



Integrating S&OP

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There is growing recognition of S&OP's value. However, many organizations persist in considering S&OP as merely a meeting, rather than an information-rich, decision-driving process. Organizations that subscribe to that limited scope of S&OP get limited value. Organizations that see S&OP as part of a highly integrative process in supply chain are achieving greater performance and value.

In this article we will explore the success several companies have achieved through automating and integrating their S&OP process.

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Introduction

Sales and Operations Planning, as envisioned,¹ was *not just a meeting*, but a process which included the “heads of state” from the Sales, Operations, Planning, and often, Marketing departments. Armed with information about sales, pricing, forecasts, current production, current on-hand inventory and other data, this *informationally-well-stocked team* could review issues and make decisions for near-term improvements. More strategically, the S&OP process has become the guiding force—what products to launch and when, how much capacity and inventory to invest in, allocation of scarce resources, and other business priorities associated with supply chain.

Decision making from the S&OP team can address both product offerings and fulfillment challenges. For example, if a product is not selling well, a discount or promotion can be planned. Or the team can decide on an end-of-life strategy. Issues such as shortages and how to prioritize customer orders can be debated and new production plans created.

In the past, these meetings became mired in data debates, as each organization would arrive with its own spreadsheets. Fortunately, many organizations today have standardized a common system for demand planning and a common system for supply in production, reducing the occurrence of *some* of these data debates. However, most organizations who still rely on spreadsheets don’t feed decisions from S&OP meetings and the subsequent changes that they imply back into their supply chain systems. This limits, and possibly defeats, the whole premise of S&OP.

In this article, we will look at a few examples of how S&OP adds more value when integrated into the supply chain system and when managed as a *full member of the business management processes* for the enterprise.

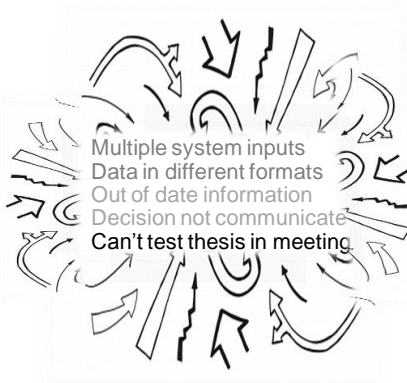
What is S&OP Integration?

System integration and propagation of the agreed-to plan, for updating demand and supply plans.

What is not S&OP Integration?

Manual meeting-only, and /or spreadsheets as the vehicle for presenting and planning.

Meetings?



Flashback. Or maybe it’s today. Meetings, bloody meetings. If your organization is like most, meeting dynamics defy the best of intentions to be short, purpose-driven, with the results well communicated.

Although ‘a meeting’ is at the heart of S&OP, it is neither the purpose, nor the end-point. Rather it is a venue in which to come to an agreement based on a healthy discussion and a rational assessment of the issues involved in achieving the plan, where sales and operations converge (supply chain), and what should be done to address them.

However, *informationally-poorly-stocked* meetings tend to have less

¹ [APICS](#) defines S&OP as the “function of setting the overall level of manufacturing output (production plan) and other activities to best satisfy the current planned levels of sales (sales plan and/or forecasts), while meeting general business objectives of profitability, productivity, competitive customer lead times, etc., as expressed in the overall business plan.”

than definitive outcomes. The upshot of that is a lack of communication and an inability to execute results and decisions from that meeting. Lost in translation...

Several problems are highlighted here that can be addressed by automating the S&OP process. Once they have a solid supply chain planning system in place, many organizations toss out their spreadsheets and implement an S&OP *system*, integrating it with other supply chain systems. We're going to look at some cases and what can be learned from them.

S&OP—Something Old, Something New...

Several recent implementations of S&OP make great examples of how S&OP, when automated, can modernize the traditional process as standards groups envisioned. One great example is the [Red Wing Shoe Company](#).² Being [steeped in tradition](#), and recently celebrating its 100th anniversary, has not kept Red Wing from being progressive. Responding to demand from diverse customers such as luxury retailers, hikers, bikers, and hard hat workers keeps Red Wing planners on their toes.

Mallery Dosdall of Red Wing Shoe Company shared their company's transformation as they automated their supply chain technology, integrating the S&OP process and achieving results such as significant increase in fill rates (a key metric for the company as well as for their retail customers), safety stock reductions, realignment in service level agreements, inventory reductions, and more.

