Sales and Operations Planning:

Current State of the Union

The Role of S&OP in Driving Organizational Alignment and Agility

6/9/2013

By Lora Cecere
Founder and CEO

Supply Chain Insights LLC

Contents

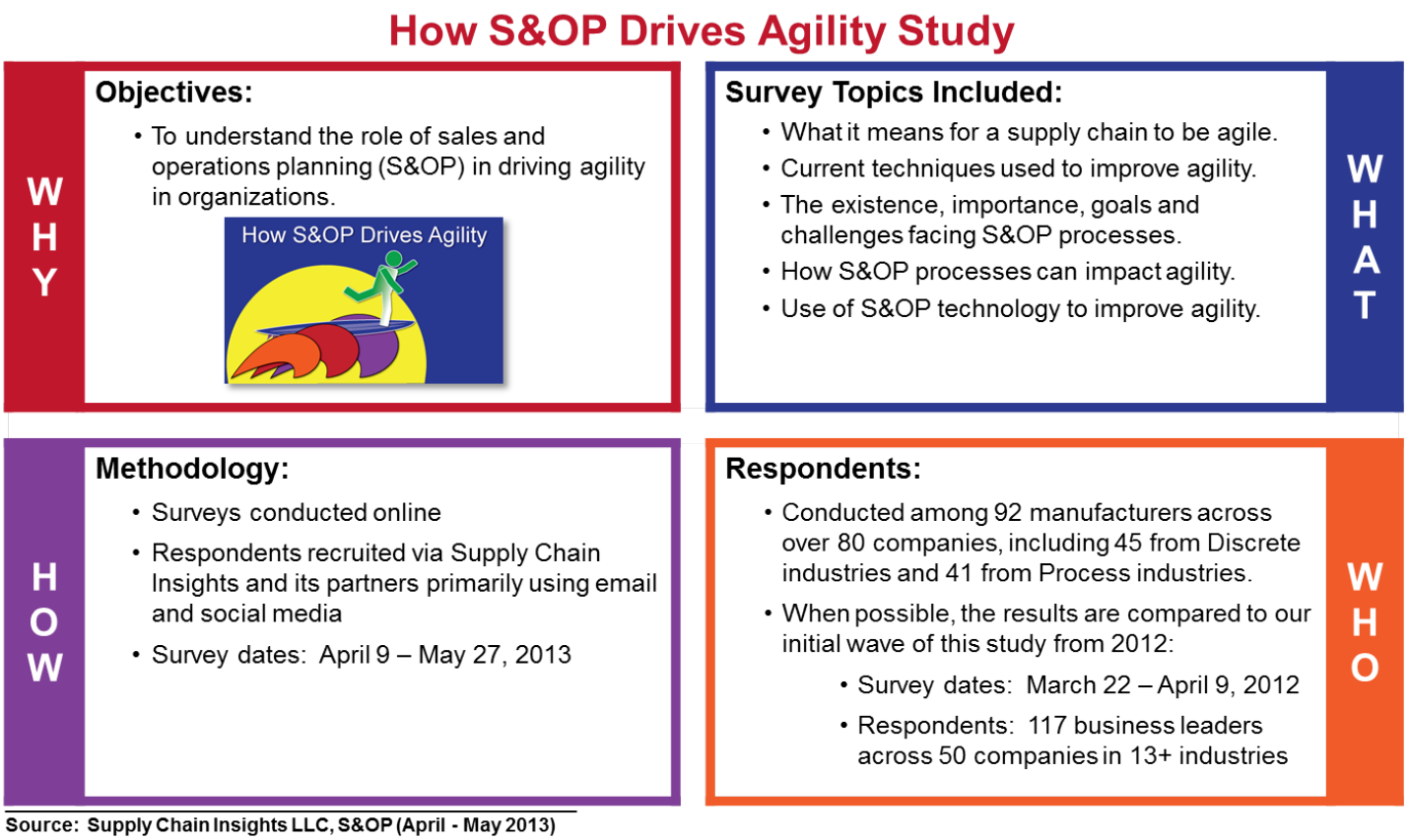
Research

Sales and Operations Planning (S&OP), as a supply chain process, is now over thirty years old. Most companies have implemented the process, but they are at very different states of maturity. The goal of this research was to understand the impact of S&OP maturity on organizational alignment and agility. We wanted to help supply chain leaders better understand the *"state of the union"* of sales and operations.

This report is based on a quantitative online study conducted among manufacturers during April-May, 2013. This is the second year of conducting this study. Where possible, we share year-over-year trends.

The study overview is outlined in figure 1 and detailed respondent demographics are shared in the Appendix.

Figure 1. Overview of the Sales and Operations Quantitative Study



Source: Supply Chain Insights LLC, S&OP (April - May 2013)

Disclosure

As an independent analyst firm, your trust is important to us. In conducting research, we are open and transparent about our financial relationships and our research processes. This research was 100% funded by Supply Chain Insights.

Data was collected via a quantitative survey distributed through email and social media; i.e. blogs, LinkedIn, Twitter and the Supply Chain Insights Community. In addition, we partnered with five companies to spur response rates and improve global reach. These companies were **International Business Systems (IBS), Logility, Kinaxis, Steelwedge, Supply Chain Brain and TXT.** (These companies sent the quantitative study to their client base.)

In completing quantitative research, Supply Chain Insights keeps respondent data confidential. Reporting is done in aggregate. In exchange for taking the survey, respondents are offered the report and the opportunity to discuss the results in a complimentary one-hour call with the Supply Chain Insights team.

