



White Paper

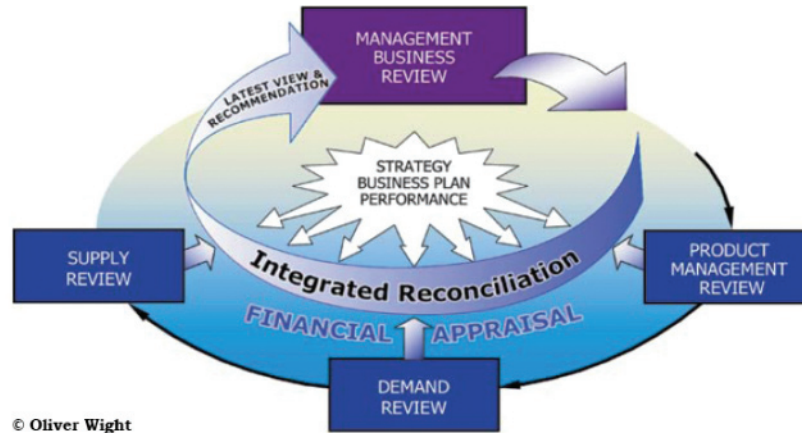
**KINAXIS**<sup>™</sup>

Four Capabilities Required  
for 21<sup>st</sup> Century Sales and  
Operations Planning

## Four Capabilities Required for 21<sup>st</sup> Century Sales and Operations Planning

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## INTEGRATED BUSINESS MANAGEMENT - S&OP



### THE SALES AND OPERATIONS PLANNING PROCESS: ADAPTING TO TODAY'S BUSINESS REALITIES

Oliver Wight, business improvement specialists and pioneers in sales & operations planning (S&OP), define S&OP as a senior management decision-making process that ensures that the tactical plans in all business functions are aligned and support the business plan<sup>1</sup>.

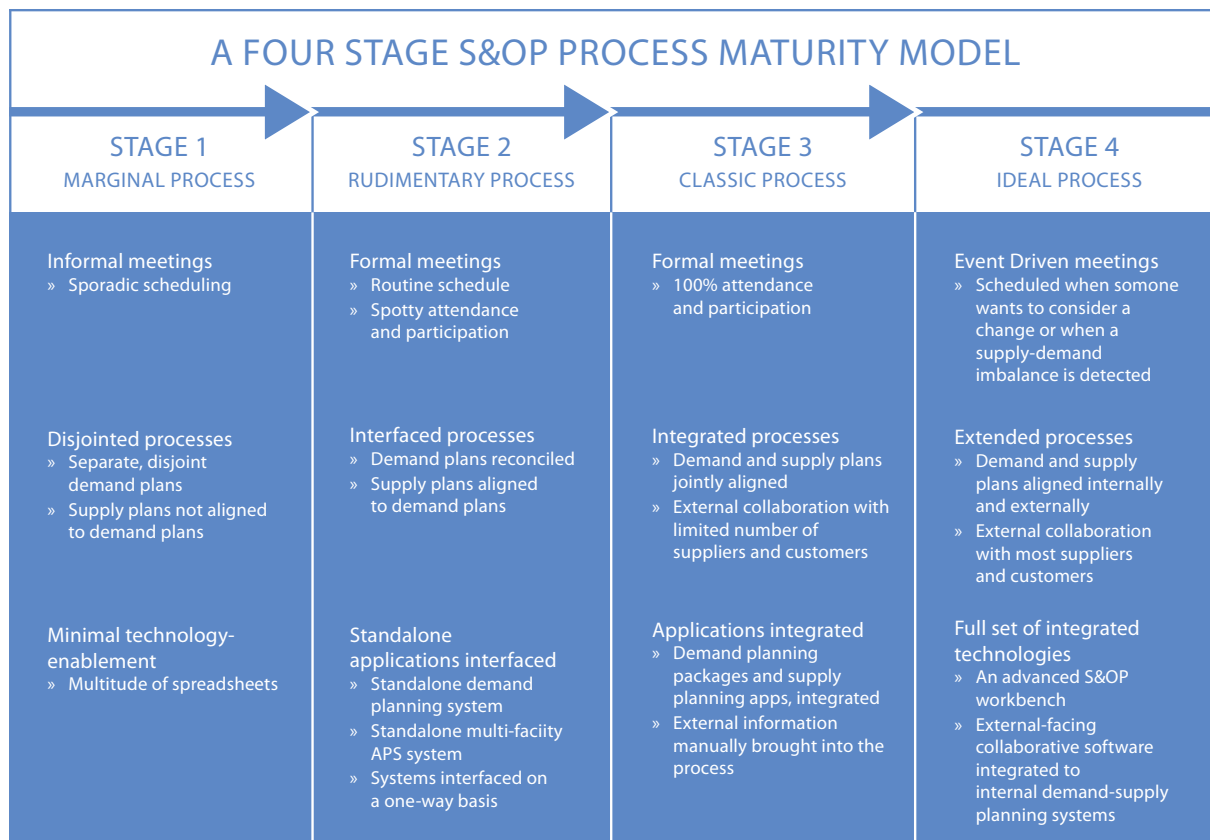
Oliver Wight<sup>2</sup> depicts this process as per the figure below, whereby:

