Chapter 1

Introduction to Executive S&OP

Let's eavesdrop on an executive staff meeting at the Acme Widget Company. The participants are not happy campers.

President: *This shortage situation is terrible. When will we ever get our act together? Whenever business gets good, we run out of product and our customer service is lousy.*

VP Operations: *I'll tell you when. When we get some decent forecasts from Sales and Marketing . . .*

VP Sales (interrupting): *Wait a minute. We forecasted this upturn.*

VP Operations: . . . *in time to do something about it. Yeah, we got the revised forecast — four days after the start of the month. By then it was too late.*

VP Sales: *I could have told you months ago. All you had to do was ask.*

VP Finance: *I'd like to be in on those conversations. We've been burned more than once by building inventories for a business upturn that doesn't happen. Then we get stuck with tons of inventory and run out of cash.*

And the beat goes on: back orders, dissatisfied customers, high inventories, late shipments, finger pointing, cash-flow problems, demand and supply out of balance, missing the Business Plan. This is the norm in many companies.

It doesn't have to be that way. Today many companies are using a business process called Executive S&OP to help avoid such problems. To learn what it is and how to make it work, read on.

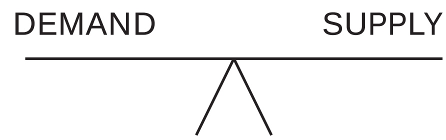
What Is Sales & Operations Planning?

How would you like to have a process that has helped many companies give better customer service, lower inventories, shorten customer lead times, stabilize production rates, work better with suppliers, give top management a real handle on the business, and build teamwork among Sales, Marketing, Operations, Finance, and Product Development?

Such a process exists. Would you like this tool to not cost much and start to generate results within a few months of getting started? It's all of those things. It's called Executive S&OP, and a growing number of companies are using it to sharply improve their ability to run their businesses. It helps them to get demand and supply in balance, *and to keep them in balance.* Balancing demand and supply is essential to running a business well, and this balancing must occur at both the aggregate, volume level and at the detailed, mix level.

We've identified four fundamentals: demand and supply, volume and mix. Let's look at the first two.

Demand and Supply



What happens when demand and supply aren't in balance? Well, if demand exceeds supply by more than a little bit for more than a little while, bad things happen:

- Customer service suffers. The company can't ship product to its customers when they want it. Customer lead times stretch out as the order backlog builds. Business is lost as customers go elsewhere.

- Costs rise. Unplanned overtime goes up. Material costs and freight costs may increase.

- Quality often "gets lost in the shuffle" as the company strives mightily to get product shipped. Specifications get compromised or waived. Temporary subcontracting yields a less robust product. Material from alternate suppliers often doesn't process well in the plant.

Isn't this great? Owing to demand exceeding supply, performance can deteriorate on three fundamental attributes: delivery, cost, and quality. Business is lost, costs go up, and thus the bottom line takes a hit. Similarly, when supply substantially exceeds demand, bad things happen:

- Inventories increase, carrying costs rise, and cash flow can become a problem.

- Production rates are cut. Volume variances turn unfavorable. Layoffs are a possibility and morale suffers. People in the plant slow down and efficiency numbers start to drop.

- Profit margins get squeezed. Prices are cut. Discounting increases. Deals and promotions become more frequent.

Well, that's not good either. Supply exceeds demand and the company is stuck with lower margins, higher costs, a cash crunch, and the possibility — or reality — of layoffs.

Now, is it always bad if demand and supply aren't in balance? No, sometimes it can be a good thing. It depends on where the imbalance lies. For example, if projected demand ten months in the future exceeds current capacity, and if the company can economically add more capacity sooner than that, that's fine. Demand is growing; business is good. Being able to see the projected imbalances soon enough is what's needed, so that the *potential* imbalance problems can be eliminated before they become *real* problems.

At the risk of stating the obvious, we'd like to point out that demand and supply are not the same thing. Demand is what the customers — external and internal — want; supply represents the resources we have available to meet that demand. We all know that, so why are we taking up your time with it?

We sometimes see companies struggling with demand/supply issues, but not being very effective. They're often unable to answer the fundamental question: Is this a demand problem or is it a supply problem? The result is a lack of focus, which can lead to a less than desirable outcome. Rather, in our thinking, we should *decouple demand from supply.* Study and analyze them separately, so that they can be brought together in the real world.