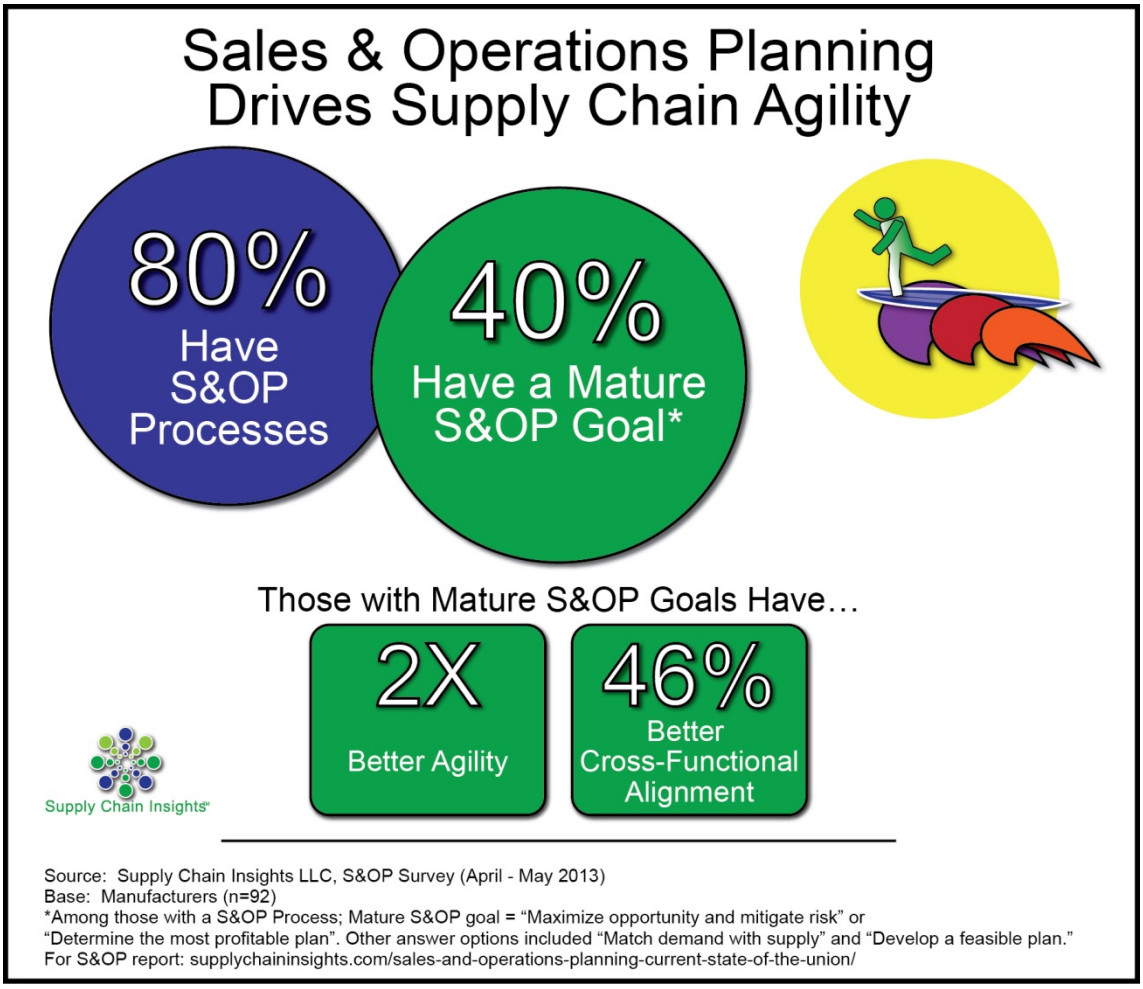
Sharing and Use

At Supply Chain Insights, we remain committed to Open Content research. These reports are intended for you to read, share and use to improve your supply chain decisions. Please share this data freely within your company and across your industry. As you do this, all we ask for in return is attribution. We publish under the Creative Commons License Attribution-Noncommercial-Share Alike 3.0 United States and you will find our citation policy here.

Executive Overview

Sales and Operations Planning processes are now in their fourth decade of maturity. The processes are growing more complex. Progress is slow. The infographic below shows the current state of the union of sales and operations into S&OP processes.

Figure 2. S&OP Infographic



In this world of uncertainty, good planning matters. Complexity and volatility are escalating. Improving S&OP in a systematic approach, focused on goal evolution and systemic process governance, makes a difference; but, it requires education. A barrier to improvement is the executive team not understanding the supply chain as a complex system. It is the goal of this report to help alleviate this problem.

Current State

Sales and Operations Planning aligns and connects the functions of the company. It is one of four horizontal processes that are essential to becoming market driven and building effective value networks. The other, complimentary processes are revenue management, supplier development and corporate social responsibility

(CSR). In mature organizations, these four processes form the fabric of decision making for the end-to-end supply chain.

Unfortunately, in many organizations, the term supply chain is a *"politically-charged"* word. When supply chain is defined narrowly as a function, versus an end-to-end process, there is an endless debate on the role of supply chain in driving S&OP excellence. As the reader can see by the definition of supply chain in figure D in the Appendix, each organization defines the reporting relationships differently. Based on our experience with manufacturing organizations, the narrower the definition of the term supply chain within the organization, the longer it takes for S&OP processes to mature. Here, in this report, we try to sidestep these issues. We use the term supply chain to describe the processes from the customer's customer to the supplier's supplier.

Sales and Operations Planning is defined by the Association of Production and Inventory Control Systems (APICS) as "A process to develop tactical plans that provide management the ability to strategically direct its businesses to achieve competitive advantage on a continuous basis by integrating customer-focused marketing plans for new and existing products with the management of the supply chain …" For manufacturers, retailers and distributors, it has become a critical process to power growth, improve resiliency and drive efficiency improvements. In the last decade, it has seen a renaissance of activity.

Figure 3. Individual Business Pain in Supply Chain Management for the Organization

Top 3 Elements of Supply Chain Pain for Respondent

Top 3	TOTAL	Discrete	Process
Demand and supply volatility	61%	62%	61%
Organizational alignment	46%	49%	39%
Management of value network relationships (suppliers, clients, customers, etc.)	39%	40%	39%
Ability to use data (access to data, dirty data, etc.)	35%	42%	29%
Talent issues (shortage, skills, training, etc.)	32%	29%	32%
Increasing speed of business	29%	16%	44%
Clarity of supply chain strategy	23%	31%	12%
Software usability	13%	7%	22%
Increasing regulations and compliance	10%	9%	10%
Other	4%	4%	5%

Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Discrete (n=45), Process (n=41)
Q4B. When it comes to supply chain management, which of the following are the top 3 elements of business pain for you personally? Please select no more than three.
O Higher than other group (Process vs. Discrete Industries) at 90% or higher level of confidence

S&OP helps guide organizations in an uncertain world. It enables the visualization of risk, and yields a cross-functional understanding of opportunities. When respondents were asked about their individual “pain” in the supply chain, in figure 3 and consistent with research studies over the last year, demand and supply volatility tops the list. Globally, organizations are struggling with market volatility in both channels and supply.

In the face of increasing demand volatility, the management of demand processes is a major gap. As organizations attempt to be more demand-driven, or market-driven, as shown in the S&OP maturity model below, the processes shift from relying on orders and shipments to redesigning processes to be outside-in. In this transition, the shift is to use multiple types of channel demand and product usage data. This data must be harmonized for different states of demand latency. It is about much, much more than improving forecasting… or stuffing demand-centric data into supply-centric processes. Instead it requires the re-architecting of processes outside-in to better sense and respond to demand and supply volatility. This shift, as outlined later in the report, is not trivial and it is not easy.

Additionally, S&OP processes are becoming more strategic in building effective trading partner relationships. As companies attempt to drive differentiation through partnerships, organizational alignment, and effective data sharing, grow in importance. As shown in figure 3, both are a struggle for today’s organization.

In addition, process organizations in this study have a greater issue with the increasing speed of business and the fit of the software, or “usability,” to perform S&OP processes. In parallel, discrete organizations responding to this survey have a greater struggle with understanding supply chain strategy.

Maturity Model

The development of S&OP processes for many is a conundrum. In interviews with supply chain leaders, many feel that their processes are “stuck” and there is mounting frustration on how to drive process improvement. One of the issues is that it needs to be carefully architected with the goal in mind. Most organizations are not conscious of the choices and the nuances of the process evolution.

