

# **Sales and Operations Planning:**

Aligning Business Goals with Supply Chain Tactics

June 2008



## Executive Summary

Sales and Operations Planning (S&OP) was identified as the number two area of focus for companies, based on a recent survey of 805 companies for the *Supply Chain Executive's Strategic Agenda* study. Aberdeen is continuing its research on the S&OP process, with over 300 respondents taking part in the May 2008 survey dedicated to S&OP. The goal of this year's report is to identify how the S&OP process is helping corporate executives accomplish their overall business strategy. The four broad strategies being: product differentiation, customer service differentiation, cost reduction, and profitability.

### Best-in-Class Performance

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Aberdeen used four key performance criteria to distinguish Best-in-Class companies (the top 20% of respondents):

- Increased Return on Net Assets (RONA) over the last two years: 43% of respondents with 5% and above improvement
- Customer service levels (on-time and complete to the customer's requested date): 97%
- Average cash conversion cycle: 15 days
- Average forecast accuracy at the product family level: 86%

### Competitive Maturity Assessment

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Best-in-Class companies are able to obtain significant competitive differentiation through maturity along different dimensions of process, organization, performance measurement, and knowledge management. For example, Best-in-Class companies are:

- 50% more likely to adopt advanced demand sensing and management capabilities
- More than twice as likely to have the ability to align the S&OP plan with the company's financial goals
- 50% more likely to have a full-time S&OP coordinator managing the S&OP process
- Three-times as likely to proactively monitor daily performance against S&OP metrics
- Twice as likely to understand business systems (ERP, advanced planning, BI) and utilize them effectively

### Required Actions

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In addition to the specific recommendations in Chapter Three of this report, to achieve Best-in-Class performance, companies must look carefully at how to enforce a collaborative view towards the S&OP process. Some companies have gone the route of creating a globally integrated supply chain organization consisting of supply chain and procurement. Other companies have created shared metrics based on S&OP performance to enforce collaboration.

#### Research Benchmark

Aberdeen's Research Benchmarks provide an in-depth and comprehensive look into process, procedure, methodologies, and technologies with best practice identification and actionable recommendations

"World class performance through empowerment is a key goal for Adtran. We need to unlock the true potential of our greatest asset the employee."

~ Tom Dadmun, Adtran,  
During Aberdeen's 2008 Supply Chain Summit While Discussing Adtran's Supply Chain Transformation Initiatives

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## Chapter One: Benchmarking the Best-in-Class

### Business Context

Sales and Operations Planning (S&OP) was identified as the number two area of focus for companies, based on a recent survey of 805 companies for the *Supply Chain Executive's Strategic Agenda* report. Hence, S&OP continues to hold the attention of most companies. Aberdeen is continuing its research on the S&OP process and in May 2008 over 300 respondents took part in an Aberdeen survey dedicated to the topic. Figure 1 shows the Integrated Business Planning (IBP) process which is an advanced form of S&OP (according to the *Technology Strategies for Integrated Business Planning* report). The focus of this report is to highlight some key areas where companies can improve their S&OP process and evolve into an IBP leader.

#### Fast Facts

- ✓ **32%** of respondents indicate that their primary business strategy is profitability
- ✓ **47%** of these respondents indicate that S&OP impacts profitability the most
- ✓ Only **12%** of respondents indicate that their organization adopt “return on asset analysis (profit velocity)” to evaluate the profitability of products and customers

**Figure 1: S&OP's Evolution into Integrated Business Planning**



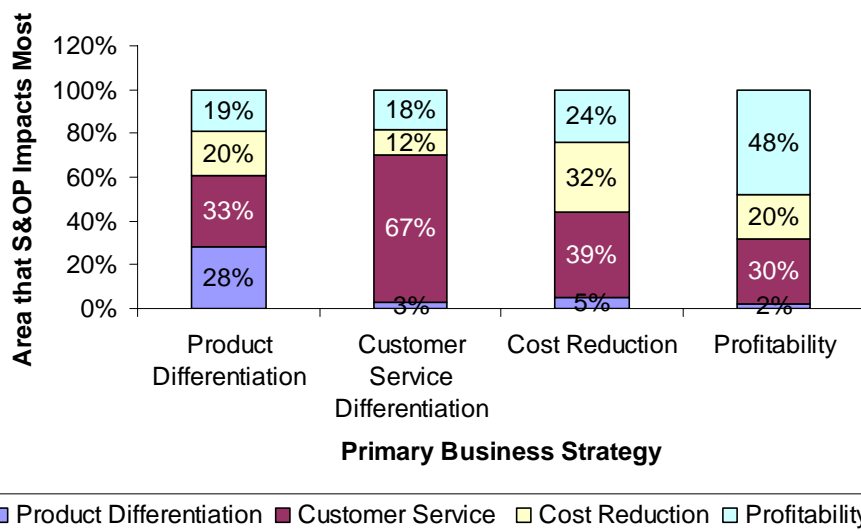
Source: Aberdeen Group, June 2008

The key difference between S&OP and IBP is that IBP involves extensive collaboration between the various roles of the organization and enables the unification of business goals and strategies rather than just being a functional supply chain process. Because the goal of this year's report is to identify how companies are using their S&OP process to help accomplish business strategies, there are also IBP implications. The four broad strategies that are

assumed are: product differentiation (17%), customer service differentiation (26%), cost reduction (25%), and profitability (32%).

As shown in Figure 2, for each business strategy there is a misalignment of business goals and the area where respondents indicate that their S&OP process impacts the most. For example, the respondents that indicate that profitability is the primary business strategy, 52% of companies do not consider profitability to be the area where S&OP impacts the most.

**Figure 2: Primary Business Strategies of Company and S&OP as an Enabler**



“Rising fuel costs are creating an impact in completely unexpected ways. Our strategy of increasing market share and reducing prices are being offset by increase in commodity prices.”

~ VP of Supply Chain at Global CPG Manufacturer

Source: Aberdeen Group, June 2008

When asked about the top business pressures forcing companies to look into S&OP, the top three identified are: rising supply chain costs, including transportation costs, inventory carrying costs, etc. (44%); meeting customer service expectations (41%); and volatile market resulting in high uncertainty in demand (36%). This is consistent with the macro economic conditions existing currently in the marketplace with rising fuel costs, rising commodity prices, and general inflationary conditions.

