how good are S&OP generated plans, and how much time I need to spend to make them executable? Make sure the system has enough capability in terms of modeling (forming a true digital twin) and ability to predict and respond to real events such as snow storms, equipment breakdowns, late truck arrivals, floods, labor shortage or commodity scarcity and price changes.



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This can only be done in an environment which is capable of having both S&OP and S&OE in a continuum. This is your path to an autonomous supply chain. Be the first in your industry to lead and break away from processes that were designed based on spreadsheet capabilities of the 80's. The digital era demands more.

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