- there are four clear stages – three of which are preparation (Product Management Review, Demand Review, and Supply Review) for an executive meeting at which decisions get made (Management Business Review). The relative degree of importance of the three preparation stages will depend on the particular industry.
- the controlling mechanisms are the strategic business plan and the financial appraisal of the S&OP plan *against* the strategic business plan.
- the process is carried out on a regular cadence – typically monthly or quarterly.

S&OP is a process defined as long as 30 years ago. Much has changed in the structure and manner in which business is conducted since then. In addition, technology used to plan and operate a business has matured from very rudimentary MRP systems focused on manufacturing in a single site into web based solutions for multi-tier collaboration between organizations. However, the S&OP process used by many organizations reflect the history of S&OP rather than the reality of today.

1. [http://www.oliverwight-america.com/our\\_approach/sop/salesandoperationsplanning.htm](http://www.oliverwight-america.com/our_approach/sop/salesandoperationsplanning.htm)

2. "Top Ten Success Factors for Sales & Operations Planning": *Managing Automation*, 11/8/2007; Colleen Crum, Oliver Wight



Larry Lapide<sup>3</sup> of MIT outlined a maturity model to determine the extent of adoption of ideal S&OP practices in organizations. Many organizations still operate in Stage 1 of the S&OP maturity model, though an ever increasing number of companies have reached Stage 2.

Aberdeen Group's view is that S&OP has matured into Integrated Business Planning<sup>4</sup>, with the key differences between the two being that:

- The objective has moved from unit measures to financial measures
- It is a collaborative process, not only internally, but also externally with customers and suppliers
- There is still a monthly cadence, but also a strong emphasis on acting on exceptions captured through monitoring the plan performance

Area	Traditional S&OP	Integrated Business Planning
Business objective	Supply/ demand balancing	Not simply about matching demand and meeting customer needs. Considers several plan alternatives and chooses one that best represents the business drivers. Objective is revenue and profit
Process	Rigid and prescriptive	Process is more rules and exceptions based
Technology	Weak and non-integrated	Technology enables the processes through workflows
Frequency	Monthly or quarterly	Still monthly in lot of cases but with ability to rapidly handle exception situations
Focus	Inward focused	Collaborative and outward focused

Source: Aberdeen Group, July 2006

3. *Sales and Operations Planning Part III: A Diagnostic Model*, Larry Lapide, The Journal of Business Forecasting, Spring 2005

4. *The Technology Strategies for Integrated Business Planning Benchmark Report*, Nari Viswanathan, Aberdeen, July 2006

## PROCESS VS. TECHNOLOGY: ON EQUAL FOOTING

Oliver Wight, along with many other consultants, emphasizes the importance of process over technology; however, many of the industry’s analysts are now promoting technology as a fundamental enabler for S&OP, largely to overcome the limitation of Excel, which has been the predominant tool of choice (or as many would argue, due to lack-of-choice).

None suggest that a process should *not* be in place, but that technology is critical to enabling a truly effective process given today’s unforgiving business environment which demands:

- more frequent S&OP cycles,
- collaborative scenario analysis, and
- *ad hoc* plan performance reviews

As Nari Viswanathan of Aberdeen Group notes:

“Netting demand and supply more frequently (going from monthly or quarterly, to weekly and even on-demand) allows the incorporation of market changes. The result can be very fruitful in terms of working capital reductions, customer service improvements, supplier relationship improvement along with growth and market share gains.”

