A Better Framework for Evaluating S&OP Processes

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The dream of every manufacturer is an operations planning process that has high forecast accuracy, is very responsive to changes in demand, results in well-balanced supply-and-demand and maximizes revenue. A plan created by such a process will ensure that the organization is able to meet its overall demand as well as customer order metrics at the lowest delivery cost. In order to achieve this dream, organizations have tried to implement a sales and operational planning (S&OP) process within their environment, but only a few organizations can claim to be satisfied with their results.

One reason is that successful implementation requires the process to be supported with the right technology. According to IDC [1], the business complexity will be far better managed — and at a pace commensurate with the "speed of business" — with a purpose-built S&OP application. For example, building a feasible plan and matching demand with supply are about modeling volume, but determining the profitability of various options shifts the model to cost and revenue trade-offs, which many planning technologies do not support well. How can companies evaluate the right S&OP-enabling technology?

Operational planning without the enabling technology

Most organizations typically use a spreadsheet-based method to drive their sales and operations planning process. In such an environment, each functional area of the company extracts data from various internal systems and uses it as a starting point to create their departmental plan. Result is a very silo-ed planning process — the sales plan identifies a bookings number that the sales team is driving towards, operations has a number for building inventory, finance has an overall profitability target and marketing has a trade promotions volume. More often than not, these numbers are very different.

All of these plans, in isolation, may make sense for the individual department, but often have detrimental results on the company as a whole. Why promote a product if we can’t get it to the shelf? Why build inventory if the demand is not there? The organization is in danger of not building enough of the right mix of products, or carrying too much inventory. When departments actually do try to share these plans, it usually is on a manual basis through, spreadsheets and e-mails.

It becomes challenging to integrate these different plans, with so much data in them, into a company-wide, cohesive plan. As a result, any formal, companywide planning meetings to get everyone on the same page ends up becoming focused on the current period— the organization isn't prepared to look forward two quarters or more. The result is a very reactive environment, which creates the risk of having too

much or not enough of inventory, not to mention deteriorating key operational and financial metrics.

Financial/Business KPIs impacted by S&OP	Operational KPIs impacted by S&OP
Revenue Growth	Customer Service Level
Cost to Serve/Supply Chain Cost	Forecast Accuracy
Profit Margin	Inventory Levels/Days Inventory Outstanding
Market Share	Capacity Utilization
	% Perfect Order Delivery
	Return on Net Assets
	Planning Cycle Time
	Source: SAP Analysis

Figure 1: Key Performing Indicators (KPIs) improved by well-implemented S&OP process

If an organization attempts to implement a S&OP process without using appropriate enabling technology, it leads to three fundamental issues.

- Each group uses its own baseline and assumptions to create their respective plans. As a result, a lot of effort is spent in reconciling multiple departmental plans to create an organization-wide plan.
- Majority of the time during the planning process is spent on extracting data from various systems at the right level of detail for creating a baseline departmental plan, leaving very little time for analysis and scenario planning.
- With manual tools, it becomes challenging to see the impact on various operational and financial metrics, which prevents the organization from creating a plan that optimizes multiple metrics simultaneously. As a result, the suggested plan ends up maximizing only a subset of metrics.

An S&OP-enabling technology framework

As supply chains have grown more complex, and outside-in, there is a need for a specially architected solution for S&OP. Generic business intelligence oriented solutions with some data extraction and simple modeling capabilities do not work well – they may make it easier to extract data or drill down into a plan or visualize the plan better, but only end up addressing a part of the requirements. A purpose-built S&OP solution should support the following five key capabilities (see figure 2):