The next time you're in a discussion about bad customer service, excessive inventories, erratic plant schedules, or the like, ask yourselves: Is this primarily a demand problem or a supply problem? Get agreement among your colleagues on that point, and often you'll be well on the way to a solution.

The name of the game is to get demand and supply *in balance* and to keep them there. It's that simple. Balance demand and supply. Have processes in place to do it. Have early warning capabilities to alert people that they're getting out of sync. Make the necessary corrections early — surgically, with a scalpel — so that they can be small, as opposed to making large, radical corrections later with a meat cleaver.[1]

Volume and Mix

The other two fundamentals are volume and mix. As with demand and supply, we need to treat them separately in our thinking. If volume is handled effectively, it's much less difficult to deal with mix problems as they arise. On the other hand, if volume is not planned well, then mix issues become substantially more difficult to cope with. Many companies get themselves in trouble because they can't distinguish volume-related problems from those of mix. In the box below, we can see the difference between the two: volume is the big picture and mix is the details.

Questions of volume precede those of mix, so smart companies plan their volumes first, and spend enough time and effort to do it well. They find that doing so makes mix problems easier to deal with. But where do most companies spend almost all of their time? On mix. Many look at volumes only once per year, when they do the Business Plan. They probably wouldn't do it even that often, except that the folks in Finance & Accounting make them do it. Once each year, the CFO says, "Well, folks, it's budget time again."

Volume	Mix
"The Big Picture"	"The Details"
• How Much?	• Which Ones?
• Rates	• Sequence
• Product Families	• Individual Products, Customer Orders

Why is that? Why do most companies spend more than 99 percent of their time on mix issues to the exclusion of volume? It's simple: mix — individual products — is what companies ship to their customers. That's where the pressure is. Mix is seen as important and urgent. The effective planning of future volumes may be seen as important, but it carries less urgency.

As a result, many companies set their volumes — sales rates and production rates — no more than once per year, when they do their annual Business Plan. But how often during an average year do volume needs

[1] Sooner or later, demand and supply will be brought into balance. You can do it, or you can let the imbalance fester and another party will get it balanced. Perhaps it will be the customers who defect — when demand is chronically higher than supply — or perhaps it'll be the bank when your inventories are going through the roof due to continued overproduction and overprocurement and your credit line is at its limit.

change? It's almost always more often than once every twelve months. For most companies, it's more than once per quarter.

Most companies don't work hard enough at forecasting and planning their volumes and spend *too much time trying to predict mix*. They overwork the details and don't focus enough on the big picture.

Back to the four fundamentals: demand and supply, volume and mix. Shipping product to customers with world-class reliability and speed requires that all four of these elements be well managed and controlled.

One of Executive S&OP's missions is to balance demand and supply at the volume level. Volume refers to rates — overall rates of sales, rates of production, aggregate inventories, and order backlogs. Companies have found that when they do a good job of planning and replanning volume (rates and levels) as they go through the year, then problems with *mix* (individual products and orders) become less difficult to deal with. Companies have found that when they do this, they can ship better and more quickly, and do it with less inventory.

In the Preface to this book, we addressed the terminology issue. We'd like to expand on that now.

The Terminology Shift

As we indicated, terminology in this field has changed. Originally, the term *Sales & Operations Planning* referred to an executive-centered decision-making process focusing on *volume* issues. This process utilizes techniques for Demand Planning (forecasting) and Supply (capacity) Planning to accomplish its mission.

However, the meaning of Sales & Operations Planning has broadened. Today, many people view Sales & Operations Planning as dealing with mix in addition to volume. Thus it now can include Master Scheduling and other mix-related tools such as customer order promising, supplier scheduling, plant scheduling, distribution replenishment, and more (sometimes done via the use of Advanced Planning Systems). Your authors have watched this development, and we endorse it. However, this morphing of the term *Sales & Operations Planning* has generated confusion.[2] People today frequently don't know if a person is talking about the Executive component of S&OP or the detailed mix pieces. At times we wonder if the person using the term knows what he or she means.

So, since Sales & Operations Planning now means more than the executive process, how is the executive process to be identified?

Well, consistent with the principle of keeping it simple, we call it Executive S&OP. Therefore, Sales & Operations Planning — the larger entity — has a number of component parts. These include Executive S&OP, Demand Planning, Supply (capacity) Planning, along with Master Scheduling and related detail-level tools for the managing of mix, including both conventional plant and supplier scheduling techniques as well as Kanban/demand pull from the world of Lean Manufacturing.