Another case that will be highlighted is the [Peninsula Beverage Company](#) (PenBev), a Coca-Cola bottler and distributor in South Africa serving multiple channels in the hotly-contested beverage industry. That is a formula for dynamic demand challenges. TG Van Zyl at PenBev shared with us the journey to achieving "one number" across their business and stellar service levels to their customers as they continue to grow.

Process of Engagement

At Red Wing, S&OP is a process backed up by *the numbers*. And those numbers come from the systems—not spreadsheets. This allows Red Wing to effectively engage all the stakeholders. Each team has the *information* they need based on their role (sales, brand owners, manufacturing, and demand planners) in a way they can understand. How does the market—both demand and supply—affect our thinking? Do we have the resources to respond? What will it take to achieve a profitable outcome, one that satisfies our customers and shareholders?

That *information* has to propagate with integrity throughout the organization, PenBev learned. PenBev aligns its commercial, sales, and distribution teams with one forecast—systemically—not manually or with spreadsheets.

The process also has to provide a vehicle for the various constituents to reach a consensus on what it will take to execute the proposed plans. Figure 1 shows a conceptual process many organizations follow to achieve that consensus. These processes have a discipline: monthly reviews to assess working capital

² Red Wing brands include: [Red Wing](#), [Vasque](#), [Irish Setter](#), [WORX](#) and others.

investments, and annually for yearly planning and capital appropriations. Lack of inclusion creates negative organization dynamics—and more costs.

For example, lack of engagement with sales leads to emotional pressure. They are unsure of supply response and therefore, often inflate numbers or provide numbers late in the planning cycles. Conversely, supply chain often does not adequately explain how sales forecast variability impacts the ability of the supply side to respond. Supply-side teams will always say yes. But that ‘yes’ can erode or destroy profits.

Ultimately, *S&OP is one of the few processes that unite the ideas of the key functions of the company.* As such, it should be managed with that sense of importance: that is, with an investment in technology enablement, meeting-management skill sets, and top management engagement to hold all the functions accountable for their contribution.

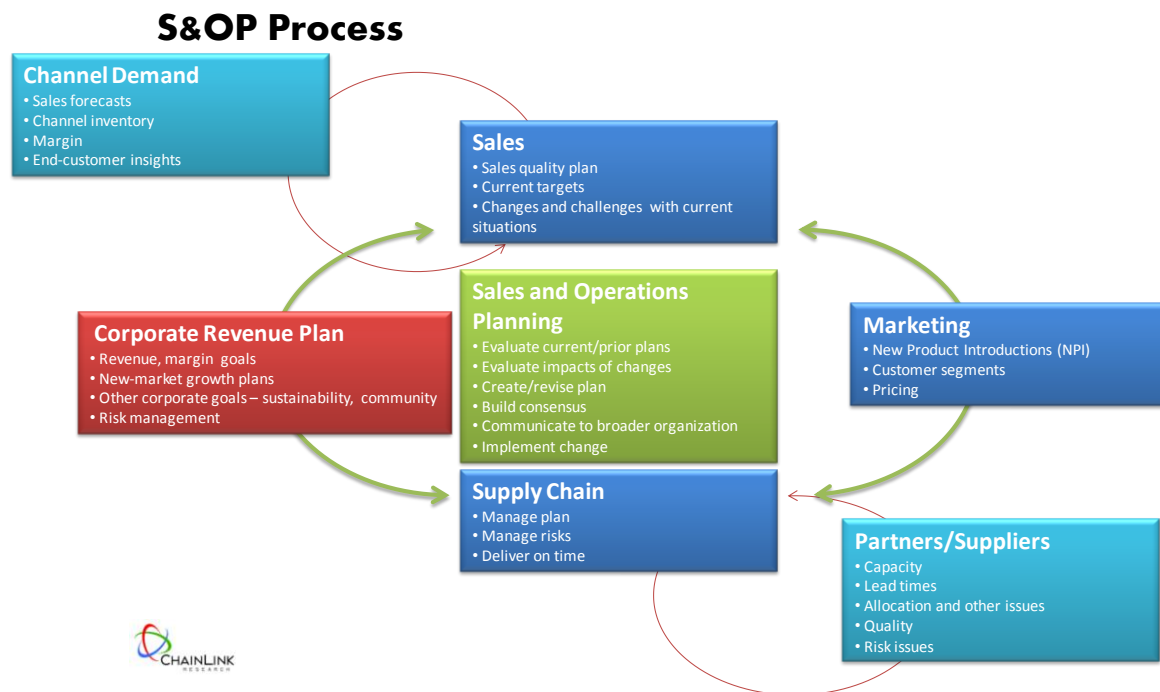


Figure 1: S&OP Model

Pragmatic Practice

Successful process management is pragmatic. Although consultants like to propose best practices, they are often not achieved in accordance with the ‘charts in PowerPoints’ (or white papers). However, in a continuous improvement program, ambition can be rewarded. Continuing with Figure 2, we show the key functions and their *part in the pageant*—the information and decisions made through S&OP. Over time, through systems and data refinement, S&OP is refined into a highly integrative process. Let’s look at some of the important roles S&OP plays.