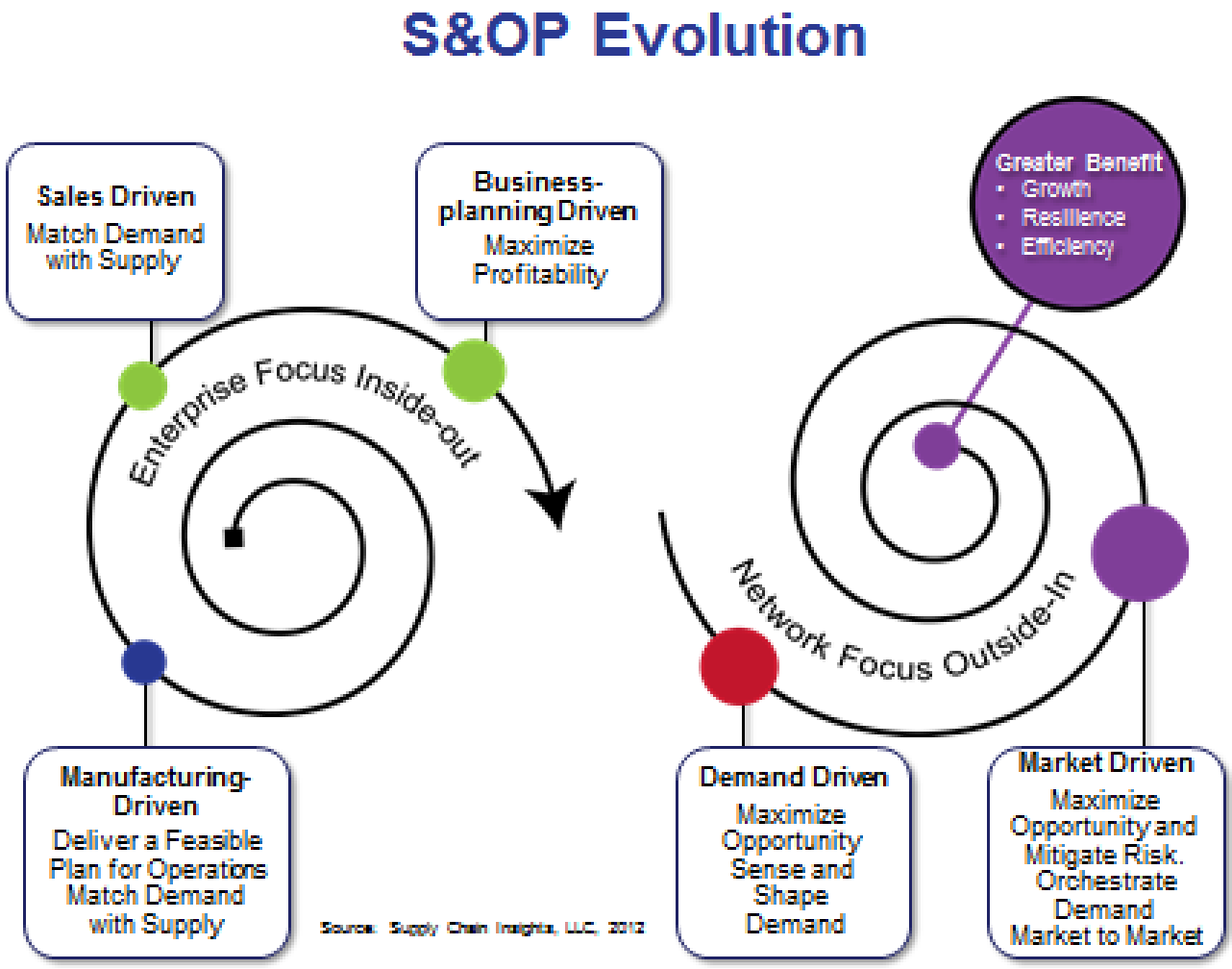
The maturity of an S&OP process can easily be determined by answering five questions:

- What is the S&OP goal?
- How is balance achieved between demand and supply?
- How are decisions made?
- How does the organization measure success?
- How is S&OP tied to execution?

The maturity of the S&OP process needs to be a carefully controlled migration. The definition of both process excellence and technology requirements are very different along the lifecycle of S&OP maturity. In this study, we were able to connect S&OP maturity to improvements in organizational alignment and agility. Since the

results of this study are SO closely tied to S&OP maturity, we are going to carefully define the model that was underneath the survey to help the reader better interpret the results. To understand S&OP maturity, let's start with a discussion of goal evolution within S&OP processes, and then discuss the issues and complexities of S&OP governance. A diagram outlining S&OP process goal definition is shared in figure 4.

Figure 4. Overview of S&OP Maturity Model for Building Market-driven Value Networks



Stage 1 Goal: Deliver a Feasible Plan. The first S&OP process originated with a goal of developing a feasible plan. Early evolution of the Advanced Planning Solution (APS) market enabled organizations to develop a forecast, visualize operational requirements, and align metrics. The introduction of the Theory of Constraints (TOC) in 1984 and the evolution of the concepts into manufacturing planning applications enhanced this capability. It allowed organizations to identify constraints and build a feasible, or realistic, plan. Each of these supply-planning models is very industry-specific. A conglomerate composed of process, discrete and apparel manufacturing found that it needed multiple systems to model operations. The building of a one-size-fits-all model by the Enterprise Resource Planning technology providers has delivered generic models that do not fit

any company very well. In this study, as shown in figure 6, 12% of the respondents were at this stage of maturity, with their S&OP goal being to “develop a feasible plan.”

Stage 2 Goal: Match Demand with Supply. As organizations mature, and after building capabilities to have a feasible plan, teams need a solution with more advanced capabilities to model the trade-offs of volume and product mix. The issues with the impact of changing product mix are not trivial. These trade-offs can be very complex. Through the use of technologies, companies are able to visualize and balance customer service, assess network strategies, and build inventory plans to best match demand with supply. To meet this requirement, companies have invested in “what-if” modeling environments. Over the last ten years, these processes were augmented by management technologies to evaluate multi-tier inventory analysis and postponement. In this study, as shown in figure 6, 45% of the respondents were at Stage 2 of this maturity model, with their S&OP goal being to “match demand with supply.”

Stage 3 Goal: Drive the Most Profitable Response. While Stage 1 is supply-driven and Stage 2 is sales/marketing-driven, Stage 3 is business-planning-driven. This is commonly dubbed by many as Integrated Business Planning (IBP). The question of the right name for the process is often a heated argument in the organization. When a company defines the term supply chain as a function within operations, the organization often will feel that the S&OP process must be renamed to achieve sufficient status to enable the process evolution. The belief is that the renaming is needed to gain permission to cross over and align the functions of finance, sales and marketing. To drive the quickest returns, it is important to not get hung up in this argument. Instead, the focus should be the definition of a clear value network or supply chain strategy and a well-defined definition of supply chain excellence. For most, this is a gating factor for success.

