



This article appeared in the Jan • Feb • Mar 2007 issue of *SAP Insider* and appears here with permission from the publisher, Wellesley Information Services (WIS), [www.WISpubs.com](http://www.WISpubs.com).



# Your Supply Chain Exceptions

## Just How Costly Are They?

*A study by the Georgia Institute of Technology found that supply chain exceptions — parts shortages, production problems, and rollout problems — can cause a stock price to drop anywhere from 7.5% to 11%.*

*Consider just how many supply chain exceptions you deal with today. Perhaps you anticipated orders of no more than 100 widgets, but you get an order for 500. Or a customer that ordered 500 widgets decides to pick up only 100. Maybe the major workstation on your plant floor breaks down and the spare is going to take a week to arrive, or a warehouse catches fire and is shut down indefinitely.*

*The number of exceptions you experience today will rise significantly as we move to a flat world where manufacturing and supply chain nodes continue to be distributed, where the frequency of engineering change orders arriving from customers is increasing, and where transportation economics can go topsy-turvy due to uncertain fuel prices.*

*In this article, SAP's Sudipta Bhattacharya looks at these indicators, the challenges they pose to SAP customers, and strategies for ensuring efficient and profitable supply chain operations in their wake.*



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Today's supply chains must now prepare for the unexpected. It is no longer enough to create a plan at the beginning of the year and simply execute against it. Now you must be able to sense change as — or even before — it occurs, and respond immediately. You must be able to sense, in real time, the supply

and demand deviations caused by internal and external events, and collaborate and respond to these deviations across the business network.

Each question in the quiz below speaks to a different aspect of the adaptive supply chain network framework: your ability to plan, execute, sense, respond,

### Quiz: 6 Indicators Your Supply Chain Is at Risk



Yes No

- Can you make informed and timely decisions using integrated processes that bring together supply chain planning and execution?
- Do you have visibility into your company's actual demand across all channels? Do you have the tools and processes in place to plan and respond quickly to changes in that demand?
- Can you actively manage and monitor your outsourced manufacturers, suppliers, and other supply chain partners as if they were part of your organization?
- Can you compare your anticipated results with actual performance metrics in real time?
- Does your company have a sales and operations planning process that is synchronized between all departments?
- Do you have a technology infrastructure in place that lets you create or adjust business processes in response to opportunities or risks within your supply chain?

If you answer "no" to any of these questions, your supply chain may be at risk. Each of the questions represents an indicator of risk — a place within your company where exceptions may lie in the weeds, just waiting to disrupt your supply chain activities.

and learn, and then to support all of these activities with a robust, cohesive technology framework. These are the essential pillars, and if you are missing even one, your supply chain may be the biggest risk to the success of your company (see **Figure 1**).

### **Plan and Execute**

Planning is important, but alone it is not enough. Companies are quickly learning that they have to fall back on their execution capabilities.

Here's a common scenario. At the end of last year, you forecasted that the demand for your product from any given order this year would be 100 units. What happens if you get an order for 500 units? Not too many years ago, you would have carried excess inventory that could have been deployed to fill the order. But in today's lean manufacturing environments, that is a luxury you can no longer afford.

Without the inventory buffer, you must now rely on your ability to execute. Do you have the capacity to create 400 more units? Ship them? Store them? Do you have the workforce to build those 400 units? All those steps must now happen in execution mode because you never planned for them.

Supply chain execution is becoming an absolute core competency. If you combine good execution with good planning, you can create an effective, efficient supply chain. But how do you do that?

### **Sense and Respond to Demand Changes**

Since you no longer have the buffer of inventory, you must become better at sensing demand. You don't want to wait to start production until the last

moment, when a customer order comes in. Instead, you want to sense the demand early enough so you can respond faster and more efficiently.

But how can you sense demand early with a supply chain that today relies more than ever on globalization and outsourcing? As companies focus on their core competencies, they are outsourcing, offshoring, or near-shoring all or parts of their supply chain. Consequently, supply chains now involve more partners, which naturally increases the risk of something going wrong.

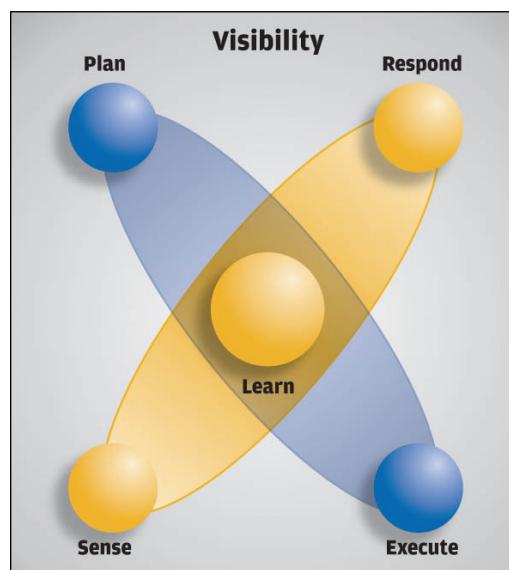
### **Collaborate with Your Supply Chain Network for Perfect Order Fulfillment**

The solution is collaboration. But you don't want to just collaborate with intermediaries; you want to collaborate with the actual sources of information. The companies that are able to manage their supply chain well are the companies that have the best collaboration capabilities with their customers, suppliers, and partners. This gives them better visibility and enables them to detect trends faster.