Strategic Role of S&OP

In practice, S&OP can have a strategic loop as well as an operational one. That is, annual or quarterly planning may work on new product introductions, large capital investment planning, determining a new distribution network, etc.³ As Dosdall stated, Red Wing uses some S&OP meetings to set the annual plan. Then, how the organization is tracking to plan is reviewed at each subsequent monthly executive S&OP meeting and adjustments can be made. These decisions are still based on organizational consensus, but the type of systems feeding the S&OP foundation may reach beyond the software modules that firms typically have. For example, distribution or overall supply chain networks may come from a [multi-echelon planning system](#). Product planning may come from a New Product Introduction (NPI) module. Or spreadsheets may come from marketing. There is no reason the data from those sources can't be fed into the traditional demand forecasting and supply planning systems to translate and evaluate their impact on the organization's monthly, weekly, or daily activities. In fact, they should be.

NPI is notoriously volatile. It has a profound impact on brand, sales, inventory, and production resources and should be integrated into the overall plan. Scenario planning and the impact of the required investment should be discussed in the S&OP meeting. Often NPI has a separate discussion thread (brand and market teams only) and misses this most important step of conferring with supply chain and participating in an S&OP, leading to poor reaction time by the supply chain as well as added cost and eroded profits. Scenario planning to understand potential upside inventory investments, as well as alternative plans if the product acceptance is not as planned is critical to ensure both internal and trading partner responsiveness.

Financial Integration

The term Integrated Business Planning (IBP) is gaining in popularity and often is used interchangeably with S&OP. Some organizations look at IBP as a super set or evolution of S&OP, evolving from sales and manufacturing (operations) to include the other functions, particularly finance. However, all the organizations with whom we spoke who had rigorous processes that included finance and senior leadership used the term S&OP.

Of the many roles finance plays in organizations, one of them is governance—ensuring that all the numbers and plans used are aligned and correct. Finance also can play a positive role in educating teams in the methods for understanding the impact that decisions such as increasing inventory, adding another shift, or acquiring surge capacity have on the company metrics (profit, working capital, shareholder value). S&OP meetings can often be the setting for a pitch for additional investments in inventory or capital; hence, finance can assist in the creation and review process in preparation of an acceptable plan for *executive sign-off*.

Trading Partner Collaboration

Many organizations have successfully extended their internal S&OP processes to include supplier meetings (or, conversely, customer meetings). Major suppliers or high-risk supply lines benefit from a

³ Methodologies for these are beyond the scope of this paper

trusted process. Embedded in supplier costs is supply chain variability. Poor safety stock with inappropriate reorder points and lack of visibility into future demand drives up inventory or causes expediting—both unnecessary costs. Both raw material and transportation cost reductions are attributable to collaboration and developing a consensus in the chain.

Sourcing and Procurement, for example, has benefited from PenBev’s “one number plan.” Here improved processes and more accurate forecast numbers have increased supplier performance with both sourced products and ingredients for beverages that PenBev bottles.

Transportation linkages not often associated with S&OP can be particularly beneficial to food and beverage companies, like PenBev, where transportation has to be highly responsive to changes in plans. Time-sensitive transportation models can be a large percentage of the cost of goods sold. Both inbound coordination and outbound distribution to wholesalers and retailers have experienced improvement.

