

Product development



figure 1

In the first article of this series on sales and operations planning (S&OP), we defined S&OP as an integrated business management process through which the executive/leadership team continually achieves focus, alignment, and synchronization among all the functions of the organization. This includes sales and marketing, operations, supply chain management, finance and product development.

What I often find when performing an assessment of an existing S&OP process is that it is limited only to supply and demand balancing. New product development and finance typically are not considered as part of

the S&OP process (figure 1).

This results in two problems. First, by omitting the new product requirements, revenue and capacity requirements are normally understated. Second, without the financial assessment of the plan, the discussion becomes a tactical middle management discussion rather than a senior management strategic business discussion. Product development will be the focus of this article while finance will be featured later in the series.

Sales and operations planning is a five step process (figure 2); the first step of which is the product management review. It describes and details the future direction of the product

portfolio, and includes new products, additions to the product lines, product improvements, repositioning of current products, and end-of-life rationalization of older products.

A company must plan sufficient new products to replace older products and fuel business growth. In addition, management needs to know whether they are just churning new products (ie replacing old with new with no volume growth) or truly growing revenue in the future. This is critical as studies have suggested that for every 23 new product ideas generated, only eight of them move into development, and only two or three of them eventually become commercial.

With that drop-out rate it is

Integrated Business Management - S&OP

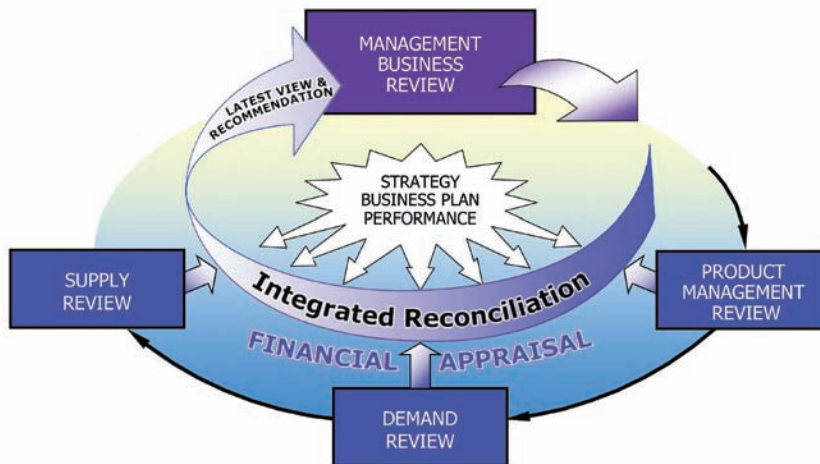


figure 2

critical for senior management to have visibility into the new product development process so they can effectively manage the aggregate flow of these new products to assure that the business plan will be met. They must ask whether there are enough viable new products coming through the pipeline to support the business plan, and whether those new products are on schedule.

The product development step begins with a brand or product strategy that must align with the company's strategic direction and objectives. Each new product must relate directly to at least one business strategy. All of the new product ideas should be evaluated against a series of business filters to ensure alignment to the strategy. If the product idea fits the business strategy, it is then prioritized and the resources are provided to support the activities needed to develop and bring the new product to market. In this step senior management should also determine whether this is the best use of business resources compared with

other potential activities and whether the correct priority has been assigned.

Once the new product passes the business filter checkpoint and has been assigned a priority relative to the other new products in development, it enters a project control process that includes decision checkpoints that review the status of the project. Typically, companies are using a stage gate process to manage their new product process. In the stage gate process, as new products move through the various development stages, there are specific checkpoints where a review and evaluation take place to ensure that the deliverables of that stage have been achieved. Until those deliverables are met, the project cannot move forward into the next stage.

Senior management needs to know if each new product in this step has achieved the specified criteria for this stage of development. If not, a decision must be made whether to stop the development completely, rework the stage, or redesign the product.

After the stage gate process has

been established to verify that the new products are meeting the requirements at each gate and they are on schedule, a series of progressive milestones are then developed to manage progress between the decision checkpoints.

Once the business filters, the stage gate process, and milestones are in place, we can now use the information to develop a resource management program. With this information we should be able to identify the key resources needed and any constraints that require attention.

Using a rough cut capacity planning process, we can identify each of the skill sets and competencies needed across all the new products and the timing of when those resources will be needed. This enables us to evaluate the feasibility of the total plan and to identify and locate the potential gaps that may hinder our ability to successfully execute the new product plan. The gaps must be identified as part of the product management review step of the sales and operations planning process. Further, to be effective, recommendations must be provided to senior management as to how those gaps will be resolved.

The product management review step in the sales and operations planning process includes inputs such as the brand/product strategy, the stage gate plan for each new product, the status of each new product against its milestones, the rough cut resource requirements, and any marketing initiatives or promotions supporting the new product initiatives (figure 3). These inputs are essential for the new product review meeting which is attended by representatives from research and development, product development; as well as appropriate product managers and business unit managers.

The product management review



figure 3

step is owned by either the head of product development or the head of marketing. It is facilitated by a new product coordinator who has the accountability to pull all the inputs together prior to the meeting and facilitate the new product meeting.