The process basics and the technology requirements are quite different between Stage 2 and Stage 3. To accomplish Stage 3 modeling, the demand and supply hierarchies must be decoupled to enable volume/mix “what-if” trade-offs iteratively between process steps. This S&OP maturity stage requires the addition of two new capabilities: demand translation and supply orchestration. The process of modeling demand volume/mix trade-offs between demand and supply is demand translation. In supply orchestration, trade-offs are determined and translated into buying strategies in commodity markets to determine the most effective formulation or platform design to schedule for manufacturing.

One of the issues in this stage of S&OP is unit conversion. The average company will have five to seven definitions of *“volume,”* often requiring modeling in equivalent units that require translation. To properly determine trade-offs the analysis needs to be calculated in *“volume”* to determine the constraints of operations and then translated to *“currency” and “profitability.”* This ongoing analysis requires close alignment between the financial and operational teams.

As shown in figure 6, 12% of organizations are focused on driving the “most profitable” response.

Stage 4 Goal: Build Demand-driven Supply Chain Capabilities. At this stage of S&OP, the process is designed from the outside-in. It is focused on product sell-through in the channel, whereas the earlier stages are focused on selling into the channel. This stage requires redefining the forecasting processes to sense market conditions based on channel demand signals and then shaping demand to increase lift. Demand sensing reduces the latency to see true channel demand, while demand shaping combines the techniques of price, promotion, sales and marketing incentives, and new-product launch to increase demand lift.

The definition of demand-driven value networks for the purpose of this report are processes that sense shifts in channel demand with zero latency to enable the organization to shape and translate demand across the functions of sell, deliver, make and sourcing operations.

Stage 5 Goal: Orchestrate Through Market-driven Value Networks. The horizontal processes in Stages 3 and 4 are foundational to building Market-driven Value Networks. This technology portfolio helps companies to sense and shape demand and supply bidirectionally between sell- and buy-side markets. This process of bidirectional trade-offs between demand and supply markets is termed "demand orchestration." This capability allows companies to win in this new world of changing opportunities and supply constraints. It is especially relevant with the tightening of commodity markets.

Figure 5. Market-driven Orchestration

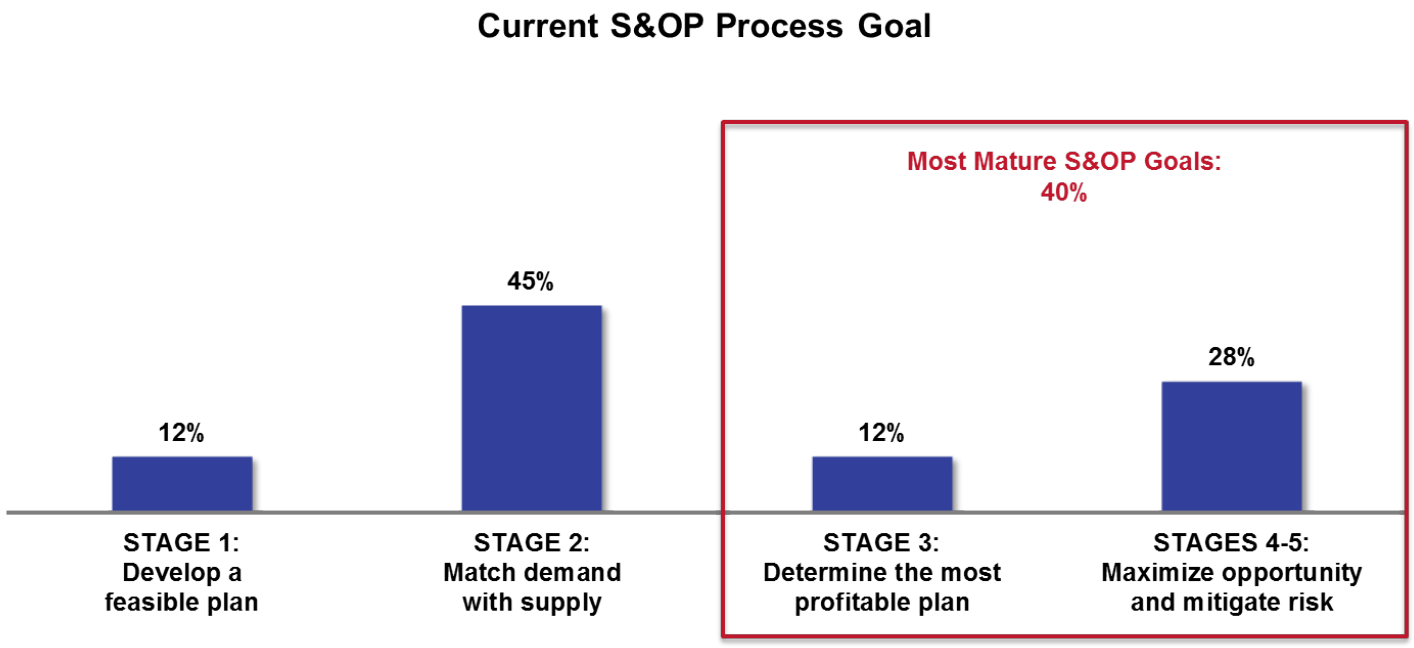
Demand-shaping Levers	Market-driven Orchestration Levers
• New product launch • Marketing • Sales incentives • Trade promotions • Distributor incentives • Assortment • Price • Run-out of obsolescence or mark-down strategies	• Price-to-price orchestration • Alternate bill of materials • Alternate sourcing • Change in assortment • Orchestration of product mix (incent products with less commodity variability) • Change in demand-shaping strategies • Commodity hedging

Market-driven takes the concepts of demand-driven one step further. The definition of a "market-driven value network" for the purpose of this report is an *adaptive network focused on a value-based outcome that senses and translates market changes (buy- and sell-side markets) bidirectionally with near real-time data latency to align sell, deliver, make and sourcing operations.*

In market-driven orchestration, the demand-shaping levers are traded-off against market-driven orchestration levers to ensure that a company can maximize opportunity and mitigate risk.

In this survey, as shown in figure 6, 28% of companies are attempting to maximize opportunity and mitigate risk through either a demand-driven or a market-driven response. They are at various levels of enablement. The toughest element of the migration is the movement from supply-centric inside-out thinking to building outside-in processes based on buy- and sell-side market data with a focus on the end-to-end process. To understand the impact of S&OP maturity, the respondents answering the survey at Stages 3-5 of the process model goal definition were contrasted to those with a focus on Stage 1-2 goal evolution. We find, as outlined in later sections, that the impact on organizational alignment and agility is significant.

Figure 6. Current State of S&OP Process Goal Definition



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers and have S&OP process – Total (n=74)
Q18. Which one of the following best defines the goal of your current S&OP process?