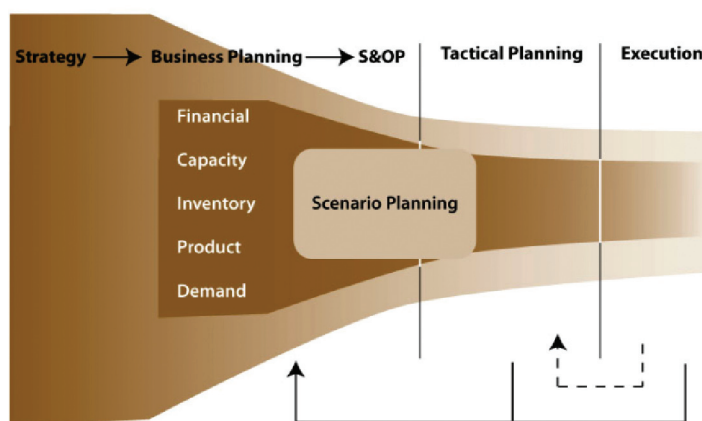
“The Technology Strategies for Integrated Business Planning Benchmark Report”: Aberdeen Group  
July 2006, Nari Viswanathan

AMR Research provides a similar perspective, but adds the requirement for scenario planning as a key enabler of an effective S&OP process.

“S&OP leaders recognize that risk is a fact of life. Rather than placing all of their bets on a one-number plan, they hedge against supply, demand, and product volatility by using scenarios to evaluate the value impact of decision alternatives.”

“Next-Generation S&OP: The Path to Bottom-Line Value”:  
AMR Research July 2007

**Figure 9:** Scenario planning: connecting strategy, tactics, and execution



Source: AMR Research, 2007

Aberdeen Group also emphasizes the need for scenarios by stating that:

“S&OP is no longer just about balancing supply and demand. It is about searching for and executing the most profitable strategy out of many possible scenarios.”

“The Secrets to S&OP Success”: Supply Chain Management Review  
May 2006, Maha Muzumdar and John Fontanella, Aberdeen Group

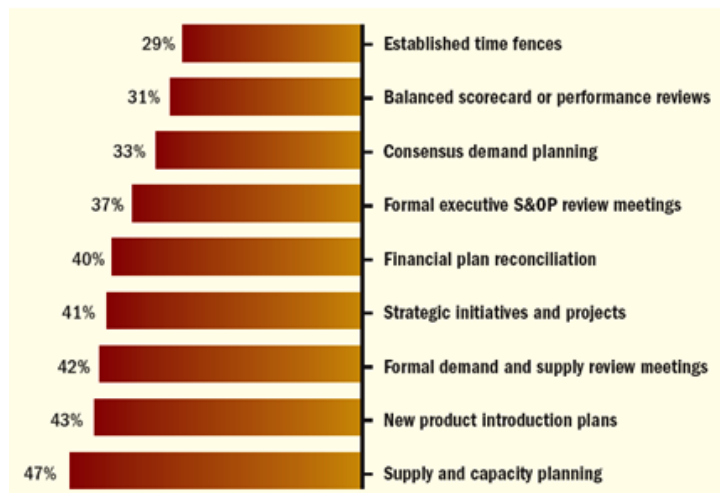
Few companies have S&OP processes that have reached the level of maturity described by Mazumda and Fontanella. Nevertheless, there is a clear progression to a more frequent S&OP process which takes into consideration the strategic business plan of the company. In addition, issues related to the need to respond to unexpected events at an operational level are being resolved at the operational level rather than being escalated to the executive ranks. This is possible because some tools now provide daily decision makers with operational and financial impact analysis of the alternative scenarios they wish to investigate.

By its very nature, S&OP crosses operational boundaries, and therefore requires a collaborative environment in which organizations with competing objectives can reach a compromise while understanding the result – financial and operational – of the decisions being made. There have been many attempts in the past to create cross-functional teams to overcome the very real structures and obstacles imposed by the requirements of financial management and reporting, which have had limited effect, largely because the team members have not been able to understand the consequences of a compromise on their departments performance measures.

One of the primary requirements of scenario planning is the ability to provide an environment in which all the people responsible for the business area which is impacted are able to collaborate in order to reach a compromise solution. Human judgment must be brought in to the process to allow sometime competing and contradictory business objects to be discussed in an open forum, using a balanced scorecard to provide an objective evaluation of the scenarios. The balanced scorecard should use both operational and financial key performance indicators (KPI's) so that all parties can understand the consequences of decisions at the corporate, divisional and departmental levels.

Interestingly though, Colin Snow of Ventana Research<sup>5</sup> found that supply and capacity planning was the most prevalent manner in which S&OP has been implemented (47%), whereas a balanced scorecard or performance review (to evaluate alternative scenarios and to monitor the actual performance against plan) was conducted in only 31% of cases.