DOS	Suppliers	Manufacturing	Finance (Governance and Planning)	Marketing (Products and Pricing)	Distribution	Channel (and Sales)	Demand Supply Chain Planning
Data to Share	<ul style="list-style-type: none"> • Supply • Schedule • Flex 	<ul style="list-style-type: none"> • Product cost • Capacity • What could be the new production plan? • What will be the impact of NPI or EOL on raw material purchases? • Required investment plan 	<ul style="list-style-type: none"> • Corporate goals and metrics • Auditable history—sales, costs, profit • Current sales, profit, costs 	<ul style="list-style-type: none"> • New Products (NPI) • End of Life (EOL) • Forecasted price & profits • Promotional impacts • Competitive pricing 	<ul style="list-style-type: none"> • Status—DOS, late, shortage, backlog • Excess and Obsolescence risk • Fill-rate metrics • Allocations to customers • Current safety stock • VMI and other commitments 	<ul style="list-style-type: none"> • Impact of NPI—product cannibalization? • Current channel inventory • Risk of change 	<ul style="list-style-type: none"> • Current demand • Variability issues • Current inventory across the business—raw, WIP, channel—shelf, safety, VMI, ATP • Alternative feasibility plans
Role / Role in S&OP	<ul style="list-style-type: none"> • Upward Collaboration • Risk Mgmt 	<ul style="list-style-type: none"> • Assess feasibility • Communicate impacts • Collaborate with supplier • Align capacity with demand 	<ul style="list-style-type: none"> • Educate on corporate goals • Assure adherence to goals • Assess investments • Assess impact of change 	<ul style="list-style-type: none"> • Understand markets • Develop cross-functional NPI • Create promotions in partnership with sales 	<ul style="list-style-type: none"> • Determine best methods to meet needs of network • Fulfillment 	<ul style="list-style-type: none"> • Manage sales • Maintain knowledge of shelf stocks • Communicate ‘field’ intelligence 	<ul style="list-style-type: none"> • Consolidate plans and feedback from all stakeholders • Evaluate scenarios • Shepherd S&OP process
Decisions	<ul style="list-style-type: none"> • What should we offer? • Can we respond? • Can we profit? 	<ul style="list-style-type: none"> • Can we change? • Can we respond? • Execute new plan 	<ul style="list-style-type: none"> • Approve change • Communicate impact on goals 	<ul style="list-style-type: none"> • When to launch—NPI • When to retire—EOL 	<ul style="list-style-type: none"> • Safety stock levels • Fulfillment plans 	<ul style="list-style-type: none"> • Allocation of channel inventory 	<ul style="list-style-type: none"> • Create and manage the plan

Consensus agreement on: products that will sell, selling price, supply plan, inventory strategy and allocation of scarce supply

More strategic decisions such as alignment of product launches and end of life




Figure 2- Roles and Decisions in Sales and Operations Planning

Testing/Validating the Plan

A key element that is often missing in an unintegrated S&OP process is the lack of surety and therefore, consensus on the plan.

PenBev has an important and positive dynamic that has developed in the company due to their S&OP process. Now the “supply chain team presents to marketing the proposed plan from the system. We use history, past promotional data, current/future promotional and other data to create the scenarios for marketing to review. Marketing can then discuss or counter these plans and we mutually arrive at the one number,” TG Van Zyl, of PenBev, said. Not having all stakeholders as users of the system, therefore, should not be an obstacle to modeling, testing and arriving at a consensus within in the organization. Once there is “agreement with Marketing, these numbers can be presented to the rest of the company,” Van Zyl said.

Consider other challenges with validating the plan before it *goes public* such as *what-if* scenario planning. Best practice today is to create a scenario within the system and/or a separate stand-up environment—a sand box—so that planners can freely run a variety of what-if plans to test various investments. This allows the planners to determine the best way to meet current demand and create contingency plans for both opportunities and challenges. Additional complexity to Demand/Supply planning exists in footwear/apparel due to the high variety within the SKU (color, size and width options). For Red Wing, one shoe can have 120 variants. When plans were created with spreadsheets, errors were often missed. When the right mix of inventory in the right quantities is not produced, ultimately, this means loss of sales.

The Red Wing Demand Planning team models multiple scenarios before the executive session so that they are prepared for executive questions and are able to quickly come to an agreement. It is far better to have had the conversation—backed up by consistent information—before any unplanned events occur. That way, the agreed-to alternative can be set in motion. Sounds like common sense, but it’s hard to implement without that integration!



One Number?

“It’s imperative that the general managers sign off on the plan; if the manager does not sign off on that, we have to start over.” Since automating their S&OP process, Red Wing hasn’t had to start over. Past spreadsheet approaches were error prone.⁴ Not wanting to waste a meeting with the President and the CFO, it is essential to walk into that meeting prepared. Companies that get S&OP right use that meeting to determine investment levels for inventory, capacity, and even staffing—not debating the integrity of the process or the validity of the numbers. Most importantly, an S&OP process that is integrated from the top down means there is no vacillating within the organization about the game plan. This is the true meaning of a *one number* where you have a comprehensive single plan for the business that evaluates

⁴ You can hear Red Wing talk about their journey from spreadsheets to Supply Chain technology enablement on this insightful [webinar co-hosted by APICS and Logility](#).

both financial and volumetric measures.⁵ Poor communication within organizations leads to a lack of plan implementation. And that means, ultimately, not achieving the plan.