Process Governance

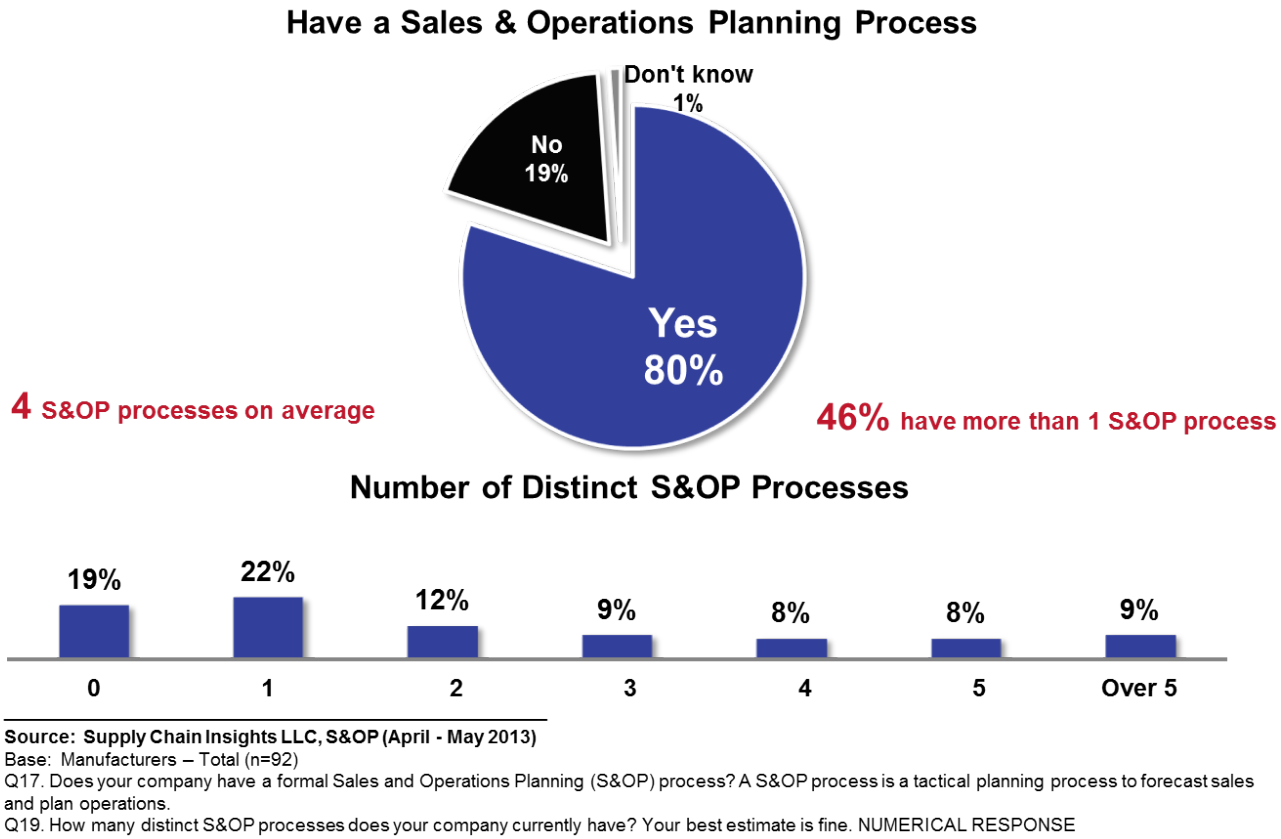
S&OP adoption is growing. Its popularity is increasing. So much so, that today there is seldom just ONE S&OP process in an organization. To maximize benefit from S&OP, companies need to be clear on governance: Goal clarity and governance go hand-in-hand in defining maturity. There are five elements of governance to focus upon:

- Local/regional governance. The role of the local supply chain organization and the role of the global organization.
- The management of multiple S&OP processes.
- The determination and management of multiple supply chains within matrixed organizations.
- The management of bottom-up and top-down planning. The management of planning master data.

- The connection between S&OP planning and operational execution of the processes

No two companies define their “global” supply chain the same, but most have evolved without a clear definition of the role of regional input and the role of the global teams in driving the process. In companies with large factories and tight inventories, the S&OP process is usually defined as global, centralized planning with local inputs. In the case of regional markets with innovation charters, the S&OP processes are often regionally driven with global reporting.

Figure 7. Overview of S&OP Processes for Respondents



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92)
Q17. Does your company have a formal Sales and Operations Planning (S&OP) process? A S&OP process is a tactical planning process to forecast sales and plan operations.
Q19. How many distinct S&OP processes does your company currently have? Your best estimate is fine. NUMERICAL RESPONSE

For global governance, there is no one right answer or one right template. The answer is, “It depends on the drivers within the supply chain.” Each organization has a slightly different set of requirements. Supply chain leaders with mature S&OP processes have well-defined governance outlining the roles of regional and global teams, discipline in forecast bias and error measurement (Forecast Value-add Analysis (FVA) is often helpful), “well-oiled” and reliable steps of the S&OP process, shared measurement systems, and well-defined processes for the management of planning master data.[i]

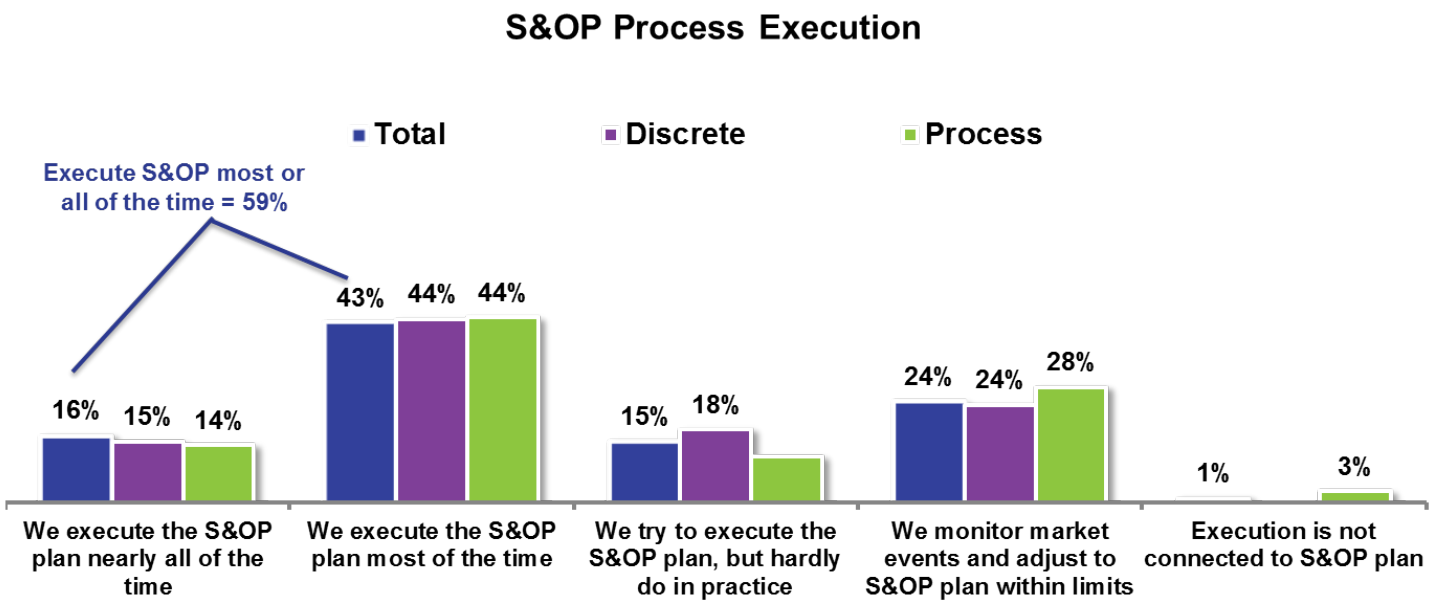
The management of multiple S&OP processes, and the associated governance of orchestrating multiple processes in a global organization, adds a new twist of complexity. In this study, 80% of the respondents answered that they have an S&OP process. And, similar to the study completed in 2012, it is more common for