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[2] Some observers predict that Sales & Operations Planning will become the successor term to Manufacturing Resource Planning and Enterprise Resource Planning.

Here are two key points:

- Executive S&OP does not refer to anything new. It's what we've always called Sales & Operations Planning. The only thing new is the term, and that's to reduce the very real confusion.

- Executive S&OP is the heart of Sales & Operations Planning; when that critically important piece is missing, much of the power of the total process goes away.

For those of you who like formal definitions, we offer the following:

Sales & Operations Planning (S&OP) — A set of business processes that helps companies **keep demand and supply in balance.** It includes Executive S&OP, Sales Forecasting and Demand Planning, Resource Requirements Planning, Master Scheduling, and other detailed scheduling tools for both plants and suppliers, both conventional and demand pull. Originally used to identify only aggregate planning, its meaning has expanded to include those elements that operate at the detailed, mix level.

Executive S&OP — That part of Sales & Operations Planning that balances demand and supply at the **aggregate volume** level, aligns units and dollars, and helps to establish relevant policy and strategy at both the volume and mix levels. It occurs on a **monthly** cycle and displays information in both **units and dollars,** for profit planning, asset management, and so forth. Executive S&OP is **cross-functional,** involving General Management, Sales, Operations, Finance, and Product Development. It occurs at **multiple levels** within the company, up to and including the **executive in charge of the business unit,** (e.g., division president, business unit general manager, or CEO of a smaller corporation). Executive S&OP links the company's **Strategic Plans and Business Plan to its detailed processes** — the order entry, Master Scheduling, plant scheduling, and purchasing tools it uses to run the business on a week-to-week, day-to-day, and hour-to-hour basis. Used properly, Executive S&OP enables the company's managers to view the business **holistically**, provides them with a **window into the future**, and serves as the forum for discussing relevant policy and strategy.

What Are the Benefits?

Benefits resulting from effective Executive S&OP include:

- For Make-to-Stock companies: higher customer service and often lower finished goods inventories — *at the same time.*

- For Make-to-Order companies: higher customer service, and often smaller customer order backlogs and hence shorter lead times — *at the same time*.

- For Finish-to-Order/Postponement companies[3]: higher customer service, quicker response, and often lower component inventories — *at the same time.*

3 This refers to the practice of not finishing the product until receipt of the customer order, and then finishing it very quickly. Think Dell Computer.

- More stable production rates and less overtime, leading to higher productivity.
- Better visibility into future resource problems, both too much work and too little.
- Enhanced teamwork within the executive group.
- Greater accountability regarding actual performance to plan.
- Enhanced teamwork among the middle-management people from Sales, Operations, Finance, and Product Development.
- A better demand/supply balance across the company's supply chain.
- A monthly update to the Business Plan, leading to better forward visibility and fewer surprises late in the fiscal year.
- The establishment of "one set of numbers" with which to run the business.[4] The primary functional areas of the business — Sales/Marketing, Operations, Finance, Product Development, and General Management — all operate with a common game plan.
- The ability to make changes *quickly* off of that common game plan.
- A sharp decrease in the amount of *detailed* forecasting and scheduling required, because the volume plans in S&OP drastically reduce or eliminate the need for detailed mix plans extending out across a long horizon.
- A "window into the future." It's uncanny, but the process — when done well — truly does enable people to better see future problems coming at them: a large increase in workload several months out, an upcoming new product launch that will consume substantial plant capacity, a forecasted downturn in demand later in the year. Executive S&OP enhances proactive decision-making.
- Better control of the business; becoming masters of your own destiny.

Our colleague, Chris Gray, makes a good point about communications as a benefit: "People complain that 'our company doesn't communicate well' and this becomes the diagnosis for all the ills in the company. Of course by saying that, they don't mean that the solution is better voice mail or e-mail or another technology approach. They know that they need better processes to *institutionalize* communications, so that Charlie doesn't have to remember to tell Fred about the slip in the new product roll out and so that Betty doesn't have to remember to communicate with Finance about a potential problem in hitting the sales targets for the year, and so on. For us, S&OP is as much about institutionalizing good communications throughout the organization as it is anything else."

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[4] Many publicly traded companies operate on the principle of: "under-promise and over-deliver." They'll use two sets of numbers: one for Wall Street, containing plans expected to be attained, and one for internal purposes with stretch goals, which many or may not be completely achieved. That's fine. They run with one set of internal numbers — the stretch goals — and that's what we re talking about here.