#### Tasks included in S&OP



Source: Ventana Research

This is a clear indication that the adoption of technology solutions that enable all the necessary capabilities is still in the early stages. The vast majority of organizations still perform S&OP at Level 2 or below on the Lapide maturity model. Until recently technology was not available to enable more mature processes. In particular, creating and evaluating several scenarios has been a very time consuming and error prone process. Business Intelligence (BI) tools are able to report the results of actions taken, but not calculate the anticipated results of the scenarios considered. ERP and APS tools can calculate the results, but not many can compare several scenarios side-by-side. None of the ERP, APS, and BI tools provide a collaborative environment in which several scenarios can be evaluated using a balanced scorecard and human judgment can be used to compromise between the contrasting scenarios.

#### MUST-HAVE CAPABILITIES FOR NEXT GENERATION S&OP: TECHNOLOGY REQUIREMENTS

Discussing Ventana Research's report, "Sales and Operations Planning," Colin Snow states that,

"...topping the wish list of [S&OP] software capabilities are scenario what-if analysis and a real-time S&OP dashboard. Respondents also want collaborative demand planning, automated financial planning reconciliation and profit-based S&OP, features that would solve process shortcomings."

"How Good is your S&OP?": Consumer Goods Technology  
June 2007, Colin Snow, Ventana Research

#### SCENARIO MANAGEMENT

Among that wish list, Snow revealed that, "... respondents ranked difficulty in doing what-if analysis as the No. 1 concern with their S&OP software..."

S&OP is an exploratory process based upon many unknowns and assumptions. A key inhibitor to effective S&OP is a capability in which multiple "what-if" scenarios can be simultaneously created and evaluated quickly and effectively. The different scenarios need to be compared side-by-side so that decisions can be made based upon rational information. In addition, because S&OP requires compromise between the performance measures and objectives of different organizations, the technology should enable a collaborative environment in which the people required to participate in the scenario(s) are identified automatically and invited to participate. For example, a supplier may agree to ramp up production of a component for a new product early because the sales numbers are trending above plan, and the inventory manager may need to agree to holding increased inventory of the component even though there is increased risk.

While spreadsheets, such as Excel, are an excellent personal productivity tool, they lack the ability to quickly and effectively create new scenarios with input from several people. More importantly, aggregating and consolidating the results of the different scenarios for comparison requires yet another spreadsheet. Overall, Excel lacks the necessary scalability, in-depth analytics, and required collaborative responsiveness to manage an active S&OP process

5. *How Good is your S&OP?*, Colin Snow, Ventana Research, Consumer Goods Technology, June 2007

FINANCIAL MEASURES AND RECONCILIATION

Once again, Snow states that,

“... 90 percent of companies that report overwhelming gains in revenue include finance in their S&OP process, as do 70 percent of companies that report gains in gross margin, 56 percent that report gains in forecast accuracy and 76 percent that report gains in customer satisfaction.”

“How Good is your S&OP?": Consumer Goods Technology June 2007, Colin Snow, Ventana Research

The operational objectives set by executive management are almost always expressed in financial measures such as gross margin, cash-to-cash cycle, economic value-add, etc. An effective S&OP tool must have a rich and deep capability of converting the unit based view of the users into financial measures which are relevant to executive management.

In addition, the technology must provide a structured mechanism for disaggregating financial measures into unit measures so that senior executives can make decisions at the financial level. While many of the capabilities described above should be provided as standard in an S&OP solution, provision must be made for user level creation of additional financial measure specific to an individual organization.

Performance measures, both financial and operational, should be able to be ranked and then compared across scenarios to obtain a balanced scorecard and an objective way of determining the best set of scenarios to include in the executive review during the S&OP process. Modification of the rankings of KPI's on standard balanced scorecards should be managed by an administrator to ensure consistency and conformance. However, users should be able to easily and independently create their own balanced scorecard.

EARLY ALERTING

Crum states that,

“Sales and operations planning is used by the leadership team to close gaps. ... You want to know if you have a gap as soon as possible. And by knowing it sooner, you have more time to respond and react than if you just find it out at month end or quarter end, for instance.”

“Top Ten Success Factors for Sales & Operations Planning” (webinar), Managing Automation, November 2007, Colleen Crum, Oliver Wight

As discussed by Crum, key to the effective adoption of S&OP is the tracking of KPI's within the S&OP cycle to understand how the company is performing according to the financial targets. Early warning to the fact that certain KPI's are projected to exceed tolerance levels allows the organization to take corrective action before they become a problem. For real value, alerting analytics need to take into account the domino relationship and cumulative effects of multiple events.