In order to further analyze S&OP processes, Aberdeen identified Best-in-Class characteristics for people, process, technology, and metrics.

### The Maturity Class Framework

Aberdeen used five key performance criteria to distinguish the Best-in-Class from Industry Average and Laggard organizations. These metrics are determiners of Best-in-Class status with respect to both S&OP excellence.

#### Fast Facts

- √ Only 1% of respondents identified sustainability-related issues as a top pressure; however, based on the survey of over 800 companies, this percentage is expected to rise

**Table 1: Top Performers Earn Best-in-Class Status**

Definition of Maturity Class	Mean Class Performance
<b>Best-in-Class:</b> <b>Top 20%</b> of aggregate performance scorers	<ul style="list-style-type: none"> <li>▪ Increased Return on Net Assets (RONA) over the last two years: 43% of respondents with 5% and above improvement</li> <li>▪ RONA: 15%</li> <li>▪ Customer service levels (on-time and complete to the customer’s requested date): 97%</li> <li>▪ Average cash conversion cycle: 15 days</li> <li>▪ Average forecast accuracy at the product family level: 86%</li> </ul>
<b>Industry Average:</b> <b>Middle 50%</b> of aggregate performance scorers	<ul style="list-style-type: none"> <li>▪ Increased Return on Net Assets (RONA) over the last two years: 12% of respondents with 5% and above improvement</li> <li>▪ RONA: 5%</li> <li>▪ Customer service levels (on-time and complete to the customer’s requested date): 91%</li> <li>▪ Average cash conversion cycle: 2 months</li> <li>▪ Average forecast accuracy at the product family level: 74%</li> </ul>
<b>Laggard:</b> <b>Bottom 30%</b> of aggregate performance scorers	<ul style="list-style-type: none"> <li>▪ Increased Return on Net Assets (RONA) over the last two years: 0% of respondents with 5% and above improvement</li> <li>▪ RONA: -5%</li> <li>▪ Customer service levels (on-time and complete to the customer’s requested date): 81%</li> <li>▪ Average cash conversion cycle: 4 months or more</li> <li>▪ Average forecast accuracy at the product family level: 60%</li> </ul>

Source: Aberdeen Group, June 2008

### The Best-in-Class PACE Model

Leveraging S&OP processes to achieve corporate goals requires a combination of strategic actions, organizational capabilities, and enabling technologies that are summarized in Table 2.

**Table 2: The Best-in-Class PACE Framework**

Pressures	Actions	Capabilities	Enablers
<ul style="list-style-type: none"> <li>▪ Rising supply chain costs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Manage demand forecasts within the S&amp;OP plan</li> <li>▪ Provide executive visibility to S&amp;OP process</li> <li>▪ Manage supply constraints within the S&amp;OP plan</li> <li>▪ Process re-engineering projects</li> <li>• Create a profit optimized supply demand balanced plan</li> </ul>	<ul style="list-style-type: none"> <li>▪ Align the S&amp;OP plan with the company’s financial goals</li> <li>▪ Ability to respond to unplanned events in a timely manner</li> <li>▪ Ability to consider pricing as a parameter to shape demand</li> <li>▪ Ability to perform constrained and unconstrained scenarios during supply demand balancing</li> </ul>	<ul style="list-style-type: none"> <li>▪ Demand planning</li> <li>▪ Supply planning</li> <li>▪ Inventory planning</li> <li>▪ Executive reporting</li> <li>▪ Scenario management</li> </ul>

Source: Aberdeen Group, June 2008

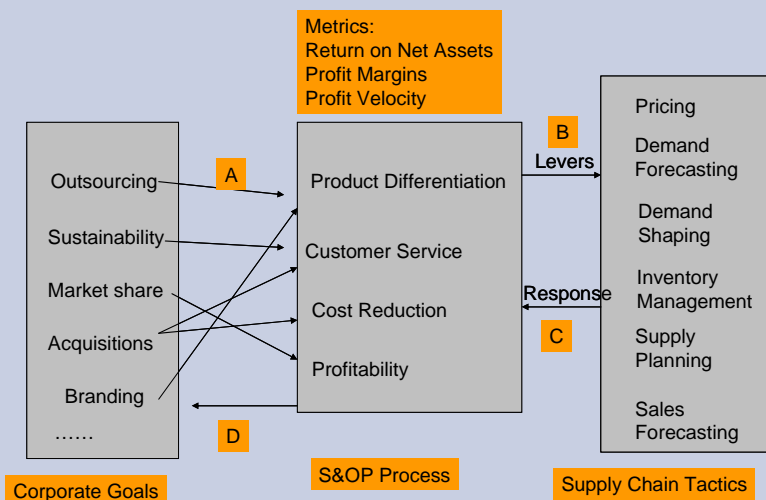
### S&OP Process: A Company's Command and Control System

The following are examples of business goals that corporations typically have and how it translates to the four major business strategies that have been defined.

- Business goal of **product innovation** – product differentiation strategy due to innovative products that are game changing
- Business goal of **outsourcing** – cost reduction strategy due to lowered total landed costs
- Business goal of **sustainability** – product differentiation strategy due to green products
- Business goal of gaining **market share** – profitability strategy due to higher pricing potential, customer service due to economies of scale
- Business goal of growth through **acquisitions** – cost reduction due to synergies, improved customer service due to better fulfillment networks, etc.
- Business goal of **growth** through high quality branding – product differentiation due to improved product quality perception

The four business strategies have to be thought of as levers that can be impacted by the S&OP process. The attributes associated with S&OP like demand, capacity, materials, inventory, and price can then be modified based on the leverage strategy or strategies adopted. Figure 3 illustrates these concepts.

**Figure 3: S&OP Balancing Corporate Goals and Supply Chain Tactics**



Source: Aberdeen Group, June 2008

*continued*

## S&OP Process: A Company's Command and Control System

### Legend:

- A A company may have multiple corporate goals dictated by the business climate, share holders, and customers. These goals are often complex, conflicting, and difficult to achieve.
- B Each of these goals can be converted into a combination of the four basic business strategies. These business strategies act as levers that can be adjusted based on managing the various attributes associated with the S&OP process. The real question is "what should be the position of these levers?"
- C The position of the attributes provides the "response" to the levers and dictates how these business strategies should be met through the supply chain tactics.
- D Once the tactics have been identified, it needs to be communicated to the management team in terms of corporate goals as part of the executive S&OP process.

