



## HOW CIOs CAN IMPROVE SUPPLY CHAIN MANAGEMENT

EVEN WITH A TIGHT IT BUDGET

## Today's supply chains have changed

In the past, the typical manufacturer's supply chain was simple.

Sourcing, inventory, manufacturing, assembly, and shipping were all under the in-house domain of each manufacturer. That gave the manufacturer near-perfect visibility into every part of the chain.

And with the economy growing for most of the past 25 years, manufacturers could generate demand through targeted advertising and promotions.

Today's business environment is very different.

The typical supply chain for a manufacturer is far more complex. The enterprise often has numerous outsourcing partners around the world, with only sketchy knowledge of the status of any orders being processed outside its walls.

And today's customers are fickle and fashion-conscious: A celebrity spotted with a product can cause a sudden rush for one SKU that falls off as quickly as it arises.

To capture sudden surges of demand without building up excess inventory, supply chain managers need to be far more sensitive to market signals and more nimble dealing with them.

Add in the uncertain economy, and managing today's complex supply chain has become more difficult than ever.

### INTRODUCTION: DOING MORE WITH LESS

Nearly all CIOs today are under pressure to contain costs; in fact, many are being asked to cut IT budgets by 20%.<sup>1</sup> But the challenges of dealing with the recession have not gone away, even if the budget has. In fact, to many, they've become more acute.

And many enterprises need better systems, not cutbacks, to help weather the recession. For example, many supply chain managers are looking for **quicker response to fast-changing conditions**, and stronger decision-support to help generate the **best possible results** from today's challenging circumstances. And, they need it now.

But how can a CIO possibly make cuts and invest in new systems at the same time?

The answer is by thinking strategically, to create new efficiencies that increase revenues and decrease losses. The recession is an ideal time for CIOs to make careful investments in key areas that wring better business results from smaller IT budgets.

This white paper looks at one way CIOs can roll out significantly more powerful supply chain functions at an affordable cost: by extending existing systems with specialized software delivered as a service (SaaS).

Looking at the limited software now being used for sales and operations planning—spreadsheets, ERP, and legacy planning—this paper concludes that CIOs would be wise to consider extending these functions with SaaS, as a way to truly “do more with less.”

### DURING A RECESSION, S&OP IS MISSION-CRITICAL

Sales and operations planning (S&OP) is not a nice-to-have frill, but a must-have business process that every CIO should consider carefully.

One industry veteran defines S&OP as “a set of decision-making processes to balance demand and supply, to integrate financial planning and operational planning, and to link high level strategic plans with day-to-day operations.”<sup>2</sup>

As such, S&OP is an essential process for every manufacturer. This is especially true during today's economic downturn, with demanding but fickle customers and supply chains stretching right around the world.

“2009 will be anything but business as usual, with this recession predicted to go longer and be more profound than any other in most of our lifetimes. What should companies do in response? The answer is simple: improve capabilities to better sense demand... If

1. Dennis Howlett. “Corrupting Consolidation” Irregular Enterprise blog. ZDNet. March 29, 2009. Downloaded March 31, 2009 from <http://blogs.zdnet.com/Howlett/?p=768&tag=nl.e539>

2. Tom Wallace. “S&OP 101” T.F. Wallace & Company. Downloaded from [http://www.tfwallace.com/pages/content/sop\\_101.html](http://www.tfwallace.com/pages/content/sop_101.html)

Managing today's complex supply chain has become more difficult than ever.

not, decisions will be made two weeks too late.”<sup>3</sup>

Clearly, balancing supply and demand is a bottom-line function that can help a manufacturer respond to the fast-changing conditions of today... and emerge from the recession in better shape.

## THE LIMITATIONS OF TRADITIONAL TOOLS

But providing effective S&OP is a big challenge, especially since none of the three tools most often used for it—spreadsheets, ERP, and legacy planning—are truly up to the task.

