

## Chapter 1 Overview: The S&OP Process

### Overview and Objectives

Sales and operations planning is the key process for developing a company game plan. This game plan ensures that overall resource capability meets total market demand. While it is primarily a **volume-oriented** process, it does establish the set of numbers to which all other detailed plans and schedules can be synchronized. And it is linked to those numbers as changes occur in the marketplace, in the manufacturing environment, and in the overall supply chain. In this way it integrates all the functions of the business. In a very real sense it becomes “management's handle on the business” – the basic set of controls that senior management has to establish and adjust the activities of the organization in support of agreed business objectives.

A working S&OP process does all of the following:

- Institutionalizes management decision-making and communication, especially in the areas related to customer demand and manufacturing volumes.
- Balances demand and supply in a way that meets the needs of the customer as well as of the business itself and, where appropriate, provides for sensible shock absorbers when supply and demand are not equal.
- Integrates financial and operating plans.
- Links strategic plans with detailed plans and schedules.
- Regulates all detailed master schedules and sales plans.
- Provides "long range vision" to other more short sighted processes, especially to resolve potential long-range capacity, material and financial issues before they become crises.

First and foremost, sales and operations planning is a decision making and communications process. Instead of relying on decisions that may be made without complete information or by an informal communications network (that may or may not reliably disseminate them), a company that implements S&OP will use a structured process so that decisions about key business activities and issues are made using facts, and a communications structure where dissemination of those decisions is routine (institutionalized) and occurs on a regular schedule.

Sales and operations planning engages key people in sales and marketing, in engineering and product design, in manufacturing and purchasing and logistics, in finance and other key areas to ensure that all the members of the management

team – up and down the organization – are working to the same set of numbers. And even more important, it ensures that those numbers were developed and agreed through a rational and integrated process that engaged all those key people.

Second, the S&OP process helps ensure that demand and supply are in balance over time, at least in volume terms, and in those instances when they are not, that there is a sensible shock-absorber in place to cushion the difference. Typical “shock-absorbers” for S&OP include *inventory*, the *order backlog*<sup>1</sup> (equivalent to the lead time for delivering against a customer order), or *flexibility in manufacturing or the supply chain*. In this way, customer demands can continue to be met, without passing highly variable demand into the upstream supply chain or immediately requiring that supply plans be adjusted.<sup>2</sup>

Third, it links operating plans with projected financial results, and tracks results against budgets and financial plans for the year. Although it’s not exactly “a monthly update to the business plan” as it is sometimes described, it is the single process in most companies that is capable of showing performance against the business plan each month and projecting it through the end of the current fiscal year.

Fourth, it is the key linkage between the business and strategic planning process, and the detailed planning and execution systems in the company. It provides the mechanism to reconcile high-level plans, and then communicate the agreed upon company game plan to sales, finance, engineering, research and development,

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<sup>1</sup> The backlog in a manufacturing company is the total quantity of sales orders waiting to be fulfilled. While some companies use the term backlog to mean “past due” orders, the correct definition encompasses all orders that have been booked but have not yet been shipped. An order promised twelve weeks into the future, for example, is part of the company backlog even though it is not past due.

For an interesting description of where this term originated, see American Word Origins, Houghton Mifflin and Company, or look it up on-line at [answers.com](http://answers.com).

<sup>2</sup> The fact that S&OP is a volume oriented process should not suggest that managing mix is unimportant. Nothing could be further from the truth – the fact is that you need to manage both mix and volume. Manage volume improperly and you’ll never have the proper resources to deal with the mix – leading to poor customer service, lowered profitability, etc. Manage mix improperly and all the good plans you may have had for keeping demand and supply in balance in aggregate go out the window – probably leading to poor customer service, lowered profitability, etc.

manufacturing, purchasing, etc. An effectively managed sales and operations planning process promises greater visibility, better managed finished goods inventories or customer backlogs, and better customer service.

The approved sales and operations plan is a regulator of all the other plans and schedules: it is the budget that management sets for the master production schedule, and, in turn, all the supporting plans. The sales plan and the supply plan, two outputs from this process, regulate the detailed planning and scheduling for most of the company.

People are involved in developing the high level plans and reconciling them to create a company game plan. This company game plan, although perhaps not the best marketing plan, or the best manufacturing plan, or the best engineering plan, balances the needs of sales and marketing against the capabilities of the factory or supply chain to produce or procure. Individual sales plans can be created that are consistent with the factory's ability to produce. Conversely, supply plans can be developed to support both long-term sales plans and inventory and backlog targets and with the financial plans of the business.

In the long term, the marketplace should be the driver and the factory should meet the needs of the marketplace. In the short term, however, factory limitations may determine the rates of supply (production).

An effective sales and operations planning process:

- Sets objectives for customer service
- Projects the order backlog and customer lead time
- Projects inventories and finished goods inventory investments
- Establishes monthly shipping goals
- Establishes company manning levels
- Projects cash flows
- Projects profit
- Establishes budgets for material
- Drives capital investment decisions and expenditures

Finally, sales and operations planning gives distance vision to important processes like lean manufacturing, that would otherwise be incomplete with regard to long range material and capacity planning needs. While lean manufacturing ranks as one of the most important changes in Western manufacturing in the late 20th Century, it is arguably short-sighted, dealing with short term planning, and scheduling and execution activities – typically with