The best example of successful collaboration in the current market environment is lowering the cost of transportation management. The more you outsource the supply chain, the more transportation you need, which is problematic in a time of high energy and fuel costs. Because of this, becoming more efficient in transportation management is, at the moment, one of the most important goals companies want to achieve. Many companies compensate by working with logistics service providers (LSPs) that are experts in the transportation area. Now companies need to integrate these service providers into the whole concept of collaboration.<sup>1</sup>

The fragmentation of today's supply chains from outsourcing and near-shoring also creates information distortion. Today, it is not unusual to have a customer placing an order with a distributor, the distributor placing an order with a local provider, and the local provider then placing an order with you. You now have three or four layers of information sitting between you and the customer order, leading to a lot of distortion and delayed information.

Overcoming information distortion requires an increase in the accuracy, velocity, and quality of



**FIGURE 1** ▶ Your ability to manage and mitigate supply chain risk ties directly to how well you plan, execute, sense, respond, and learn — the pillars of an adaptive supply chain network

<sup>1</sup> See "Transportation Trends Are On the Move" by Tillman Estes and Bernd Mosbrucker in this issue of *SAP Insider* ([www.SAPinsideronline.com](http://www.SAPinsideronline.com)) for more on transportation management.

collaboration with your partners in the supply chain. Collaboration should not, however, be confused with networking. When you network with your supply chain partners, you get much more information than you need. Just gathering information doesn't help, even if you can get it faster. Imagine that your information flows into a big funnel; the most important part is the filter at the end that pours out only the right information. The companies that excel at collaboration are not only getting information, but are getting the right information at the right time.

Because information hits you so quickly and in such large volumes, you always have to be in execution mode. Companies need to accept the fact that they will be operating in much more of an execution mode today than they were a few years back. And, in the future, the degree to which they are being forced to execute is only going to increase.

### **Monitor, Measure, and Control Performance Metrics in Real Time**

The crucial "filters" of information from partners are analytics. For example, one of the key metrics used to measure the efficiency of a physical supply chain's inventory is the number of times you can roll over that inventory. If you don't roll inventory over 10 times faster than your competition, your working capital requirement is going to be 10 times greater. Inventory turnover is dependent on how quickly you are able to process information. The better you can turn over information (meaning you get information, act on it, get more information, act on it again, and so on), the better able you are to compete.

Analytics offer an efficient way to distill and process that information within the context of your supply chain processes. They enable you to track how quickly you turn over your inventory in real time. Not only do you get accurate information, you are also able to distill it, analyze it, and make decisions against it, as well as resolve performance deviations when they happen. If you do that well, you will outperform your competition. And the name of this game is to be better than the competition.

### **Synchronize All Departments Connected to Your Supply Chain**

As supply chains look outward to customers and suppliers, they must also turn inward. This year, SAP will unveil a sales and operations planning xApp for mySAP SCM.

Sales and operations planning (S&OP) is a process that enables a company to determine a single, negotiated plan across all departments to meet its operational, sales, and financial goals. This new xApp pulls data from a company's current planning solutions and allows S&OP team members to look at and agree on one number and to analyze the consolidated data for their department's purposes.<sup>2</sup>

### **Support It All with the Right Technology Infrastructure**

When SAP launched its vision for an adaptive supply chain network, we told customers of the need to be able to plan, execute, sense, respond, and learn. Planning by itself – or execution by itself – is meaningless. You also must be able to sense any changes or exceptions in the supply chain and respond to them accordingly. And after you do so, you need to measure what you've done and apply the lessons learned to continuously improve your supply chain for the next time.

mySAP SCM is built around these concepts. Planning is enabled by Advanced Planning and Optimization (APO), while execution capabilities reside in the Warehouse Management (WM) and Transportation Management (TM) systems. These applications are tightly coupled from both a data and a process perspective, providing a high level of synchronization. Technologies such as RFID and SAP xApp Manufacturing Integration and Intelligence (SAP xMII) expand your organization's ability to sense what is occurring in the real world at the time it occurs. The Inventory Collaboration Hub (ICH), which manages your interactions with customers and suppliers, enables you to respond to this real-world awareness. Finally, SAP NetWeaver Business Intelligence (SAP NetWeaver BI) provides the ability to analyze and continuously improve supply chain performance.

There are too many unknowns today to build a perfect supply chain plan. Therefore, you have to be prepared and stay in perpetual execution mode. It becomes very important for companies to augment that execution capability. Good execution, backed by good planning and a sound technology infrastructure, creates an effective and efficient supply chain. ■

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<sup>2</sup> See "S&OP Goes Beyond Just Aligning Supply and Demand" by Tod Stenger in this issue of *SAP Insider* ([www.SAPinsideronline.com](http://www.SAPinsideronline.com)) for more information on SAP's new xApp for S&OP.