In this meeting, the milestone schedules are reviewed on all new products. Where new products have fallen behind schedule, action plans are established to get them back on schedule. Changes to schedules are approved and all new products entering the process are then checked against the appropriate business filters. Performance to plan in terms of schedules (launches/gates, milestones on-time) also are measured and used as inputs to the total resources required to accomplish the new product plan.

The outputs of this new product review meeting are the new family plans (figure 4), the dashboard (figure 5), and issues arising out of the new product plans that need to be resolved, along with all the assumptions and risks documented. The new family plans are graphical presentations of the demand plan, supply plan, and the resultant inventory plan for all the new products. This provides senior management the visibility into the aggregate amount of new products, and helps them to determine whether there is enough "new" coming along to support the business plan.

The dashboard typically is a traffic-light color-coded graphical view of all the new products in terms of schedule and resource requirements. Green indicates the product is on or ahead

of schedule, and the resources needed for development are available. Yellow represents a potential problem with either the schedule or the resources needed in the future. Red warns that the schedule is in jeopardy, the resources are not available to support this project, and/or that the launch date will not be met.

The outputs from the new product review meeting provide the inputs for other steps in the S&OP process. For example, one set of the output is used in the demand meeting for inclusion in the demand plan. The demand plan is a statement of the total demand on the company for all products, both existing and new.

A second use is for the senior management sales and operations planning meeting (called the management business review) where

New Product Review

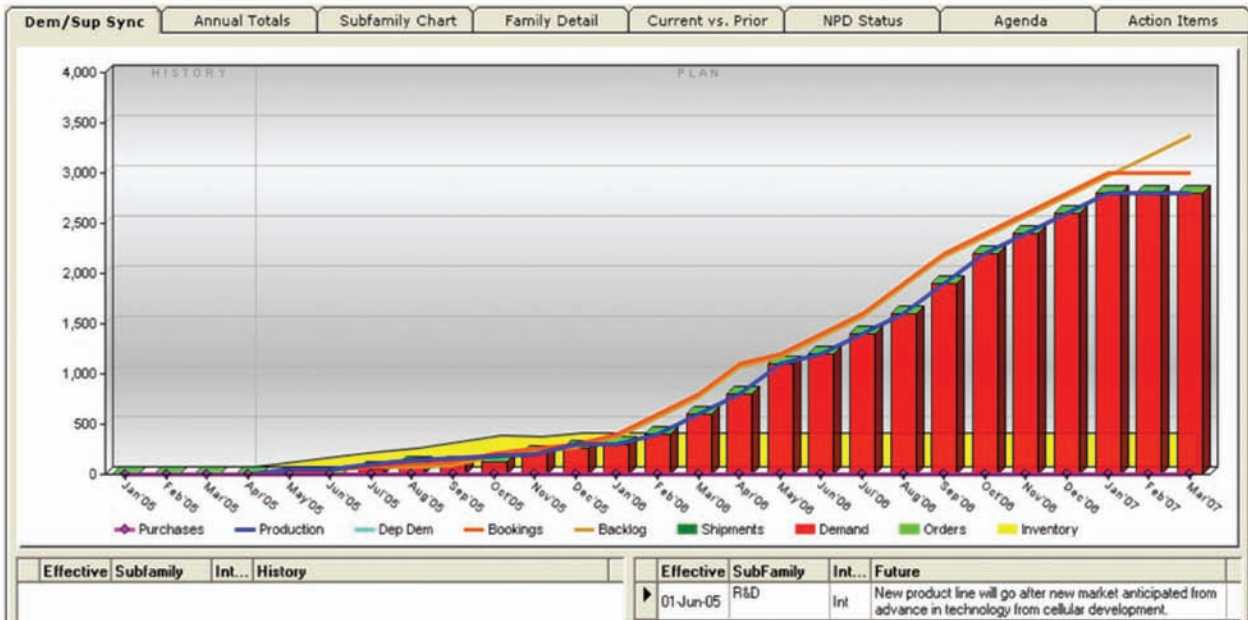


figure 4

New Product Review

NPD Status

Product Description	Resource	Schedule	Demand Supply Inventory	Current NPD Stage	Plan Launch Date	Scheduled Launch Date
Enhanced Oxide Transmitter	Green	Yellow	Red	5	Jul-06	Aug-06
M2 Receiver	Green	Green	Green	5	Sep-06	Sep-06
1300nm Receiver	Green	Green	Yellow	4	Dec-06	Dec-06
10Gbs Transmitter	Yellow	Yellow	Yellow	3	Apr-06	May-06
10Gbs Receiver	Yellow	Red	Green	3	Apr-06	Jun-06
6000 Sensor	Green	Green	Green	2	Jun-06	Jun-06
HS Transmitter chip	Red	Green	Green	1	Sep-06	Sep-06

figure 5

the data and information is either approved, or if there are issues with the schedule or the required resources, action plans are defined to resolve the potential conflicts.

The product management review meeting of the sales and operations planning process establishes a valid achievable product development plan across all products that is balanced to available resources and where the exceptions are recognized and managed.

The third article in this series will address the demand meeting where a valid demand plan for both existing and new products is developed. ■

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