



INVENTORY
MANAGEMENT BASICS

OPTIMIZE PROCESSES
WITH MACHINE LEARNING

LESSONS FROM
REAL-WORLD S&OP

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Safety-Shoe Manufacturer Applies

S&OP with Form and Function

Small and medium enterprises (SMEs) have an impressive ability to innovate, create and mobilize resources in response to unexpected scenarios. Sometimes, however, it's difficult to realize the value of change until you're already in the middle of it. That was the case for Base Protection, a designer and manufacturer of workplace safety shoes headquartered in Barletta, Italy.

Base Protection was launched in 2003 when company founders began developing safety footwear with a brand-new concept: an anti-fatigue element to the shoe's sole. The ultimate creation, TPU-Skin, was invented in 2005 and immediately patented. The business was acquired by Fegemu S.A. in 2007 and began expanding into European markets. By 2012, the company was selling 12 million euros of footwear annually, and it started exporting to new markets including Saudi Arabia, North America and Russia.

Base Protection is a make-to-stock (MTS) company, so manufacturing strategy and forecast accuracy are crucial. Producing too many unneeded styles will result in an excess of inventory, a lack of storage space for new products and less budget flexibility. Conversely, producing too few styles will of course lead to unhappy customers.

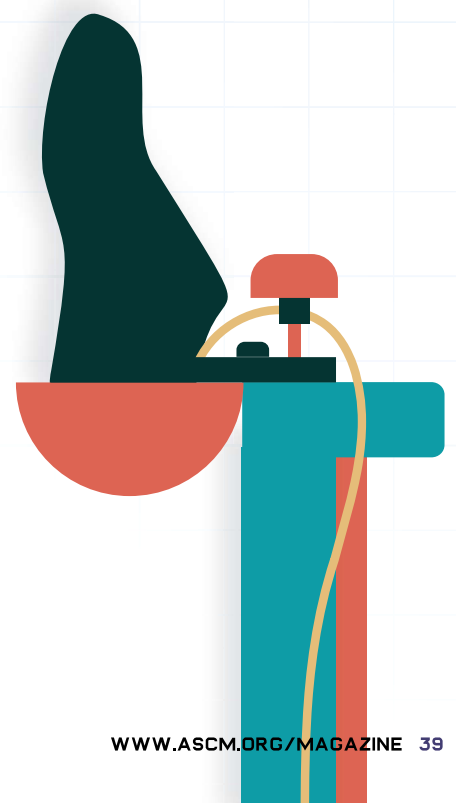
Today's global marketplace has created all new requirements for businesses aiming to stay competitive, including enhanced cooperation, focus on sustainability and ethics, and long-term business sustainability. Pasquale Muciaccia, operations manager at Base Protection, explains that company leaders therefore wanted to implement a method for reducing fixed costs and obsolescence of product styles, as well as a process for managing and growing their business to stay relevant. They looked to sales and operation planning (S&OP).

The first step in their journey was making sure the rest of the organization would be on board. "At the beginning, it was not so easy to build awareness inside our organization, so we asked for an external expert capable [of introducing] the key insights of the process and the value that S&OP will bring," Muciaccia explains. Base Protection decision-makers planned a six-month timeframe for the implementation, then created a group to run it, including a project manager, diverse team members and key users.

S&OP: WHAT AND HOW?

S&OP helps make feasible what is promised in a company's business plan. It goes beyond defining a strategy to sharing it across the organization; monitoring progress; taking

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corrective actions; and rectifying mistakes as early as possible, rather than discovering and dealing with bad news at the end of the year.

S&OP enables senior management to verify, formally and at least monthly, the progress of the business plan through a deep integration of four functional plans: sales, production, financial and product introduction. The functional plans are managed in their subsequent level of detail (in the case of production, the master scheduling disaggregates the S&OP figures). The process acts as an essential hinge between the business and functional plans. It facilitates consistency with business objectives and acts as a tool for superior decision-making so that the main actors of a business are empowered and involved.

The relevant figures are expressed in product families to show a snapshot of the plan in its entirety. In this way, the product families are highlighted, rather than specific items, which are typically managed inside the functional plans.

However, correctly defining product families is key, and sometimes the marketing and sales product families need to be aligned with production. For each product

family, sales and production plans must be prepared, with a planning horizon of 12-to-18 months. Then, the production plan can be updated monthly to ensure an acceptable level of projected available inventory, in the case of MTS companies like Base Protection. This should also be aligned with the financial requirements needed to support the corresponding inventory investment figures.