Executives who've implemented Executive S&OP swear by it. Let's hear from some:

- *Sales & Operations Planning addresses the very same issues that are vital to our customers — what they need and how we're going to get it to them.* — Vice President, Sales

- *Because we're looking ahead every month, we're able to make production rate changes sooner and, at times, spread the impact. This means these changes are easier for us and our workforce to respond to. And they cost less.* — Vice President, Operations

- *In some of our Make-to-Order businesses, as a direct result of S&OP we've reduced lead times to customers by up to 50 percent.* — Vice President/Group General Manager

Perhaps the best testimonial of all came from the head of the North American component of a UK-based multinational. At the conclusion of an S&OP meeting where some very difficult decisions were made effectively, he turned to one of your authors and said:

> *Tom, when I think back to a year ago, before we had Executive S&OP, I wonder how we were able to run the business without it*. — Division Chief Executive

Executive S&OP really is top management's handle on the business.

Why Is Top Management Necessary?

Saying it another way, does the boss really need to be involved, and if so, why? Well, we believe that active, hands-on leadership and participation by the head of the business unit (president, CEO, COO, and so on) is essential for Executive S&OP to work anywhere near its full potential. The two main reasons are stewardship and leadership:

- Many of the decisions made in Executive S&OP affect the Financial Plan for the current year, and top management "owns" that Business Plan. They have a *stewardship* responsibility for it, because they represent the shareholders, partners, family, etc. Thus, only they can make decisions to change it. When the Business Plan is not changed to reflect the new Sales & Operations Plan, there's a disconnect between the financial numbers top management is expecting and the sales forecasts and operations plans being used to operate the business. "Best in class" performance in this area means that the business is managed using only one set of internal numbers.

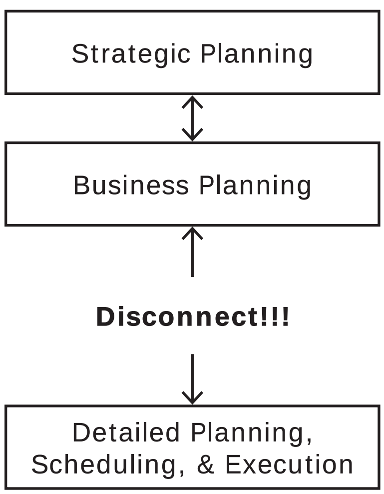
- Participation by the *head* of the business makes a strong *leadership* statement that Executive S&OP is the process being used to manage these important activities: integrating operational and financial planning, balancing demand and supply, and enhancing customer service. This "encourages" people throughout the organization to do their part. Without such leadership by the senior executive, participation in the Executive S&OP process can be viewed as optional, with the result that through the passage of time, the process erodes and goes away, or deteriorates into a high-level shortage meeting.

Hands-on participation by the executive group shouldn't be a problem, because so relatively little of their time is required. We're talking about one meeting per month, lasting for two hours or less. This event, called the Exec Meeting, can often replace several other meetings and thus result in a net reduction in meeting time. For the president, preparation time is zero. For members of the president's staff, some preparation time may be helpful — mainly in the form of briefings by their people — to enable the necessary sign-offs to take place.

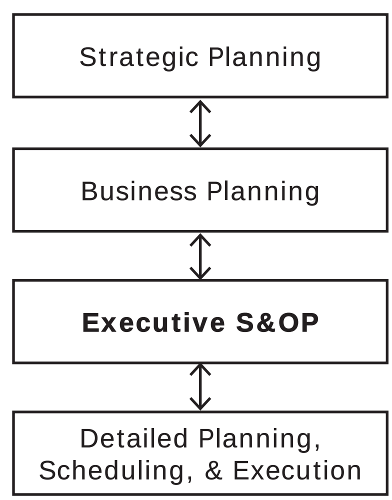
So how can something so productive require so little time? Well, most of the heavy lifting is done in earlier steps: middle-management people update the Sales Forecast and Demand Plan, identify resource issues and raw material problems, and formulate recommendations for the Exec Meeting.

How Does Executive S&OP Connect the Pieces?

In companies without Executive S&OP, there is frequently a disconnect between the Strategic and Business (financial) Plans on the one hand, and the detailed plans and schedules on the other. In other words, the plans developed and authorized by top management are not connected to the plans and schedules that drive day-to-day activities on the plant floor, the receiving dock, and most important, the shipping dock.