As one company told us, “We had a working capital leak. Our safety stock was not aligned to actual demand, with inventory creeping up during the month. There was never a plan that everybody believed in.” Often we think about supply chain as a response only to demand. Surely determining demand as accurately as possible is a major preoccupation of planning teams. But the subsequent investments are just as critical. That is how the organizations respond to information. The plan emanating from the S&OP is the foundation.

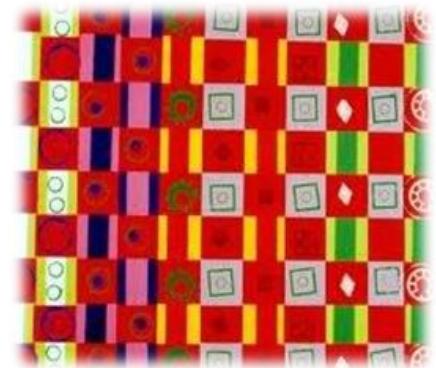
At PenBev that plan becomes the foundation and source of the subsequent activities from supply through distribution. “There is a lot of trust among the Directors and so the rest of the company follows,” says TG Van Zyl, at PenBev.

Organizational Fabric

Sign-off, backbone, alignment, everyone believing, executive engagement. These are the characteristics that support any successful process, especially S&OP, which is cross-functional and often cross-enterprise in nature. “The supply chain is our backbone and is essential in our ability to meet the growing demands for Coca-Cola products across the Western and Northern Cape,” said Andre Cloete at PenBev. “The past supply chain processes hindered our ability to cost-effectively scale operations and improve service levels. With these improvements we are now able to focus on improving our collaboration to share forecasts across a broader business group.”

At Pen Bev, developing trust is the key. This comes from building on successes. “Departments talk; and if the project brings benefit, everyone will use it,” TG Van Zyl told us. “Over time the organization develops a common *language*.” A common language is a strong fiber which strengthens an organization’s fabric overall.

Successfully integrating S&OP not only requires the technology, but a full-organization commitment to use the system and to adhere to the process and numbers. Doing this eliminates the “where did that number come from?” says Mallery Dosdall at Red Wing. “Implementing S&OP with *wise leadership*...and complete buy-in by the organization allows everyone to see how they contribute to the goals and what their role is.”



Attention, therefore, must be paid to all the threads in the fabric—people, process, and systems. One thread alone can’t do this. “Success allows everyone to take pride in the results,” says Dosdall.

⁵ One number advocates often miss some of the challenges of achieving this goal, such as the need for different forecasts for different functions, audiences, and purposes, as well as different planning calendars. An automated system can help unite these views. For example, internal supply chain forecasts probably should not be shared with the investment community, since they may have ‘stretch goals’ that the CEO does not have to report until they become a reality.

Conclusions—Wise Management Does It Ahead of Time

One of the most powerful arguments for S&OP, when it is well run as part of the fabric of the company, is the ability to discuss and assess risks upfront. What are the risks in this plan? Have we put the right investments in place? What downsides we are likely to encounter? Understanding risks and the potential scenarios to deal with them, in a calm climate, usually produces better answers. Having a reliable, regular and consistent process allows time to assess—ahead of events—and inject *wisdom* into the response process as Mallery Dosdall of Red Wing stated, rather than being reactive.



Although companies are testifying to the benefits gained from S&OP projects, the real motivator for integrating S&OP is organizational integrity and cohesion. PenBev is achieving 99.3% service levels now. At Red Wing they eliminated 450 spreadsheets and reduced their S&OP efforts by half. And of course they also achieve those critical metrics—an inventory reduction of 27%!

Although we all find hard numbers convincing at some level, increasing trust reduces rework and errors, builds accountability, and ensures communication of complex ideas and agreements. These are the real motivators for implementing an integrated S&OP system, with the subsequent results that organizations are reporting. Trust in the process and the plan is what enables its implementation within the enterprise as well as with trading partners.

In this world of content and information overload, how planners are able to visualize, clarify, understand, and respond to information is just as important as the information itself. Having a process with integrity is critical, therefore, to achieving an intelligent response which has alignment across the supply chain.

References—Additional Reading

Red Wing success webinar: [webinar co-hosted by APICS and Logility](#)

Successful Sales and Operations Planning in 5 Steps - <http://www.logility.com/5stepsSOP-ChainLink> Wikipedia on S&OP http://en.wikipedia.org/wiki/Sales_and_operations_planning



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