For example, while a supply order may arrive only one day late (which may be within tolerance from a supplier management perspective), the consequence could be that a major new order will be delivered later, or even worse, lost. This in turn might mean a downward trend for gross margin. With these tools, such an occurrence would cause an alert to be sent to a senior manager, allowing him to take appropriate action.

More importantly, there could be several small changes at the operational level, each of which each is within tolerance and therefore do not generate alerts. However, the cumulative effect of these changes could be, say, a 5% drop in revenue for the quarter, large enough to warrant executive attention.

“You cannot improve what you cannot measure ... The emerging best metrics, such as gross margin, encompass the two-way impact of demand and supply decisions, rather than having separate and unrelated metrics for each.”

“The Secrets to S&OP Success”,  
Supply Chain Management Review  
April 2006 Maha Muzumdar and John Fontanella, Aberdeen Group

MANAGEMENT BY EXCEPTION

Closely related to alerting is the capability to drill down to these exceptions which cumulatively cause a particular KPI to trend out of tolerance in order to understand the root cause of the out-of-tolerance condition. In the example above, the executive could identify all sales regions in which the projected sales revenue is below target. These can be ranked in order, allowing the executive to rapidly identify the regions on which to focus.

When contrasted to the common approach of performing ad hoc analysis and data extracts using spreadsheets, as adopted by many companies in similar situations, the improvement in productivity and effectiveness afforded by tools with an instant drill-down and data analysis capability is readily apparent.

SUMMARY

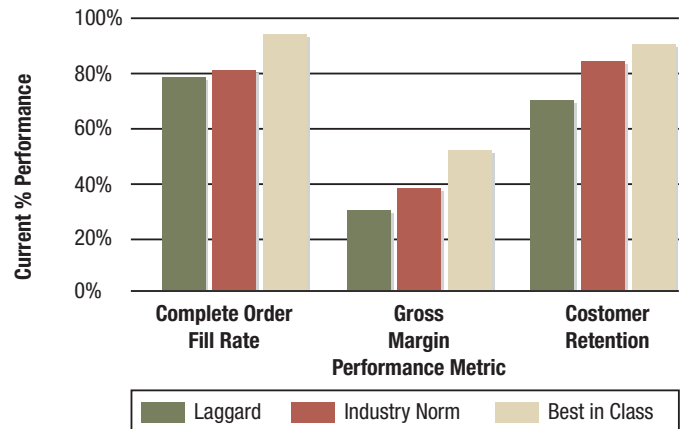
Aberdeen<sup>4</sup> reports that the best-in-class S&OP adopters report significant financial and operational benefit. In today’s world of fickle consumers and customers, the most striking of the measures is customer retention. However, from a pure financial perspective, a 20% difference in gross margin between the best-in-class companies and the laggards, clearly illustrates the benefits achieved by those companies with a higher level of S&OP process maturity.

So while there is no question that S&OP is a very effective and beneficial management tool, it was initially developed over 30 years ago when calculators were still something of a novelty and personal computers were the domain of hobbyists. We had to wait another decade for personal productivity tools such as Lotus 123 and Excel... nearly 15 years before effective graphical user interfaces were developed... and 20 years before the internet began to have an effect of the way we worked and conducted business.

Business has changed radically in the same time period. Multi-national companies were still a relative novelty. And they may have had sales organizations around the globe, but very few had operations in other countries. Adding to that the pervasive trend of outsourcing that has taken place during this time, it is clear that decision processes have also changed.

Thus, the S&OP process – which was designed to provide executives a forum for operational decision making in the absence of modern computing tools – needs to be reassessed and updated to take advantage of more modern technology concepts and capabilities.

**S&OP Practices are a Prime Determinant of Business Performance**



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## ABOUT KINAXIS

Kinaxis™ RapidResponse is a single on-demand service that empowers multi-enterprise manufacturers with integrated demand-supply planning, monitoring, and collaborative response capabilities. RapidResponse embraces human judgment to enable planners and front-line responders to handle unpredictable changes. Global leaders such as Casio, Honeywell, Jabil, Qualcomm, and Raytheon use RapidResponse to achieve breakthroughs in sales and operations planning (S&OP), demand management, supply management, and supply chain risk management. The results are superior customer service, improved operations performance, and a competitive market advantage. For more information, visit the Kinaxis web site at [www.kinaxis.com](http://www.kinaxis.com) or the company's blog at [www.21stcenturysupplychain.com](http://www.21stcenturysupplychain.com).

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