Integrated business planning refers to the advanced form of the S&OP process which follows the workflow identified earlier. In most companies, there are gaps and opportunities for improvements to their process. For example, only 15% of companies, on average, indicate that their business strategy and the outcome of their S&OP process are the same.

In the next chapter, we will see what the top performers are doing in terms of actionable process, organization, knowledge management, and technology related areas of S&OP.

## Chapter Two: Benchmarking Requirements for Success

The orchestration of S&OP processes and integration with existing people, process, and technology is critical to ensuring the success towards achieving corporate goals.

### Case Study - Consumer Products: Demand and Supply Balancing

**Company background.** To improve their ability to balance demand and supply, a leading Consumer Products company worked with a large consulting solution provider to design and implement integrated supply chain processes in the demand management, supply planning and sales and operations planning (S&OP) areas. The key business pressures that the company faced was:

- High inventory with no differentiation of customer or SKU service levels
- High inventory write-offs of discontinued and promotional SKU's
- Poor forecast accuracy with a bias to over forecast
- Informal collaboration processes with no customer input
- Lack of process consistency and documentation

#### Barriers and challenges:

- The company did not have clearly defined processes in the areas of demand management, supply planning and S&OP.
- The company did not have a demand planning or supply planning organization or resources to support the processes.

#### Result:

- **Formal sales and operations planning process.** The key benefit of developing new demand and supply planning processes was the integration and improved communication across the organization through an S&OP process. The S&OP process implemented was a formal decision making forum that is facilitated through a series of collaborative meetings with all of the business functions. By bringing executive level decision makers together monthly with a holistic view of customer demand and supply capabilities, fact based business decisions can be made and implemented uniformly. The S&OP process was a significant departure from the current operating model.

*continued*

#### Fast Facts

- √ **43%** of Best-in-Class companies are able to align their S&OP plan with their company's financial goals versus 20% of all other companies
- √ **43%** of Best-in-Class companies are able to consider the phase in / phase out of products during the S&OP process versus 15% of all other companies

### Case Study - Consumer Products - Demand and Supply Balancing Case Study

- **Dramatic increase and consistency in forecasting accuracy.** Based on the new demand planning process and organization design, this Consumer Products Company is now developing forecasts at the customer – SKU – monthly level. Forecast accuracy with a six week lag at the SKU monthly level is consistently in the mid 70s (for 7 months) which is an overall improvement of 15 percentage points or 27%
- **Improved run strategy.** Significant contribution to inventory was attributed to the run strategy. Typically, the company planned large runs to help reduce the overhead absorption rate. By developing a numerically based run strategy which considered changeover times, current inventories and batch sizes, the team was able to increase run frequency by as many as four times on the first production line piloted.
- **Reduced inventory levels.** As a result of the improved forecast accuracy, moving to an ABC inventory stratification and improved run strategy, the latest data shows approximately 10% reduction in open stock (non-promoted items) inventory.

**Key takeaway.** Alignment of corporate goals with supply chain tactics has resulted in a streamlined S&OP process.

### Competitive Assessment

Aberdeen Group analyzed the aggregated metrics of surveyed companies to determine whether their performance ranked as Best-in-Class, Industry Average, or Laggard. In addition to having common performance levels, each class also shared characteristics in five key categories: (1) **process** (the approaches they take to execute their daily operations); (2) **organization** (corporate focus and collaboration among stakeholders); (3) **knowledge management** (contextualizing data and exposing it to key stakeholders); (4) **technology** (the selection of appropriate tools and effective deployment of those tools); and (5) **performance management** (the ability of the organization to measure their results to improve their business). These characteristics (identified in Table 3) serve as a guideline for best practices, and correlate directly with Best-in-Class performance across the key metrics.

**Table 3: The Competitive Framework**

	<b>Best-in-Class</b>	<b>Average</b>	<b>Laggards</b>
<b>Process</b>	Ability to sense and forecast based on customer demand		
	54%	20%	15%
	Ability to align the S&OP plan with the company's financial goals		
	43%	22%	20%
	Ability to consider major constraints during the supply demand balancing		
	52%	28%	25%
	Ability to consider pricing as a parameter to shape demand		
	36%	25%	15%
	Ability to respond to unplanned events in a timely manner		
	38%	19%	17%
Ability to consider phase in / phase out of products during the S&OP process			
	43%	19%	11%
<b>Organization</b>	Formal S&OP meeting timing and schedule		
	60%	55%	47%
	Full time S&OP coordinator managing the S&OP process		
	48%	31%	25%
Cross-functional S&OP team			
	58%	38%	32%
<b>Performance Management</b>	Ability to consider the KPIs from the previous periods with regards to capacity, forecast accuracy, and inventory		
	68%	40%	15%
	Ability to express the S&OP plan in terms of revenue and margins		
	42%	27%	21%
	High-level reporting designed for executive management		
	45%	29%	28%
Ability to proactively monitor daily performance against S&OP metrics			
	41%	14%	12%
<b>Knowledge Management</b>	People view the supply chain holistically in terms of linked processes		
	42%	26%	17%
	People understand business systems (ERP, advanced planning, BI) and utilize it effectively		
	50%	29%	16%
	People utilize statistical analysis and fact based decision making		
	43%	24%	19%

	Best-in-Class	Average	Laggards
<b>Technology</b>	Technology currently in use:		
	<ul style="list-style-type: none"> <li>▪ 37% demand planning</li> <li>▪ 48% supply planning</li> <li>▪ 34% scenario management</li> <li>▪ 38% executive reporting</li> <li>▪ 40% inventory planning</li> <li>▪ 14% price optimization</li> </ul>	<ul style="list-style-type: none"> <li>▪ 37% demand planning</li> <li>▪ 33% supply planning</li> <li>▪ 19% scenario management</li> <li>▪ 26% executive reporting</li> <li>▪ 37% inventory planning</li> <li>▪ 11% price optimization</li> </ul>	<ul style="list-style-type: none"> <li>▪ 16% demand planning</li> <li>▪ 31% supply planning</li> <li>▪ 10% scenario management</li> <li>▪ 16% executive reporting</li> <li>▪ 24% inventory planning</li> <li>▪ 7% price optimization</li> </ul>

Source: Aberdeen Group, June 2008

## Capabilities and Enablers

Based on the findings of the Competitive Framework and interviews with end users, Aberdeen’s analysis of the Best-in-Class demonstrates the following capabilities and enablers in process, organization, performance management, and technology.

