

# Supply Chain Management: Achieving agility through the sales inventory operations planning process

## At a glance

As senior executives continue to confront a difficult and uncertain economy, they understand that developing a vibrant supply chain that responds with agility to changing conditions is essential to achieving a competitive advantage.

The route to agility in a supply chain is through a rigorous sales inventory operations planning (SIOP) process. Most companies have SIOPs in some form, but many are seriously inadequate for meeting the challenge of today's environment.

There is an urgent need for corporate leaders to review the effectiveness of their SIOP process to be certain it enables the supply chain to achieve the company's goals of controlling costs, reducing capital expenses, and improving customer service.

When the economy fell into recession, catastrophic sales declines forced most companies to drastically restructure their supply chains, releasing employees, shrinking inventories and closing facilities. It's not over. Many companies still have excessive inventories and dissatisfied customers. Whether the economy is moving toward recovery or headed for a double-dip recession, successful supply chain management will be as challenging going forward as it was in the recent past. Little is familiar in the economic landscape. Demand remains volatile and uncertain. In this environment, a responsive and flexible supply chain is essential. And that requires a well-defined and well-executed SIOP process.

### Achieving agility through the sales inventory operations process

It has never been clearer to senior managers that their companies' supply chains are critically important to achieving competitive advantage. The recent global economic crisis played havoc with every aspect of supply chain management, and now companies are confronted with a world that is starkly different from anything they've experienced. Fundamental shifts have taken place in social values and global markets. Companies must be "reset" if they hope to prosper in the face of new and poorly understood realities.

In these uncertain and volatile times, supply chains must be more agile. PricewaterhouseCoopers has defined agility as "a strategic mix of standardization and flexibility" that allows companies to anticipate and respond to change, "all while keeping your business on course and your customer satisfied." Agility in a supply chain can be defined as the ability not only to adjust for anticipated change but also to respond effectively to *unanticipated* change.

In supply chain management, agility arises from well-defined planning. Without a rigorous SIOP process as a foundation, attempts at agility lead to chaos. When the financial

crisis hit, some companies departed from their SIOP processes. They struck out frantically, slashing costs by cancelling orders, closing plants, and laying off employees in a headlong effort to get in front of imploding markets. Trying to be responsive, they created chaos as their moves resulted in a cascade of unintended consequences. Others continued to take the rigorous steps required in SIOP and worked their way to fact-based decisions about how best to restructure their supply chains. These were the truly agile companies, responding in a disciplined way to unprecedented change, and today they are in far better positions to deal with the challenges ahead.

## A rigorous path to a common view

The major barrier to agility in supply chains is the lack of a formal SIOP process or the poor execution of an existing one. An effective SIOP process is illustrated below. Its goal is to determine how a company should apply its resources to meet the demand for its goods and services in both short and longer terms. The SIOP process should be formal, rigorous, and cadenced—with inviolable deadlines for producing data and reports, firm dates for meetings, and a clear understanding of roles and responsibilities.

An effective SIOP process requires collaboration among groups that often have clashing agendas and dissimilar metrics. Managers from areas such as manufacturing, operations, supply chain, product

development, sales and marketing—and, sometimes, key suppliers, customers, and business partners—must reach a consensus as they plan what will be required of the supply chain in the months ahead.

Directing the SIOP process may or may not be a full-time job, but it is always a major responsibility. The SIOP leader must have direct access to and support from the chief operating officer or chief executive officer (CEO). This is essential to ensuring the full cooperation of all parties.

SIOP is a continuous process involving five steps, each with specific deadlines and deliverables. The steps culminate each month in a meeting with senior management (called “executive SIOP” in the table below). Here, company leaders arrive at a consensus on how best to manage the supply chain to

achieve business goals. Although specific deadlines are set for each step in the process, conversation and thinking about the supply chain, and everything that affects it, never stops.

The result of a successful SIOP process is shared knowledge of the business and its supply chain, a common view of the supply chain’s capabilities, strengths, and weaknesses. This understanding provides the basis for creating an agile supply chain.

Figure 1: The SIOP process



## An agile SIOP process

In an era of drastic change, an effective SIOP process provides a systematic framework and defined processes through which a supply chain can become more flexible and responsive. To do this, the SIOP process itself must be highly disciplined without being rigid. It must be standardized *and* flexible—agile, in other words.

For example, in today's economy, scenario planning has become increasingly important. It turns what could be a theoretical exercise into a vital decision-making process. Similarly, the use of market intelligence has come to play a larger role in demand planning, although it must still be coupled with the appropriate use of historic statistical forecasts. Another recent trend is that SIOP participants pay much more attention to data on actual demand consumption and trends, allowing managers to promptly modify supply decisions without creating unnecessary volatility. Thus the rigor of the process allows the company to manage the supply chain more flexibly as conditions change.