Next, key decisions are taken to the executive S&OP meeting. In case of process disagreements, the executive team takes responsibility for closing the gap. This process is an effective way to control tactical and strategic choices — such as variations in skills needed, capabilities, workloads, supply constraints, and structural changes in demand and capacity — while following an adequate time horizon. The adoption of S&OP prepares an organization to deal with unpredictable situations; reduce business risks; and focus on the pursuit of strategic goals, greater satisfaction and customer loyalty.

The main goals of S&OP include

- functional plans that contribute to the strategic objectives as declared in the business plan and annual budget
- a reliable sales plan
- a production plan that is executable according to the availability of resources
- a strategy for monitoring cash, revenues and profits as projected in the annual budget.

Best-in-class companies excel because they apply these simple, clear, consolidated rules with high commitment, discipline and persistence.

EXECUTIVE BOARD COMMITMENT

Another important aspect is ensuring the S&OP function is a management decision-making process. For this to be possible, the CEO needs to be a strong supporter. Keeping the S&OP process running monthly is vital to maintaining a balance across the business: Sales and operations in the short- and medium-long terms must anticipate and solve problems and enable structural changes.

Top management should determine the balance between demand and supply, including resource utilization, cash flow and profit figures; the company climate; and the attitude for a proactive decision-making process — and share in the effort to integrate the functional plans within the organization. If supply and demand are not in balance, the company may encounter several problems: products not shipped on time, incomplete orders, unsatisfied customers leaving to go elsewhere, insufficient or too much inventory, and so on.

At Base Protection, as at many SMEs, some of the questions asked by management during this stage include:

Base Protection designs and manufactures workplace safety shoes.





Take whatever steps are necessary to clearly highlight S&OP's value to stakeholders.

- What will the impact on operations and resource availability be if a major customer contract is signed next month?
- Which of our resources will be overloaded?
- When should we start talking with our major supplier if an increase in volume is expected next month?
- What will the financial impact on the income statement be due to this inventory increase?

In this way, S&OP helped top management proactively outline their vision of the future so that plans for sales, operations, resources, product development, finance, and human resources are periodically assessed by leadership. Then, the vision is communicated across the organization for more detailed planning and execution, thereby further strengthening collaboration.

Another typical S&OP implementation issue is failing to get people to commit to the process from the beginning. This damages S&OP credibility. If this happens, investigate to find the root cause. Also take whatever steps are necessary to clearly highlight S&OP's value to stakeholders. Consider hosting additional workshops, holding awareness sessions, and sharing business cases to create awareness. And be sure the facilitator, whether internal or external to the company, shows up strong and is highly effective.

INFORMATION SYSTEMS

Once the process is mastered by the executive board, it needs to be deployed through a robust information system infrastructure, creating a relationship between S&OP and the enterprise resources planning (ERP) system.

Few companies have fully achieved the potential benefits of ERP. One common reason for this failure is S&OP not running well at the top. In other words, it's not about the technology, but how S&OP managers facilitate ERP functionalities. An effective upstream S&OP process, that includes information and decision support and planning, is an input requirement for effective ERP.

REAL-WORLD RESULTS

S&OP must be a top-priority business process for today's SMEs. It is vital to streamlining supply chain


decision-making and optimizing performance, new product initiatives, and bottom-line success. CEO and executive team commitment, as well as a simple and structured information flow, are necessary for achieving the best possible results.

At Base Protection, implementing S&OP brought about numerous positive outcomes. Although, at first, the company struggled with the discipline of the process (such as scheduling and keeping regular meetings and managing time during the executive S&OP meeting), once those components were in place, the company was able to derive considerable value.

After the planned six-month launch period, the executive team at Base Protection decided to further improve forecast accuracy by lengthening the time horizon for its MTS environment from six months to one year. Muciaccia says that, once they accomplished that goal, Base Protection was able to "better manage plant capacity, anticipate demand variation more accurately and increase service levels."

Another benefit was on the logistics side: Because of the increased accuracy in volume sales and production rates, Base Protection could cut transportation costs and decrease rush deliveries.

Today, the company's S&OP plans are still expanding, Muciaccia says, adding that current goals include a time horizon of 18 months. To achieve this objective, Base Protection involves a cross-functional team from numerous different departments.

Muciaccia strongly recommends that all SMEs put in the time and effort to create a strong S&OP process, as this makes it possible to align the organizational behaviors and functional objectives with overall strategic goals while balancing demand with supply. As he puts it, S&OP is "a great tool for business continuity in the current turbulent environment." 

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