### Best-in-Class Focus on Demand

Best-in-Class companies are 50% more likely to adopt advanced demand sensing and management capabilities. The S&OP journey for the majority of companies needs to start with the demand planning process. The majority of companies have some form of demand forecasting system in place; however, they need to focus on becoming real-time in their approach to becoming demand driven. They need to be setting up demand signal repositories based on customer demand and ensure that sales is highly engaged in this process as well.

### Constrained Planning

Best-in-Class companies are more than twice as likely to have the ability to consider major constraints during supply demand balancing. Having the ability to manage constraints within the S&OP process is highly linked to the nature of technology tools available. By definition, the process is extremely difficult to be handled manually and through spreadsheets. The best approach is leveraging light-weight solutions that have the ability to do scenario analysis and rough cut capacity planning within themselves but also provide the ability to link to an Advanced Planning and Scheduling (APS) tool.

### New Product Introduction

Best-in-Class companies are 2.8-times as likely to have the ability to consider phase-in / phase-out of new products during the product review

process. Only 25% of companies indicate that their engineering / R&D teams are involved in the S&OP process. Product design differentiation is a key business strategy that is highly misaligned with the S&OP process. The primary reason for this is the highly siloed nature of the organizations as well as the software solutions. Product information management, ERP, Master Data Management (MDM), and demand management are all involved in some aspect of product introduction processes but are un-integrated and worse when it comes to replicating business processes.

### **Price and Profit Optimization**

Best-in-Class companies are two-times as likely to have the ability to consider pricing as a parameter to shape demand. Sixty-one percent (61%) of companies indicate that marketing is involved in their S&OP process, however only 4% of companies indicate a strong process capability with pricing. From a needs perspective, it has to be noted that only 15% of companies have indicated a strong need for this capability; however, pricing is definitely an area that has to be looked at as an attribute along with others such as demand, supply, capacity, inventory, and carbon footprint.

### **Scenario Management**

Best-in-Class companies are:

- 1.8-times more likely to have the ability to create upside scenarios (profit) to analyze the S&OP plan
- More than four-times as likely to have the ability to create downside risk assessment scenarios to analyze the S&OP plan
- More than two-times as likely to have the ability to align the S&OP plan with the company's financial goals

Scenario management can be obtained through multiple sources: Excel, point solutions that provide an Excel interface, BI tools, performance management modules from point solution providers, and so forth. The following capabilities, however, are critical for such solutions:

1. Add on module that can be integrated to any underlying ERP or supply chain suite
2. Provide opportunities for S&OP managers to do what-if analysis in the executive S&OP meeting itself
3. All data needed for conducting S&OP meetings, as well as demand planning and supply planning pre-S&OP meetings, is available in one place
4. The S&OP plan needs to be viewed in terms of both revenue and earnings based on average selling prices
5. Management should be able to examine summaries by user-defined periods, such as quarters or total years, and any data or graph can be exported to Excel for custom analysis

“We are leveraging a supply chain analytics tool that allows us to have capabilities that are the best of both worlds of excel and powerpoint which were used previously in our S&OP meetings. This tool is expected to drives our meetings more efficiently by providing the capability to do what-if analysis without doing excel programming.”

~Deep Parmar, Sr. Director,  
Sales Administration &  
Customer Service for Constar

6. Ability to do rough cut capacity planning to balance supply and demand based on financial considerations
7. Translate S&OP families to manufacturing families for capacity planning
8. Ability to add overtime and additional shifts or make other adjustments to ensure that demand is met
9. Inventories need to be projected over time at the S&OP family level, both in dollars and in volume, for comparison to target levels
10. S&OP meetings are very long and involve different constituencies within the company like sales, marketing, operations, and procurement. In order for the S&OP coordinator to run the meeting effectively there is a need to manage the meeting agenda and running it efficiently. Typically PowerPoint slides are used in this effort.
11. When S&OP meetings are run, action items emerge that need to be assigned to different stakeholders and managed by the S&OP coordinator. The software solution should allow for capturing these action items within the context of the various reports associated with demand review, supply review, and so forth.

## **Response Management**

Best-in-Class companies are two-times as likely to have the ability to continuously monitor the S&OP plan to ensure plan quality compared to all other companies. Additionally, Best-in-Class companies are two-times as likely to have the ability to respond to unplanned events in a timely manner compared to all other companies.

The creation of an S&OP plan is only the beginning. Best-in-Class companies are gaining a significant advantages due to their superior response management capabilities. This requirement is especially true in outsourced manufacturing environments where the manufacturer has ceded significant control over to the suppliers while simultaneously needing to maintain very low cycle times.

The key takeaway is that Best-in-Class companies are much more focused on developing end-to-end process capabilities, including demand sensing and management, supply planning, and inventory planning. This is not an easy activity given the fact that the aforementioned areas are often handled by different departments and hence may have different priorities.

## **Organization**

Best-in-Class companies are two-times more likely to have a full-time S&OP coordinator managing the S&OP process compared to all other companies. We see the lack of S&OP ownership penetrating other Best-in-Class organizational capabilities. For example, the involvement of a cross-functional team in the S&OP process is three-times more likely in organizations with an S&OP coordinator.

The level of executive participation with the supply chain also impacts the effectiveness of the S&OP process. Best-in-Class companies have either a VP of Supply Chain (38%) or Director of Supply Chain (35%). All other companies, however, are two-times more likely to have a Supply Chain Manager as the highest ranking executive involved. While these companies are relying on local management, Aberdeen sees a trend towards the Chief Supply Chain Officer among Best-in-Class companies. We see the involvement of the finance organization drop by 16 percentage points in companies with the Supply Chain Manager as the highest ranking executive. Furthermore, organizations with a Chief Supply Chain Officer or VP / Director of Supply Chain have a broader view of the supply chain as these organizations are 62% more likely to have a view that is aggregated across the supply chain or aggregated across the value chain (includes trading partners, suppliers and customers).

“We measure success as a company based on three metrics: Sales, EBITDA, and Sustainability. We have to have great performance in all three categories – and we provide financial incentives for meeting or beating our sustainability goals.”