### **Excel: not robust enough**

Much of S&OP today is still done using Excel spreadsheets. As you know, Excel is very flexible, but it has all the limitations of any Windows application, and it works best for a single user handling limited data.

“The companies that struggle with S&OP often strangle themselves with spreadsheet data that does not enable senior executives to confirm that operation plans are in sync,”<sup>4</sup> says Robert Tearnan of Oliver Wight.

Excel cannot support many of the basic requirements of mature and effective S&OP:

- ▶ Early alerts to support management by exception
- ▶ Sophisticated what-if scenario planning based on numerous inputs
- ▶ Quick, effective collaboration within or between enterprises

To stay on top of volatile conditions, many manufacturers now run daily updates of supply chain forecasts. But Excel can barely consolidate a set of monthly sales forecasts into a single view. It certainly can't be used to refine forecasts by pulling in data from the entire supply chain, highlighting the most relevant details, and helping executives decide the most effective responses.

Despite its huge installed base, Excel is simply not robust enough for today's S&OP.

### **ERP: focused on transactions**

Nearly every manufacturing firm has an ERP system in place. These are well equipped to take orders, manage production, count inventory, produce invoices, and merge numbers into financial statements.

But at its heart, ERP was designed around accounting transactions. These systems clearly lack the functionality to manage today's complex supply chains. Software vendors acknowledge this, with a huge number of add-ons for business intelligence, data collection, optimization, planning, and supply chain management (SCM).

In the old days of larger IT budgets, CIOs could consider extending an ERP system with add-ons, or even customizing it to deal better with supply chain issues. But with the extremely high costs of any ERP project, these options are not viable today.

Even paying for ERP support is now a burden. After years of vendor consolidation,

3. Lora Cecere, AMR Research. “Recovery Strategies: Seven Ways To Sense Demand and Predict the Upturn.” SupplyChainBrain.com. February 11, 2009. Retrieved from <http://www.supplychainbrain.com/content/nc/world-regions/single-article-page/article/recovery-strategies-seven-ways-to-sense-demand-and-predict-the-upturn/>

4. Robert Tearnan. “S&OP Data Management: Critical to a Successful Implementation” Oliver Wight White Paper Series. September 12, 2005. page 1. Downloaded from <http://www.oliverwight-americas.com/sop/pdf/wpaper23.pdf>

SaaS can be a game-changing alternative to the traditional ways of buying and using enterprise software.

annual maintenance has climbed as high as 22% of license fees in some reported cases.<sup>5</sup> (That’s like paying for a new system every four and a half years, whether you need one or not.)

Investing even more to extend, customize, or patch an ERP system is simply not realistic in today’s economy.

**Legacy planning: designed for yesterday**

The ERP add-ons for optimization, planning, and “SCM” can be grouped together as “legacy planning applications.” Unfortunately—and despite what your ERP sales rep tells you—these were designed to support an outdated business model.

From their basic data structures through all their analytics, these legacy systems were intended for a small team dealing with known numbers. They’re based on the assumption that all manufacturing costs, values, and decisions are housed within a single enterprise... as in yesterday’s supply chain.

These legacy planning apps were never designed to handle today’s global, outsourced, multi-tier supply chains where much of the cost, value, and decision-making reside outside the enterprise with third-party business partners.

This fundamental design flaw means that legacy planning apps have not kept up with the times. Manufacturers cannot rely on this class of application to meet the challenges of today.

If Excel is not robust enough, ERP is rooted in accounting, and legacy planning was designed for yesterday, what other choice is there? How can CIOs help enterprises manage their supply chains any better?

Fortunately there is another option. Table 1 compares the three traditional classes of applications with a new approach that offers sophisticated functions at a cost-effective price: an S&OP application delivered as a service.

