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S&OP's Evolution: **Becoming a strategic imperative**

By: Robert A. Stahl

The primary mission of *Sales & Operations Planning (S&OP)* has always been imbedded in our business acumen. In other words, every sustaining company has to anticipate demand, and plan resources (supply) to satisfy that demand, even if done poorly. So . . . the question is NOT whether a company is “doing S&OP” – they surely are! The question is are they doing it as well as possible?

What's happened over the last several decades, is that we've learned how to do S&OP a lot better – which has resulted in major improvements. Those companies that have implemented S&OP to it's full potential have experienced transformational benefits in quantum fashion. The leaders of those companies have come to well understand that hard measurable benefits are the direct result and consequence of soft benefits that align human energy – which is the main objective of S&OP.

In spite of this, there remains a major misunderstanding that technology has made this transformation happen. Nothing could be further from the truth – success is all about people, people, people. In general, technology makes people more effective – it does not replace them.

***Technology is
necessary, but not
sufficient***

In other words, while technology has enabled this progress, technology is not what makes S&OP successful – technology and data are necessary, but not sufficient. S&OP is indeed data intensive, but the presence of data is only one component of a company's success with S&OP. Those that fully succeed understand that the ratio of S&OP improvement comes from ¹:

- **60%** = Culture/Behavior change
- **30%** = Process Improvement & Discipline
- **10%** = Technology (better data management)

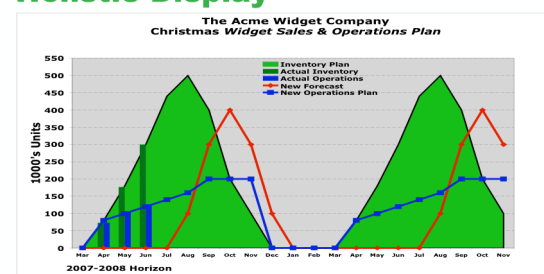
¹ Lora Cecere, Supply Chain Researcher - 2010

Path of Improvement

In this piece, I'd like to trace some of the more significant highlights in the path of improvement over the last several decades that has made S&OP a strategic imperative:

1. **In the Beginning** -- In 1970, when I started working in industry (following a short career in the military), there was not much of a defined structure or disciplined process to managing the supply chain of a manufacturing company. There was an ad hoc process, responding only to the last stimulus or crisis. This vacuum began to get quickly filled, because nature abhors a vacuum.
2. **Volumetric Planning** -- This was the first step in the progression toward S&OP. This improvement added up the projections from granular SKU-type detail into families of product. This gave us a “bigger picture” and helped us get out of the fog of detailed complexity, enabling us to see not only the trees but also the forest. We began to see trends and patterns in the groupings by family that could not be seen by a focus on the detail. This was a big step forward. It simplified the process, so that people could begin to see and understand future implications of policy, strategy, and risk.
3. **Production Planning** -- This “big picture” development enabled us to do *aggregate planning* with a pencil on 13 column accounting paper. Usable spreadsheet software or formal data warehouses didn't exist at that time. At this point, the process was not called S&OP, but “Production Planning,” even though it was driven by a demand forecast. It endured for quite some time, and while much progress and acceptability of this process was taking place, the name S&OP was not crafted until 1989.
4. **Sales & Operations Planning (S&OP)** -- In their book *Orchestrating Success*, Dick Ling and Walt Goddard (1989) coined the term Sales & Operations Planning (S&OP), capturing the fact that this process was not only about supply (production) but DEMAND & SUPPLY. It therefore demanded (no pun intended) the inclusion of the Sales/Marketing people in the process.
5. **Graphs & Pictures** -- The next step function of improvement came with the use of *Spreadsheet Software*, which was capable of converting tables filled with data into simple graphs or pictures. W. Edwards Deming taught us with TQM (Total Quality Management) that seeing things more clearly involved visualization. The same is true with S&OP. To see the “whole picture” requires a graph, not just a table of numbers.
6. **Holistic View** -- This use of spreadsheet software made possible the presentation of a Holistic View of Demand, Supply, Inventory, and/or Backlog. The dictionary defines Holistic as “. . . characterized by comprehension of the parts of something

Holistic Display



as intimately interconnected and explicable [able to be understood] only by reference to the whole . . .” The S&OP Holistic View paints a single picture (graph) of all of the interconnected data for a company regarding demand, supply, inventory, and/or backlog. The “whole” can only be comprehended when looking at ALL of the data in one picture. An example is in the insert.