~Executive VP Supply Chain  
Burt's Bees

### **Performance Measurement**

Best-in-Class companies are highly focused on operational BI capabilities rather than analytical BI. Best-in-Class companies are:

- 2.8-times more likely to consider the KPIs from the previous periods in terms of capacity, forecast accuracy, and inventory compared to all other companies
- 2.7-times as likely to express the S&OP plan in terms of revenue and margins compared to all other companies
- 60% more likely to utilize high-level reporting designed for executive management compared to all other companies
- Three-times as likely to proactively monitor daily performance against S&OP metrics compared to all other companies
- 2.5-times as likely to be proactively alerted when they are no longer on track to meet S&OP objectives compared to all other companies

This implies that any performance measurement capabilities that are invested in must be supported by tight and rapid linkages to the planning as well as execution processes. For example, being able to rapidly re-plan a facility after realizing that the facility is underutilized based on capacity reports.

### **Knowledge Management**

Best-in-Class companies are:

- 1.7-times as likely to view the supply chain holistically in terms of linked processes compared to all other companies
- Two-times as likely to utilize statistical analysis and fact-based decision making compared to all other companies
- Nearly three-times as likely to practice advanced cost management in supply chain processes compared to all other companies

- Two-times as likely to understand business systems (ERP, advanced planning, and BI) and utilize it effectively compared to all other companies

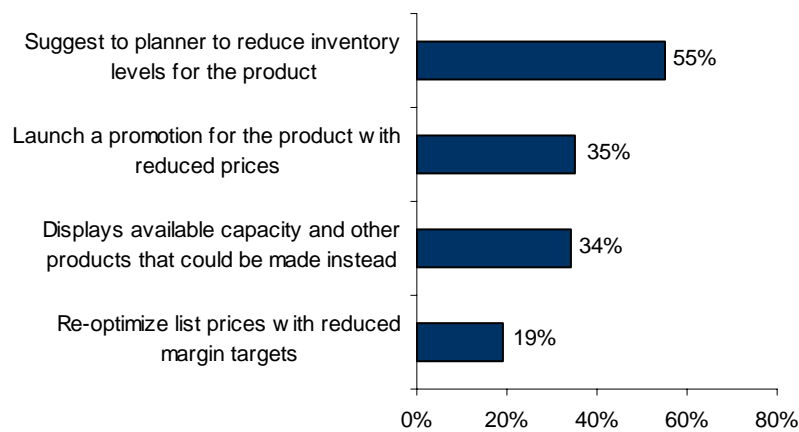
The key takeaway is that Best-in-Class companies are much more likely to possess supply chain talent that is able to understand the details of their business systems and are able to perform fact based decision making. In the absence of any technology, Best-in-Class companies will continue to do well because they simply possess a competitive advantage based on their people.

### Technology

Table 3 identified the key technology enablers that companies have implemented and the extent of their maturity along each of these areas. Demand planning is an area where the maximum attention has been spent in the past and it continues to be a key area of impact towards S&OP excellence.

In order to further explore how technology enablers can help companies to address supply chain issues as part of the S&OP process, we can look towards resolution capabilities for handling demand shortage (Figure 4) as well as resolution capabilities for handling supply shortage (Figure 5).

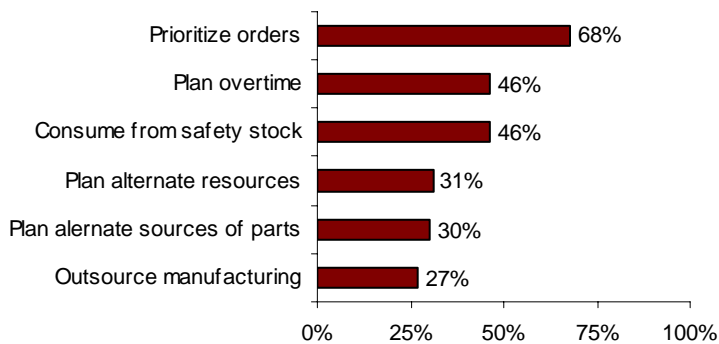
**Figure 4: Resolution Capabilities for Handling Demand Shortage**



Source: Aberdeen Group, June 2008

These figures show that the majority of companies either do not have sophisticated resolution capabilities or possess basic capabilities.

**Figure 5: Resolution Capabilities for Handling Supply Shortage**



Source: Aberdeen Group, June 2008

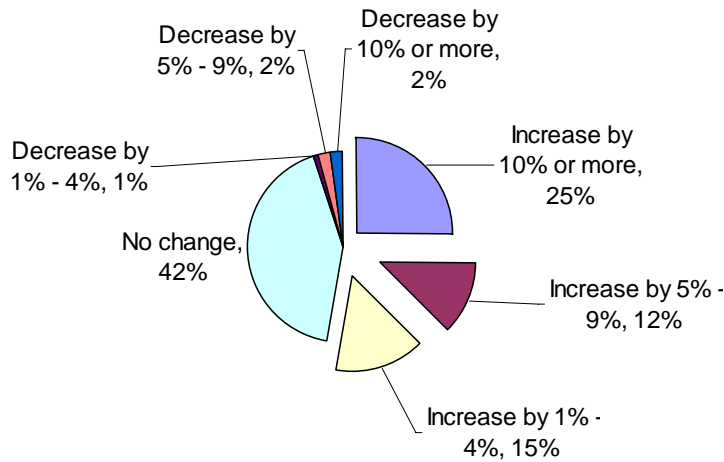
Faster and more frequent S&OP cycles are required to keep pace with shorter product life cycles, compressed order lead time requirements, and more dynamic demand. Technology enables automating these processes as well as decreases the time that S&OP planners spend on manual operations versus doing more productive work. More importantly, technology enables the ability to rapidly react when real-life scenarios unfold in real-time like supply shortages or plant breakdowns.

Some critical decision parameters are overall margin, product family level margins, budget (financial plan), inventory, supply capacity, demand accuracy, and service level requirements. These decision parameters are often multi-dimensional and often involve attributes that may be different at different levels of aggregation. For example, demand accuracy at a product family level may be measured differently from the demand accuracy at a SKU level. These require support from technology to not only model but also to manage and monitor.

### **Technology Spend Trends in S&OP**

Fifty-three percent (53%) of respondents indicate that they will have increased budget for the organization's initiative with respect to S&OP in the next fiscal year (Figure 6).