## Tenets of a successful SIOP process

- Strong executive sponsorship and participation, including support and open access for the SIOP leader
- Disciplined and rigorous processes with defined deadlines for specific deliverables
- Clearly defined roles and responsibilities
- Continuous communication and information sharing across functions and among suppliers, customers, and business partners
- Engagement of sales and marketing to gain relevant market intelligence and customer input
- Classification of products based on statistical forecast confidence and an appropriate supply strategy
- Growth, gap closure actions and a long-term view of demand for scenario planning
- Supply capacity understood and constraints managed to optimize profit and gap closure
- Financial plan and SIOP plan compared, with differences noted and understood
- A fact-driven approach throughout the process

## What CEOs should do

CEOs know when their supply chains are performing ineffectively. They know when costs get out of line, when inventory levels are unsatisfactory, and when customer service must be improved. But most supply chains are so complex that it's extremely difficult to pinpoint specifically what needs to be improved. When inventory is high and customer service is unsatisfactory, the root cause—or causes, for there is often more than one—could lie almost anywhere along the supply chain.

A review of the SIOP process is an essential first step in improving the

supply chain. Very often, CEOs who conduct such a review discover that the SIOP process itself is inadequate. They often find that some of the steps are not being conducted fully or rigorously. They may discover that the disparate groups are not collaborating effectively. They may find that some activities are inappropriate in light of the level of sophistication or maturity within the company's SIOP process.

The “maturity profile” below describes some of the key characteristics of SIOP processes at various levels of sophistication. As part of the review process, a

company decides the level of maturity that must be reached for the supply chain to meet the company's business goals. Different levels of maturity are appropriate for different companies. Not every company needs to aspire to reach the progressive stage in every aspect of its SIOP process.

What should be avoided is leaving the matter to chance. A thorough SIOP review not only will improve the process itself, but also will provide a window into the supply chain, with a view of where improvement is most urgently needed.

	Stage 1 No SIOP Process	Stage 2 Reactive	Stage 3 Standard	Stage 4 Advanced	Stage 5 Progressive
Meetings & Collaboration	<ul style="list-style-type: none"> <li>• Silo culture</li> <li>• No collaboration</li> <li>• Limited coordination</li> </ul>	<ul style="list-style-type: none"> <li>• Discussed at top level management</li> <li>• Focused on financial goals</li> <li>• Ad hoc / infrequent meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Staff pre-meetings</li> <li>• Executive SIOP meetings</li> <li>• Some supplier/customer data</li> </ul>	<ul style="list-style-type: none"> <li>• Supplier &amp; customer data incorporated</li> <li>• Suppliers &amp; customers participate in parts of meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Event-driven meetings supersede scheduled meetings</li> <li>• Real-time customer &amp; supplier contribution</li> </ul>
Organization	<ul style="list-style-type: none"> <li>• No SIOP organization</li> </ul>	<ul style="list-style-type: none"> <li>• No formal SIOP function</li> <li>• Components of SIOP are in other positions</li> </ul>	<ul style="list-style-type: none"> <li>• SIOP function is part of other position; Product Manager, Supply Chain Manager</li> </ul>	<ul style="list-style-type: none"> <li>• Formal SIOP team</li> <li>• Executive Participation</li> </ul>	<ul style="list-style-type: none"> <li>• Throughout the organization, SIOP is understood as a tool for optimizing company profit</li> </ul>
Information Technology	<ul style="list-style-type: none"> <li>• Individual managers rely on tribal knowledge</li> <li>• No consolidation of information</li> </ul>	<ul style="list-style-type: none"> <li>• Disparate calculations and spreadsheets</li> <li>• Some consolidation, performed manually</li> </ul>	<ul style="list-style-type: none"> <li>• Centralized information</li> <li>• Revenue or operations planning software</li> <li>• Limited MRP system</li> </ul>	<ul style="list-style-type: none"> <li>• Batch process</li> <li>• Revenue &amp; operations optimization software – interfaced to ERP but not jointly optimized</li> <li>• SIOP workbench</li> <li>• Established MRP system</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated SIOP optimization software</li> <li>• Full interface with ERP, accounting, forecasting</li> <li>• Real-time solver</li> <li>• Advanced MRP system</li> </ul>
SIOP Plan Integration	<ul style="list-style-type: none"> <li>• No formal planning</li> <li>• Operations attempts to meet incoming orders</li> </ul>	<ul style="list-style-type: none"> <li>• Sales plan drives operations</li> <li>• Top-down process</li> <li>• Capacity utilization dynamics ignored</li> </ul>	<ul style="list-style-type: none"> <li>• Limited plan integration</li> <li>• Sequential process in one direction only</li> <li>• Bottom up plans – tempered by business goals</li> </ul>	<ul style="list-style-type: none"> <li>• Plans highly integrated</li> <li>• Concurrent and collaborative process</li> <li>• Constraints applied in both directions</li> </ul>	<ul style="list-style-type: none"> <li>• Seamless integration of plans</li> <li>• Process focuses on profit optimization for whole company</li> <li>• Contingency planning</li> </ul>
Measurements & Analysis	<ul style="list-style-type: none"> <li>• No measurements</li> </ul>	<ul style="list-style-type: none"> <li>• Measure how well operations meet sales plan</li> <li>• Limited use of statistical demand forecasts and market intelligence</li> </ul>	<ul style="list-style-type: none"> <li>• Stage 2 plus:</li> <li>• Sales measured on forecast accuracy</li> <li>• Statistical demand forecasts and measurement of forecast accuracy</li> </ul>	<ul style="list-style-type: none"> <li>• Stage 3 plus:</li> <li>• New product introduction</li> <li>• SIOP effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Stage 4 plus:</li> <li>• Company profitability</li> </ul>

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