	Excel	ERP	Legacy planning	S&OP (via SaaS)
<b>Class</b>	Desktop	Enterprise	Add-on	SaaS
<b>Era</b>	1980s	1980s	1990s	2000s
<b>Strength(s)</b>	Number-crunching	Accounting	Optimizing in-house plans	21st century SCM
<b>Drawbacks</b>	Not robust enough	Transaction based	Designed for yesterday	Security? Reliability?
<b>TCO</b>	\$	\$\$\$\$\$\$ \$\$\$\$\$\$ \$\$\$\$\$\$	\$\$\$\$\$\$	\$\$\$

Table 1: Four Types of Software for S&OP

5. By Mary Hayes Weier. “Software Maintenance Fees: Time For This Model To Change?” InformationWeek. January 24, 2009 (From the January 26, 2009 issue) Downloaded from <http://www.informationweek.com/news/software/erp/showArticle.jhtml?articleID=212902014>

## Four critical limitations of legacy planning

Designed for a previous era, legacy planning add-ons embody at least four critical limitations that make them inappropriate for today's executives.

### **Legacy planning limitation #1: Unsophisticated forecasts**

Legacy apps cannot generate sophisticated supply and demand forecasts, since they lack both the far-ranging data inputs from supply partners and the analytic models to process it.

### **Legacy planning limitation #2: Slow what-if scenarios**

Legacy planning apps cannot easily model various what-if scenarios to help balance supply and demand forecasts with fast-changing business conditions. They lack both the responsiveness, and the algorithms to weigh various KPIs between departments—and even between business partners—and help to select the best possible outcome for all.

### **Legacy planning limitation #3: No collaboration**

Legacy planning apps cannot capture the knowledge of many people in a collaborative fashion, since they lack the functions to support quick communications and data sharing within or beyond the enterprise.

### **Legacy planning limitation #4: No accounting for outside value**

Based on the accounting principles inherited from ERP, legacy planning apps cannot import data from supply chain partners without the risk of seriously contaminating the enterprise's financials. These systems cannot account for the value of inventory being purchased, assembled, or shipped by third parties on behalf of a manufacturer.

With all these limitations, legacy planning apps cannot support the demands of today's complex and outsourced supply chains.

## EXTENDING YOUR S&OP WITH SAAS

Most IT teams are looking at cloud computing to save costs and deliver new capabilities in a cost-effective way. A major element of the cloud is software as a service, or SaaS.

SaaS can be a game-changing alternative to the traditional ways of buying and using enterprise software.

Many CIOs still have reservations about SaaS, especially around its security and reliability. But as this business model becomes more common, these fears tend to fade.

Table 2 sums up several key factors about licensed enterprise apps vs. SaaS, as discussed in the following sections.

	Licensed Applications	SaaS Applications
<b>Security</b>	??	High (set by data center)
<b>Reliability</b>	??	99% + (set by SLA)
<b>TCO</b>	\$\$\$\$\$	\$

Table 2: Comparing Licensed Applications to SaaS

### **More secure than your own LAN?**

Some IT managers are concerned about any business data residing outside the corporate firewall. Yet study after study has confirmed that employees are the weakest link in the chain.

For example, the 2008 security survey by Ernst & Young found that “so much emphasis is often placed on technology that the ‘people’ component of information security is frequently overlooked... This is still an unaddressed issue for many companies.”<sup>6</sup>

On the other hand, this issue is front and center at every data center.

Today's data centers have tight physical access controls. Staff are highly trained and on the alert for any attempts at social engineering. Data centers routinely scan for malware with industrial-strength programs.

And emerging industry standards such as SAS 70, ISO 900, and ISO 27001 hold hosting services to stringent security measures.

The fact is that third-party data centers may well be more secure than your own LAN, and data on their hard disks may be safer than data on the hard disk down the hall.

6. “Moving Beyond Compliance: 2008 Global Information Security Survey” Ernst & Young, October 15, 2008, page 16. Downloaded from [http://www2.eycom.ch/publications/items/giss\\_2008/2008\\_EY\\_GISS.pdf](http://www2.eycom.ch/publications/items/giss_2008/2008_EY_GISS.pdf)

“IT shops are being forced to make moves that optimize costs much more quickly than they would in an economic boom.”