respondents to have multiple processes than just one. In this study, 46% of respondents have more than one S&OP process. The respondents in this study have an average of $3B in annual revenue with four supporting S&OP processes.

The most common process frequency for the respondents is monthly. While some consultants tout the concept of real-time S&OP, for mature companies driving the greatest benefit, it remains a tactical monthly planning process. It enables the alignment of tactical plans for the business in a forward-looking time horizon of one to eighteen months. One of the issues hindering S&OP maturity is using it as a way to solve short-term operational issues.

After a decision is made in S&OP processes, companies often ask, “How should the output of the S&OP plan be connected to execution?” These processes are evolving with only 24% of companies actively monitoring market events and aligning execution to S&OP planning. As shown in figure 8, 59% of S&OP processes are executed most or all of the time.

Figure 8. Tying S&OP Planning to Execution



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers and have S&OP process – Total (n=74), Discrete (n=34), Process (n=36)
Q25. After your S&OP plan is generated, how is it executed? Please pick the one that describes it best.

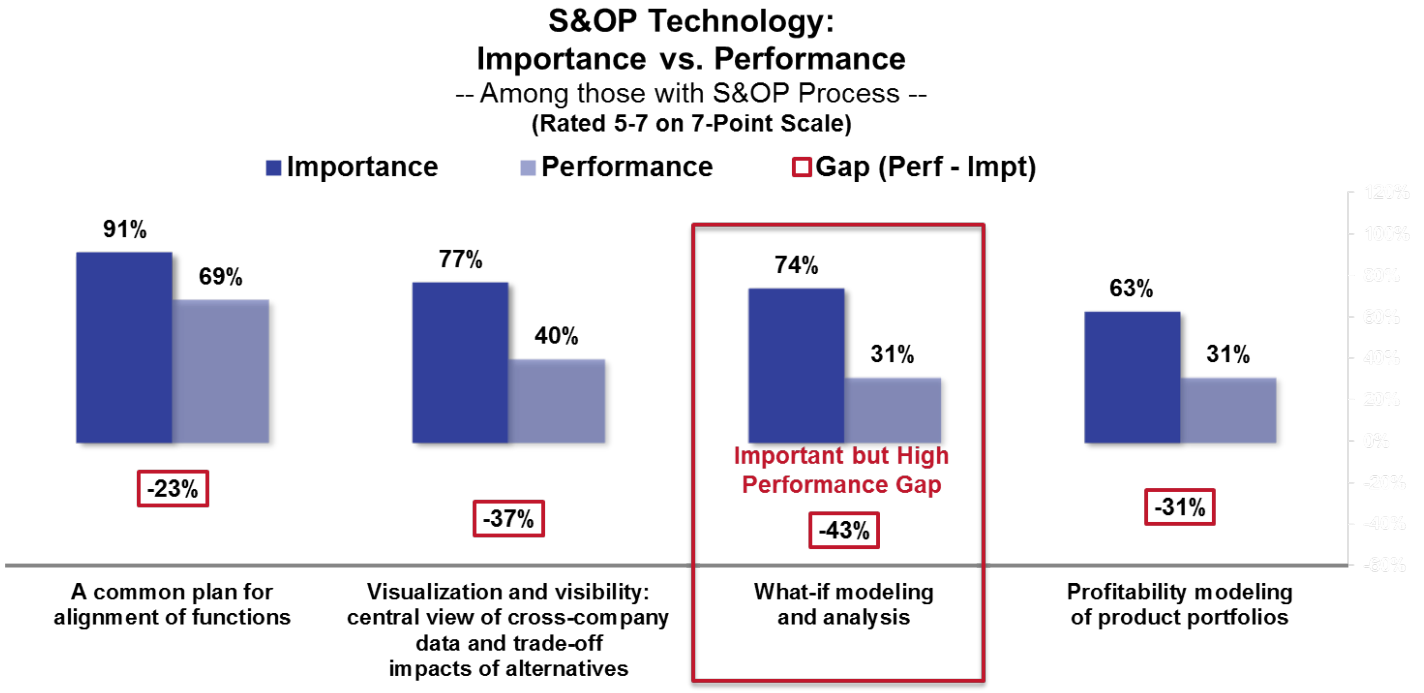
The most mature S&OP processes use “what-if” analysis in planning systems to build a series of “playbooks.” These playbooks outline plausible scenarios that could happen for the organization within the month. The playbooks outline potential market scenarios and then agree on the right organizational response. These

organizations have an agreed upon “quarterback” that calls the plays for the organization between S&OP cycles.

An analogy used by one organization that we have worked with is that these playbooks are like the plays that are mapped on the whiteboard in the locker room before a football or soccer game is played. The plays are well known by all players and the roles of each player are well rehearsed before the game starts. As a result, in the course of play, the team’s leader can call an audible to realign them to improve the game’s outcome. The translation of S&OP planning to operational executional is a similar process.

One of the barriers to achieving the connection between S&OP planning and execution is the immaturity of “what-if” analysis in conventional S&OP technologies. In figure 9, we outline the overall gaps in current technologies to visualize and analyze the output of the S&OP plan to develop feasible playbooks.