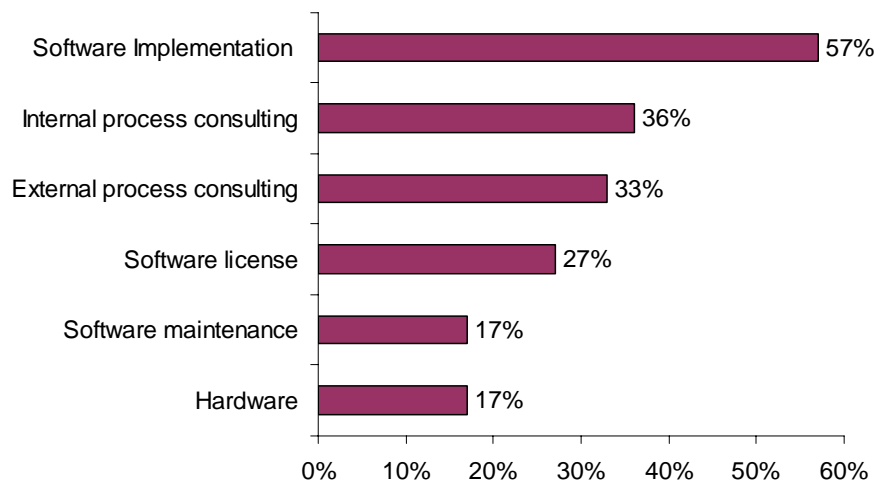
**Figure 6: Percentage Change of Budget for S&OP**



Source: Aberdeen Group, June 2008

In terms of actual spend, only about 40% of respondents indicate that they will be spending more than \$100,000 USD on new S&OP technology projects in 2008. Twenty percent (20%) of respondents indicated a budget of \$500,000 USD and above. This includes costs for software, hardware, services, implementation costs, and other fees. Aberdeen also asked respondents about the top two line items associated with their spending plans (Figure 7).

**Figure 7: Top Two Line Items Associated With Spending Plans**



Source: Aberdeen Group, June 2008

**Aberdeen Insights — S&OP Versus Integrated Business Planning**

The key differences of an Integrated Business Planning process compared with a traditional S&OP process are shown in Table 4.

**Table 4: Integrated Business Planning Process vs. Traditional S&OP**

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
Finance integration	Loose integration	Tight integration – financial goals and supply chain tactics are aligned
Process	Rigid and prescriptive	Process is more rules and exception 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
Key attributes considered	Supply and demand	Supply, demand, inventory, price, carbon footprint

Source: Aberdeen Group, June 2008

Some key additional issues that need to be considered are:

The technology that supports S&OP/IBP should have a holistic perspective of:

- 1) Supply, Demand and Finance
  - a. Demand, including product/customer profitability
  - b. Financials. Financials should be both a constraint and an output.
  - c. All of these elements must be considered simultaneously and not in modules.
- 2) Financial modeling needs to be very deep in order to properly consider and evaluate impact on working capital, profits, cash flow and other financial metrics. In addition, the financial modeling needs to replicate the company’s reporting structure in order to feed directly into the budgeting and planning process.

*continued*

### **Aberdeen Insights — S&OP Versus Integrated Business Planning**

- 3) The technology needs to have deep optimization capabilities. Simulation alone is not sufficient as the impact of constraints and flows across different scenarios will result in an apples vs. oranges comparison.
- 4) Ideally, the optimization and what-ifs should include the ability to set financials as the objective function and to toggle back and forth across different metrics as the objective function for proper analysis.
- 5) The ability to support decisions on product line, price policy, capital expenditures, financial policy, network design, open/close, supply chain policy, etc are also part of the IBP framework. There are three reasons we include these elements:
  - a. All the above have cross-functional implications and therefore collaboration and information are critical
  - b. Decisions need to align with business strategy and financials
  - c. Tactical and operational planning need to align with these decisions and therefore understanding of constraints is critical

## Chapter Three: Required Actions

Whether a company is trying to move its performance in S&OP process from Laggard to Industry Average, or Industry Average to Best-in-Class, the following actions will help spur the necessary performance improvements.

### Laggard Steps to Success

- Institute demand sensing and management based on customer demand. Even though demand management has been identified as a well known enabler of S&OP (according to the [Demand Management in Discrete Industries: Order to Delivery Excellence](#) Benchmark Report), only 15% of Laggards have the ability to sense and forecast based on customer demand as compared to 54% of Best-in-Class companies.
- Companies should refocus their effort towards improving forecast accuracy through getting closer to the customer not only in the retail-CPG sector but also in other B2B areas like general manufacturing and aerospace and defense.
- Implement constrained planning. Only 25% of Laggards have indicated strong process capabilities in their ability to perform unconstrained scenarios during supply demand balancing, versus 52% of Best-in-Class companies.
- S&OP is not only a technology issue, it is also a people issue. Forty-three percent (43%) of Best-in-Class companies utilize statistical analysis and fact-based decision making versus 19% of Laggards. Hence, Laggards should invest in training to make sure that their existing systems are utilized better to perform constrained planning.
- Monitor S&OP plan to point of execution. Only 19% of Laggards have indicated strong process capabilities in the ability to continuously monitor the S&OP output to ensure plan quality, versus 38% of Best-in-Class companies.
- No plan can be perfect. The S&OP plans have to be looked at in terms of providing a baseline as well as a boundary within which the execution must take place. Any changes in supply chain tactics that are happening during the short term must be weighed against the overall S&OP plan.
- Institute a formal meeting schedule. One hundred percent (100%) of Best-in-Class companies have a formal S&OP meeting schedule as compared to 32% of Laggard companies. Laggard companies need to ensure that they have a formal S&OP meeting schedule in place so that they can ensure that the different stakeholders (like procurement, finance, manufacturing, and engineering) participate in the S&OP process.