- Data Extraction
- Planning Process
- Collaboration
- Scenario Planning

- Visualization

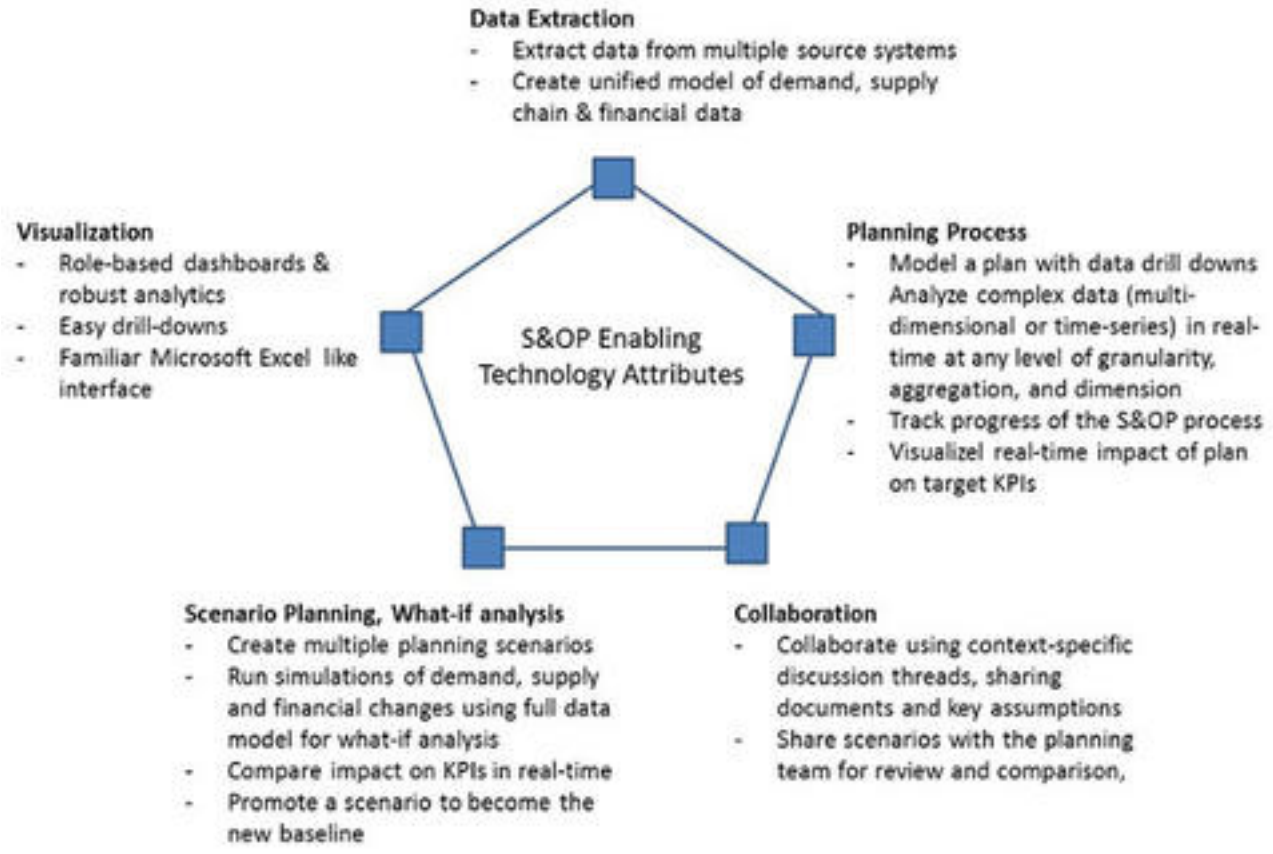

Figure 2: Key components of a purpose-built S&OP solution

Any solution that supports all the five key capabilities described above can enable a company to gain more control over their S&OP process by eliminating the use of disparate spreadsheets and replace it with a consensus on the numbers and letting analysts spend time detailing information instead of chasing and reconciling data. By eliminating manual extraction and reconciliation and taking a lot of wasted time out of the process, one can also move from a quarterly planning cycles to monthly planning cycles, enabling them to become more responsive to changing demand. Key inputs such as marketing budgets, sales pipeline opportunities and new product introduction plans can easily be incorporated into the planning process — collaboration capabilities enables an organization to seek broader inputs and still coalesce around a single number.

Imagine a scenario where the S&OP technology extracts data from different operational systems within the environment (such as the ERP system, supply chain execution system, demand forecasting system and so on), transforms the data into a common format and stores into a database designed for rapid simulations and analysis of business decisions and impacts. Each department then utilizes this data to create their plan and then collaborates with each other to arrive at a shared baseline. Each department also then creates alternative scenarios, evaluates the impact on metrics and shares them with the team members from other departments. From there, meetings are scheduled for the cross-functional teams to discuss the plan, as well as alternative scenarios, in order to agree on approaches.

Information is presented to the executive team at formal S&OP meetings once a month, from which a plan emerges.

In summary, by using purpose-built S&OP technology based on a framework described above, one will find their organization creating operational plans that are feasible, where supply and demand is in balance. Their flexibility to respond to special requests from key customers will be increased. Perhaps most importantly, their business objectives — such as profitability, revenue or flexibility — can be maximized while their responsiveness to changing demand patters is higher.

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