Figure 9. Current Gaps in S&OP Technologies

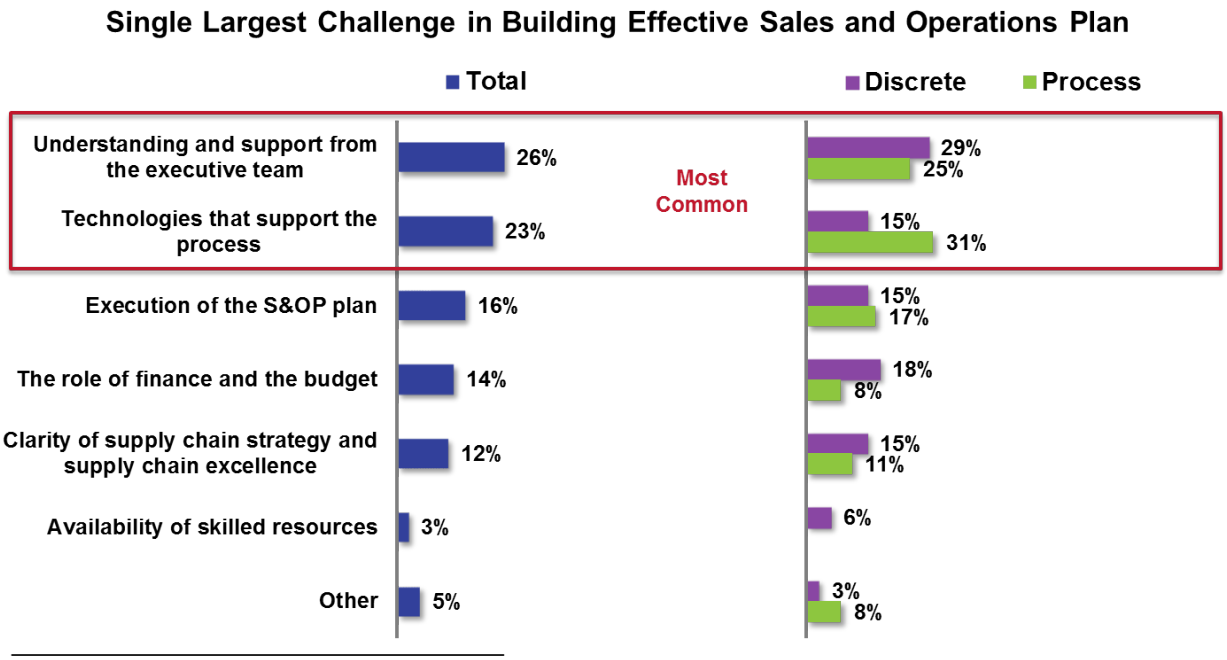


Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers and have S&OP process and S&OP technology (n=35)
Q21. At your company, how important are each of the following elements of S&OP technology to improving agility? SCALE: 1=Not at all important, 7=Extremely important
Q21A. How well does your company perform on each of these same elements of S&OP technology to improve agility? SCALE: 1=Poor, 7=Excellent

Year-over-Year Changes

In writing this report, we compared responses from similar surveys for both 2012 and 2013. While the survey demographics are slightly different, we cannot see substantial change or improvement in S&OP maturity. While there is a greater use of technology reported in 2013, the responses to the surveys indicate that organizational progress on S&OP is stalled. One of the greatest issues, as shown in figure 10, remains the executive team’s understanding of their role in driving S&OP processes.

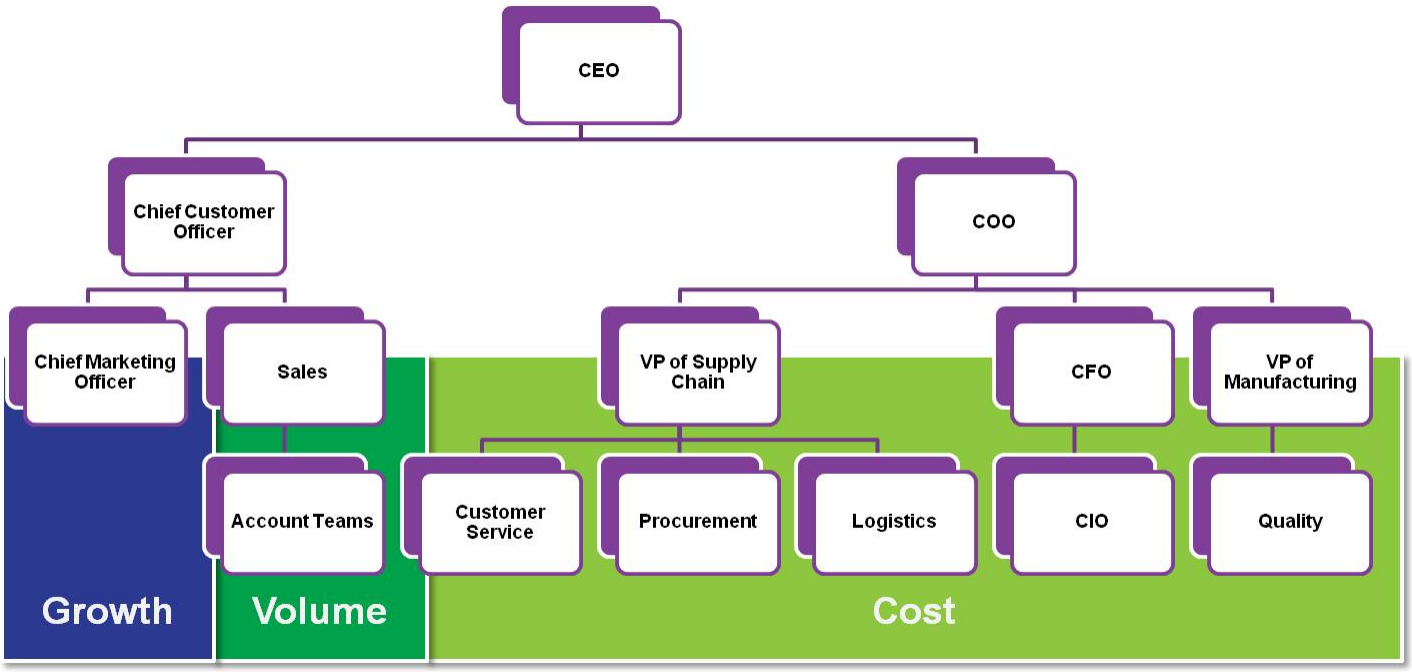
Figure 10. Single Largest Challenge in Building an Effective Sales and Operations Plan



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers and have S&OP process – Total (n=74), Discrete (n=34), Process (n=36)
Q27. What is your company's single, largest challenge in building an effective Sales and Operations Plan (S&OP)?

These issues usually center on understanding the supply chain as a complex system where there are interconnected processes and a series of finite trade-offs. As a result, individual metrics, like inventory, cannot be managed in isolation. Instead, the executives need to work to increase the supply chain's potential response through organizational alignment and agility.

Figure 11. Typical Organizational Metrics Alignment



S&OP and Its Impact on Organizational Alignment

A key insight from this survey is that S&OP maturity increases both organizational alignment and agility. Traditional incentives are a barrier to organizational alignment. As shown in figure 12, the traditional organization focuses the efforts of operations on costs while the focus of sales is on volume. Without an effective S&OP processes, the barriers between functions grow, becoming an obstacle to meeting corporate goals.

Metrics Measured

To align for success, the organization has to be gauged on a common, and balanced, set of measurements. One of the goals of this report was to understand what metrics were used in the management of S&OP processes and how these differed between supply chain leaders and laggards.