### Fast Facts

- √ **52%** of Best-in-Class companies indicate the strong process capability to perform unconstrained scenarios during supply demand balancing
- √ **40%** of Best-in-Class companies indicate the strong process capability to be proactively alerted when you are no longer on track to meet objectives
- √ **50%** of Best-in-Class companies indicate that their people understand business systems (ERP, advanced planning, BI) and utilize it effectively

## Industry Average Steps to Success

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- New product introduction. Forty-three percent (43%) of Best in Class companies have a strong process capability to consider phase-in / phase-out of products during the S&OP process as compared to 18% of Industry Average companies. In an environment where product life cycles are rapidly shrinking, this ability is a key requirement for Industry Average companies to focus on. Sustainability pressures are forcing companies to rapidly change their existing product portfolio to make "greener products." This has an implication in the phasing out of existing products and phasing in of new products as efficiently as possible.
- Alignment with financial goals. Forty-three percent (43%) of Best-in-Class companies indicate the strong process capability to align the S&OP plan with the company's financial goals versus 22% of Industry Average companies. Industry Average companies need to ensure that finance has a chair in the S&OP meetings and ensure that the financial / budget plans are discussed as part of the different plans being evaluated. Tools that allow companies to effectively toggle between the financial and operational views must be explored. Some of the commercial tools provide real-time scenario analysis capabilities as well.
- Response management. Thirty-eight percent (38%) of Best-in-Class companies indicate the strong process capability of being able to respond to unplanned events in a timely manner versus 19% of Industry Average companies. The standard S&OP frequency of a month has to be looked at more closely and made more responsive. For example, some companies have a monthly S&OP meeting schedule but do supply demand match much more rapidly – daily or weekly. This requires a well orchestrated data, software, and process infrastructure.
- Invest in improving competency. Forty-three percent (43%) of Best-in-Class companies indicate the strong process capability of utilizing statistical analysis and fact-based decision making versus 24% of Industry Average companies. Improved competencies, in terms of supply chain knowledge, have emerged as a key driver in companies with the looming shortage of talent in supply chain professionals. Companies must create centers of excellence of experts in supply chain, six sigma, and Lean to aid the S&OP process.

"It is our goal to phase out of hazardous products even though competitors actively participate in a strong market for such products."

~General Manager,  
Large Pharma Manufacturer

## Best-in-Class Steps to Success

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- Implement profit and pricing strategies. Thirty-six percent (36%) of Best-in-Class companies indicate the ability to consider pricing as a parameter to shape demand. There are opportunities for these companies to leverage pricing and margin optimization capabilities as part of the operational process of S&OP. This is a key missing link

for companies to evolve their S&OP to an integrated business planning solution.

- Manage risk more effectively. Forty-seven percent (47%) of Best-in-Class companies indicate having the strong process capability to create downside risk assessment scenarios to analyze their S&OP plans. Within this group, 80% of companies actually do not have a formal risk management scenario planning capability. Instead of using rules of thumb risk management (not letting inventory come below a week of supply), companies should look at formal techniques for managing financial risks. The office of the treasurer and CFO of companies should step up to the plate and share their expertise in this area.
- Provide a financial window to the S&OP plan. Forty-two percent (42%) of Best-in-Class companies indicate the strong process capability to express the S&OP plan in terms of revenue and margins.
- Ideally, the output of the S&OP plan should drive the income statement and balance sheets of companies. Best-in-Class companies should create internal projects and SWAT teams wherein the S&OP plan is mapped to the key financial documents with collaboration between finance and supply chain. Once this activity is completed, very interesting insights can be gained by both sides of the organizations, in terms of supply chain tactics that can impact corporate goals and vice versa.

“Our S&OP transformation project runs for a period of three years. We are in the middle, but are running into challenges of ensuring the right level of collaboration between supply chain, procurement, and manufacturing. We find that procurement deviates from the overall plans that we have come up with, and make their own decisions based on local factors. We find the same issue with manufacturing plants making products to maximize capacity.”

~ Vice President of Sales,  
Inventory, and Operations  
Planning, Large A&D  
Manufacturer

### Aberdeen Insights — The Role of Collaboration

In addition to the specific recommendations in this chapter, to achieve Best-in-Class performance, companies must look carefully at how to enforce a collaborative view of the S&OP process. Some companies have gone the route of creating a globally integrated supply chain organization consisting of supply chain and procurement. Other companies have created shared metrics based on S&OP performance to enforce collaboration.

When asked about the functional areas within the organization that were involved in the S&OP process, the top three areas identified were: supply chain operations (86%), sales (85%), and manufacturing (71%). The bottom three areas were engineering / R&D (29%), finance (38%) and procurement (41%). Given the fundamental definition of S&OP striving to obtain a consensus among the different players within the organization, it is indeed a major issue that widespread collaboration among entities is not prevalent.

*continued*

### Aberdeen Insights — Role of Collaboration

S&OP tends to still be perceived as a supply chain activity - 61% of companies report that supply chain operations is the functional area of the company that is most responsible for driving or leading the S&OP process versus 5% of companies reporting finance as the key driver.

It is widely understood (and validated by statistical data) that management needs to be heavily involved in the S&OP process especially at the beginning of the transformation project. However when the transformation projects are underway the executives in charge of S&OP find organizational misalignments. For example, procurement organizations are highly focused on reducing the piece costs of products and this approach may not serve the overall business goals and may not be the right approach as prescribed by the S&OP plan. Another example is the focus of manufacturing departments in maximizing capacity utilization without consideration of profit velocity – namely deciding which products should be manufactured based on profitability rather than purely based on manufacturing velocity.

How can companies overcome these hurdles? Metrics are one way of tackling this issue (for example, having shared metrics for procurement, finance, and supply chain based on meeting the S&OP plan). Another approach is to create a globally integrated supply chain organization where manufacturing, supply chain, and procurement all report up to a Chief Supply Chain officer who has overall visibility and ownership of the supply chain process.

*Send to a Friend* 

## Appendix A: Research Methodology

Between May and June 2008, Aberdeen examined the use, the experiences, and the intentions of more than 300 enterprises involved in Sales and Operations Planning (S&OP) processes and technology solutions in a diverse set of enterprises.

Aberdeen supplemented this online survey effort with interviews with select survey respondents, gathering additional information on S&OP strategies, experiences, and results.