7. **Conflict Resolution** -- At this stage, it became evident that the various functions (demand, supply, finance, technology) when seeing the Holistic View saw things through different prisms. We learned that disagreement between these functions was not only acceptable, but it was necessary for S&OP to bring about best decisions. We realized that to align human energy, we had to endure and resolve the discomfort of disagreement. The resolution of that conflict became an imperative. That resolution only happened by putting not only the issue on the table for resolution, but also the emotion behind the issue – we call this *Putting the Moose on the Table*! Even though many people provide processes for Conflict Resolution, we find that companies, who have a WILL to expose and resolve conflict, find a WAY and a process to make it happen.

. . . enduring and resolving the discomfort of disagreement.

8. **Market-Facing Families and Simplifying Assumptions** – Although the use of “families” has always been part of authentic S&OP, we learned that better demand forecasting required that the families we used to be market-centric verses product-centric. That improvement resulted in forecasts that were more reasoned, reasonable, transparent, and credible, because they connected to leading market indicators, focusing on markets and not just customers.

As part of this step, we also learned how to convert these Market-Facing family projections into supply resource requirements through the use of simplifying assumptions about MIX, derived from mining history.

9. **Alignment of Human Energy** – This practice of conflict resolution not only ended up with one set of numbers to which an organization worked, but more importantly it aligned the “human energy” within the organization. This alignment of human energy made an organization capable of doing things not before possible. We learned that with no additional resources, when people fully resolved conflict and worked together, the level of accomplishment increased in multiples.
10. **Expert Witness** – A couple of years ago, I was asked by two law firms to serve as an Expert Witness in a court case involving a manufacturing company and its alleged false statements about demand and supply. The case centered on the fact that if the company’s leadership did not know that their claims about demand outstripping supply were allegedly untrue, they should have known so. Their

allegedly false statements caused their stock value to rise dramatically, to only fall dramatically later when the truth outed.

My contribution took the company's own data and put it in a Holistic View, showing demand, supply, and inventory, ala eS&OP. This Holistic View dramatically demonstrated that in (9) nine of the (10) months involved, the company out-produced demand, causing total inventory to increase by 256%, contradicting their prior claims about demand being greater than supply.

When seeing their own data presented in this way, the company chose to settle the case versus going to a jury trial. We are indeed getting closer to making executive leadership accountable to properly do S&OP as part of their "generally accepted manufacturing practices" in the same way they are now held accountable for conforming to "generally accepted accounting practices." This is really good news!

A Word About Terminology

The term Sales and Operations Planning (S&OP) originally referred to a decision-making process for balancing demand and supply in aggregate. This was an executive-centered activity that set appropriate policy, strategy, risk assumption, and fiduciary responsibility regarding the proper management of the supply chain.

However in the recent past, common usage of this term has broadened to include tools and techniques that operate at lower, more granular levels, that were not an executive processes.

As this happened, some chose to invent/create a totally different term to represent the original meaning of S&OP. My writing partner (Tom Wallace) and I thought this added confusion, not clarity to our field. We therefore chose to not do that and avoid confusion. We referred to the original meaning of S&OP as "the executive portion of Sales & Operations Planning (S&OP)" – or executive S&OP (eS&OP) -- NOT changing the term, but only adding the adjective preface. eS&OP became part of the APICS dictionary of terms in 2010, and states that executive S&OP (eS&OP) does the following:

- Balances demand & supply at the aggregate (family) level
- Fully integrates financial planning
- Provides a forum for establishing and linking strategic planning to day-to-day operations" (*setting appropriate policy, strategy, risk, and financial responsibility*)

The Future

While we have learned more and more over the years about how to make S&OP transformationally effective in managing a manufacturing company, it is likely that we will continue to evolve and get smarter. In my early career, a mentor named Oliver Wight taught me “the ultimate sophistication is simplicity.” I found this to be totally true, and I further learned that making things simpler was not easy – it was very difficult.

. . . the ultimate sophistication is simplicity . . . removing us from the fog of complexity.

There remain many people that have not learned that lesson about simplicity and earn their living making things more complex. As such those things never get truly understood. They believe that harnessing the fog of complexity is the solution, rather than eliminating the fog of complexity and seeing things more simply.

Technology has indeed played a role in our progress to date, and will have an important role in the future of S&OP. But – technology has not, and will not, replace human involvement and decision making in the process. Technology will continue to enhance people’s ability and will not replace them.

Further Information

For a complete discussion of eS&OP, please consult one of our books that lay out not only how eS&OP works, but also how to implement the transformational process at low cost, low risk, high impact, with quick results.

Thanks for listening, all the best, and good luck.

Bob Stahl

Bob Stahl – Biographical Sketch

In the early 1970’s, Bob was one of the early practitioner-pioneers working to fill the void of supply chain management practice. As a practitioner and executive coach, he and others, developed the workings of S&OP, as we know it today. He has written (with Tom Wallace) six books relating to S&OP. Several have been used for professional certification, and remain best sellers to today’s practitioners. Today, Bob remains one of the thought leaders in this field.