The vice president/general manager of a two billion dollar per year consumer goods business had an interesting way of putting it. He said, "Before we had Executive S&OP in the company, I spent a lot of my time turning knobs that weren't connected to anything." What he was saying is that the decisions he made at his level may or may not have gotten transmitted down to impact directly what happened on the receiving dock, and perhaps most important of all, in the customer order department and on the shipping dock. Or, if they did get communicated, they might get garbled on the way down. Or two or more other things might get messed up along the way. There was a disconnect in the process.



He went on to say, "Executive S&OP connects the knobs." It links the top-level strategic and financial plans of the business to the week-to-week, day-to-day, or shift-to-shift activities of receiving and promising customer orders, acquiring material, converting it into finished product, and shipping it to customers.

Report from the Field: The Procter & Gamble Company

Company Description: Procter & Gamble, following its acquisition of Gillette, is now the largest consumer packaged goods company in the world, with annual sales of over $75 billion. It is a very large, very global business – selling into grocery chains, drug chains, mass merchandisers and, since the Gillette acquisition, electrical distributors and electronics shops (with Duracell batteries).

Their Experience: The Executive S&OP process is not new to P&G, having been implemented during the 1990s. Over the years, it has become deeply imbedded in most of the company's business units.

Mike Kremzar, formerly Vice President, Product Supply, Customer Services Worldwide, was the S&OP champion and the force behind its successful implementation. Mike had the following to say: "The general managers of the business units now can operate their profit centers with the knowledge of the impact of their decisions on the total system. The S&OP process provides the data, the forum, and the measurement tools that lets these leaders continue to make good decisions for their brands, but now with full team understanding including cost, inventory, and service impacts."

One of these general managers, fully experienced with the process, stated: "For the first time, Sales & Operations Planning lets me feel like a true general manager. I now know the cost implications of the decisions that we make every month. Our entire business team – Marketing, Sales, Product Supply, Finance, R&D – is working more effectively since we have stopped defending different volume estimates all month. We can pull together with a 'single number' forecast that has everyone's full support."

Benefits, per Mike Kremzar: "Some of our business units have experienced a 20 percent improvement in inventory with a 25 percent improvement in customer service levels while costs have decreased!"

One last point: the P&G/Gillette merger will probably go down in business history as one of the smoothest, best managed mergers ever. Not surprisingly, perhaps, both companies prior to the merger had excellent Executive S&OP processes.

The Moral of the Story: Executive S&OP is truly "Top Management's Handle on the Business."

How Much Does Executive S&OP Cost?

Surprisingly little. It involves relatively few people: dozens, not hundreds, in an average-sized business unit of, say, $100 million to $1 billion in annual sales. Thus, the education and training costs are low. It normally doesn't require a full-time project team or even a full-time project leader. Software plays a relatively minor role in Executive S&OP, so computer costs range from moderate to zero.

This is not to imply that "S&OP is free" or anything like that. Rather, the costs are largely in people's time, not in out-of-pocket dollars. The primary resource consumption is people, not money.

Back to software. Many companies have found that Executive S&OP will require that they do a better job of forecasting and that good forecasting software will help them do that. Some companies already have all they need; Excel™ has surprisingly good support for forecasting. For the S&OP spreadsheet itself, most companies also use a spreadsheet package such as Excel.™ More on software later; for now, just be aware that it doesn't need to cost you very much at all.

The other expenditure that some companies incur is consulting costs. We'll discuss this aspect of implementation in Chapters 7 and 8, but for now let's just point out that these costs are typically less than $100,000 over the life of the eight- to ten month implementation cycle. If you don't need software and are able to use an experienced internal advisor, your out-of-pocket costs will be near zero.

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FREQUENTLY ASKED QUESTIONS

This process sounds very formal. Is it too rigid?

Executive S&OP is all about managing change. Think about it: if things never changed, or changed only once per year, there would be no need for Sales & Operations Planning. It's there because things change.

Executive S&OP gives you the ability to make changes very quickly because there's an agreed-upon game plan already in place. Without Executive S&OP, there's seldom a total plan; each department has its own. With Executive S&OP, the foundation's in place because the key players have already bought into one single plan. All that needs to be addressed are the changes arising from new conditions.

Yes, there is a structure and a logic to Executive S&OP but it's far from rigid. It's a tool to manage change.