—Tom Sullivan, *InfoWorld*

### **More reliable than your in-house apps?**

Some IT managers worry that any system based in the cloud can go down. But that’s like worrying that your plane will crash.

Most years, a couple hundred Americans die in plane crashes, while more than 200 times as many die in car accidents. Yet many people feel safer on the road than in the air. A recent article in Time magazine concluded that we “misjudge risk if we feel we have some control over it, even if it’s an illusory sense.”<sup>7</sup>

In fact, a SaaS application may well be more reliable than the in-house apps you take for granted every day. As you know, every SaaS vendor includes a Service Level Agreement that dictates very high availability, at least 99% or better. Can your in-house applications match that?

### **Better TCO for a tight economy**

SaaS can deliver exceptional value for a tough economy, with a much lower overall total cost of ownership (TCO).

“The growth of SaaS,” writes software consultant Jeffrey Kaplan, “is actually being driven by the economy, as organizations of all sizes and across every industry seek more cost-effective alternatives to traditional, on-premise software.”<sup>8</sup>

As you know, every on-premise enterprise application requires:

- ▶ A large upfront license fee
- ▶ On-premise hardware
- ▶ Months of costly professional services
- ▶ A stiff annual maintenance fee
- ▶ Ongoing IT support from your team

All those costs make any licensed software project a long-term investment that will not likely pay off within the fiscal year.

On the other hand, a SaaS application offers:

- ▶ No initial capital expense
- ▶ Little need for outside consultants
- ▶ No annual maintenance fee
- ▶ Little need for your IT resources
- ▶ A low monthly operating cost

That means an effective S&OP application delivered as SaaS will be fast and affordable; even with a few weeks of implementation, it will likely begin to deliver value in the next quarter.

All this makes SaaS the ideal delivery model for rolling out new business capabilities during a time of tight IT budgets.

7. How Americans Are Living Dangerously” Time magazine. November 26, 2006. Downloaded from <http://www.time.com/time/magazine/article/0,9171,1562978-4,00.html>

8. Jeffrey M. Kaplan. “Predictions for On-Demand Services in 2009” SandHill.com. January 13, 2009. Downloaded from <http://www.sandhill.com/opinion/editorial.php?id=221>

SaaS is likely more reliable and more secure than your current enterprise systems... with a much lower TCO.

## THE BENEFITS OF EXTENDING S&OP

Extending the S&OP capabilities of your enterprise systems will deliver many high-level benefits. Among these are three in particular:

### 1. More agile response to events

Your S&OP team will react much faster to external events, as they move beyond reviewing monthly or weekly plans toward event-driven plans they can update as needed, even hourly.

This function will help your enterprise deal with the current downturn, and quickly gear up for renewed demand as the economy pulls out of the recession.

### 2. Live collaboration with partners

An online forum will be created with human intelligence from many players that captures the nuances of your business relationships.

At a time when competitors' partnerships are likely being eroded by an "every man for himself" approach, this function will strengthen your business relationships and create goodwill you can harvest in future.

### 3. Flexible "what-if" scenario testing

This will allow your supply chain decision-makers to weigh the consequences of various actions more precisely, and make tradeoffs to select the best from an array of possible outcomes.

This function will help squeeze the most possible profits from today's challenging circumstances.

## SUMMARY

Enhancing your S&OP will help managers deliver more accurate forecasts, based on a wide sampling of data from supply chain partners, all consolidated automatically and available to executives anywhere, any time.

And a more responsive supply chain will help your enterprise adapt to the current short-term challenges, and be better positioned to thrive when the recession ends.

These powerful benefits enable CIOs to make a strategic investment in mission-critical supply chain functionality for a modest cost, and truly help the enterprise "do more with less."



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