Responding enterprises included the following:

- *Job title:* The research sample included respondents with the following job titles: C-Level executive (CEO, CFO, CTO, CIO) (4%); VP/General Manager (13%); Director (24%); Manager (36%); and other titles (27%)
- *Functional Responsibility:* The research sample included respondents with the following functional areas of responsibility: logistics / supply chain (47%); operations / procurement (18%); IT / BPM (14%); sales and marketing (7%); other areas (14%)
- *Industry:* The research sample included respondents from the four major industry segments - process, consumer, discrete, and high-tech / electronics. (Please note that respondents can select more than one industry segment.) Key demographics include:
  - Discrete (19%): aerospace / defense (1%), automotive (4%), general manufacturing (10%), and industrial equipment manufacturing (4%)
  - Consumer (31%): apparel (2%), consumer durable goods (2%), consumer electronics (4%), consumer packaged goods (9%), distribution (2%), food / beverage (9%), retail (2%), and wholesale (1%)
  - Process (18%): chemicals (7%), metals and metal products (3%), mining / oil / gas (2%), paper / lumber / timber (2%), and pharmaceutical manufacturing (4%)
  - High-tech / electronics (10%): health / medical / dental devices or services (1%); high-technology / telecommunication / computer equipment and peripherals (6%), and telecommunication equipment (3%)
- *Categories of companies:* The research sample included respondents of the following categories: manufacturers (72%), distributor (9%), retailer (6%), logistics provider (7%), contract manufacturer (2%), brand manager (3%) and aftermarket spare parts provider (2%)
- *Description of manufacturing style:* build to stock (55%), configure to order (15%), build to order (24%), engineer to order (5%)

### Study Focus

Responding supply chain executives completed an online survey that included questions designed to determine the following:

- √ The key business strategy that companies are adopting in 2008
- √ The perceived impact of S&OP in helping companies achieve these business goals
- √ The actual impact of S&OP in helping companies achieve these business goals
- √ The Best-in-Class metrics of companies with respect to S&OP
- √ The process, organization, performance management, and knowledge management capabilities of Best-in-Class companies as compared to Industry Average and Laggard companies
- √ Case studies that highlight companies supply chain tactics that enable the business strategies identified

- *Mode of manufacturing:* discrete low volume low mix (5%), discrete low volume high mix (19%), discrete high volume low mix (11%), discrete high volume high mix (21%), process batch (14%), process continuous (9%), and mixed mode balance of process and discrete (21%)
- *Geography:* The majority of respondents (58%) were from North America. Remaining respondents were from the Asia-Pacific region (16%), Europe (16%) and rest of world (South / Central America, Caribbean, Middle East, Africa) (10%)
- *Company size:* Thirty-one percent (31%) of respondents were from large enterprises (annual revenues above US \$1 billion); 47% were from midsize enterprises (annual revenues between \$50 million and \$1 billion); and 22% of respondents were from small businesses (annual revenues of \$50 million or less)
- *Headcount:* Fourteen percent (14%) of respondents were from small enterprises (headcount between 1 and 99 employees); 35% were from midsize enterprises (headcount between 100 and 999 employees); and 51% of respondents were from large businesses (headcount greater than 1,000 employees)

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**Table 5: The PACE Framework Key**

Overview
<p>Aberdeen applies a methodology to benchmark research that evaluates the business pressures, actions, capabilities, and enablers (PACE) that indicate corporate behavior in specific business processes. These terms are defined as follows:</p> <p><b>Pressures</b> — external forces that impact an organization’s market position, competitiveness, or business operations (e.g., economic, political and regulatory, technology, changing customer preferences, competitive)</p> <p><b>Actions</b> — the strategic approaches that an organization takes in response to industry pressures (e.g., align the corporate business model to leverage industry opportunities, such as product / service strategy, target markets, financial strategy, go-to-market, and sales strategy)</p> <p><b>Capabilities</b> — the business process competencies required to execute corporate strategy (e.g., skilled people, brand, market positioning, viable products / services, ecosystem partners, financing)</p> <p><b>Enablers</b> — the key functionality of technology solutions required to support the organization’s enabling business practices (e.g., development platform, applications, network connectivity, user interface, training and support, partner interfaces, data cleansing, and management)</p>

Source: Aberdeen Group, June 2008

**Table 6: The Relationship Between PACE and the Competitive Framework**

<b>PACE and the Competitive Framework – How They Interact</b>
<p>Aberdeen research indicates that companies that identify the most influential pressures and take the most transformational and effective actions are most likely to achieve superior performance. The level of competitive performance that a company achieves is strongly determined by the PACE choices that they make and how well they execute those decisions.</p>

Source: Aberdeen Group, June 2008

**Table 7: The Competitive Framework Key**

<b>Overview</b>	
<p>The Aberdeen Competitive Framework defines enterprises as falling into one of the following three levels of practices and performance:</p> <p><b>Best-in-Class (20%)</b> — Practices that are the best currently being employed and are significantly superior to the Industry Average, and result in the top industry performance.</p> <p><b>Industry Average (50%)</b> — Practices that represent the average or norm, and result in average industry performance.</p> <p><b>Laggards (30%)</b> — Practices that are significantly behind the average of the industry, and result in below average performance.</p>	<p>In the following categories:</p> <p><b>Process</b> — What is the scope of process standardization? What is the efficiency and effectiveness of this process?</p> <p><b>Organization</b> — How is your company currently organized to manage and optimize this particular process?</p> <p><b>Knowledge</b> — What visibility do you have into key data and intelligence required to manage this process?</p> <p><b>Technology</b> — What level of automation have you used to support this process? How is this automation integrated and aligned?</p> <p><b>Performance</b> — What do you measure? How frequently? What’s your actual performance?</p>

Source: Aberdeen Group, June 2008

## Appendix B: Related Aberdeen Research

Related Aberdeen research that forms a companion or reference to this report includes:

- [Global Supply Chain Benchmark Report](#); June 2006
- [Technology Strategies for Integrated Business Planning](#); July 2006
- [Technology Strategies for Inventory Management](#); September 2006
- [Globalization: The Turning Point for Packaged Supply Chain Software in Automotive, Aerospace and Defense Industries](#); January 2007
- [The Supply Chain Innovators Technology Footprint 2007](#); April 2007
- [Driving Sales and Top Line Revenue Requirements through Executive S&OP](#); April 2007
- [Executive Sales and Operations Planning: Process and Technology Strategies](#); June 2007
- [Supply Chain on Demand: Enable Flexible Business Processes](#); August 2007
- [Working Capital Optimization: Improving Performance with Innovations and New Technologies in Inventory Management and Supply Chain Finance](#); June 2007
- [Supply Chain Executive's Strategic Agenda 2008: Managing Global Supply Chain Transformation](#); January 2008
- [Supply Chain Innovator's Technology Footprint 2008](#); March 2008
- [Technology Strategies for Closed Loop Inventory Management](#); April 2008

Information on these and any other Aberdeen publications can be found at [www.aberdeen.com](http://www.aberdeen.com).

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