Figure 12. Metrics Measured by All Respondents Having an S&OP Process

Measurements Tracked to Meet Corporate Goals

Top 5	All Measurements Tracked			Top Five Measurements		
	Total	Discrete	Process	Total	Discrete	Process
Operating Margin	86%	78%	95%	68%	67%	71%
Cost of Goods Sold	85%	87%	83%	34%	36%	27%
Days of Inventory	83%	82%	90%	38%	36%	41%
Volume Sold	83%	80%	83%	35%	31%	41%
Shipments On Time, Complete no Errors	79%	76%	80%	55%	51%	56%
Forecast Accuracy	75%	64%	85%	41%	36%	46%
Days of Receivables	73%	71%	76%	8%	7%	7%
Inventory Turns	71%	73%	73%	35%	47%	27%
Market Share	67%	56%	85%	38%	33%	49%
Days of Payables	66%	67%	68%	10%	13%	7%
Write-offs	55%	44%	71%	5%	-	10%
Return on Assets	53%	53%	56%	21%	27%	15%
Cash-to-Cash Cycle	49%	53%	49%	29%	31%	29%
Overall Equipment Effectiveness	47%	29%	59%	14%	4%	17%
Revenue/Employee	33%	31%	34%	13%	13%	15%
Cost to Serve (cost by customer)	29%	22%	32%	13%	11%	10%
Carbon Footprint	29%	18%	44%	4%	2%	7%
Other	11%	13%	7%	8%	11%	5%

Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Discrete (n=45), Process (n=41)
Q29. Please indicate which of the following are the 5 most important measurements to track in order for your company to meet its goals?
Q30. Which other measurements does your company typically track, as far as you know?
O Higher than other group (Process vs. Discrete Industries) at 90% or higher level of confidence

The good news is that most respondents are using a balanced portfolio of measurements, as shown in figure 12: profitability, market share, days of inventory, customer service ("shipments on time, complete no errors"), and forecast accuracy.

For the more mature S&OP leaders, as shown in figure 13, this list is augmented by a focus on more end-to-end metrics including obsolescence ("write-offs") and cash-to-cash cycles.

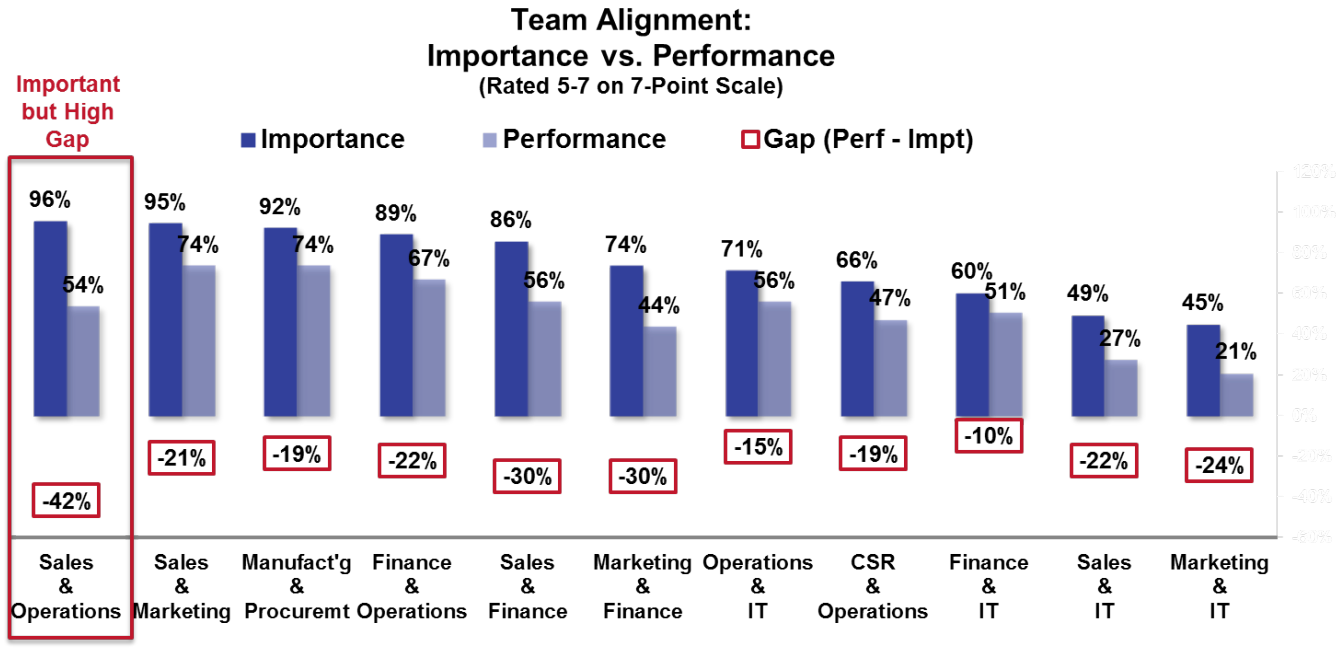
Figure 13. Metrics Measured by Mature Respondents with an S&OP Process

All Measurements Tracked to Meet Corporate Goals

Top 5	Total	Agility Definition		S&OP Goal	
		Recalibrate	Other	Max Opp or Profit Plan	Other
Operating Margin	86%	89%	84%	93%	89%
Cost of Goods Sold	85%	89%	82%	90%	84%
Days of Inventory	83%	83%	82%	80%	91%
Volume Sold	83%	89%	79%	77%	89%
Shipments On Time, Complete no Errors	79%	75%	82%	90%	80%
Forecast Accuracy	75%	69%	79%	80%	80%
Days of Receivables	73%	78%	70%	77%	82%
Inventory Turns	71%	67%	73%	73%	77%
Market Share	67%	64%	70%	63%	77%
Days of Payables	66%	72%	63%	67%	73%
Write-offs	55%	61%	52%	77%	48%
Return on Assets	53%	67%	45%	77%	43%
Cash-to-Cash Cycle	49%	61%	41%	70%	41%
Overall Equipment Effectiveness	47%	44%	48%	57%	50%
Revenue/Employee	33%	39%	29%	37%	30%
Cost to Serve (cost by customer)	29%	25%	32%	37%	30%
Carbon Footprint	29%	31%	29%	33%	32%
Other	11%	6%	14%	17%	7%

Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Agility Definition = "Recalibration in the face of market, demand and supply volatility while delivering comparable cost, quality and customer service (n=36), Other ("Ability to adapt the supply chain to variations in demand and supply," "Shorter supply cycles: reducing the time to respond with greater reliability", "Increased flexibility to make and deliver whatever is ordered," "Other") (n=56); S&OP Goal = "Maximize opportunity and mitigate risk" or "Determine the most profitable plan" (n=30), Other ("Develop a feasible plan," "Match demand with supply," or "Other") (n=44)
Q29. Please indicate which of the following are the 5 most important measurements to track in order for your company to meet its goals?
Q30. Which other measurements does your company typically track, as far as you know?
O Higher than other group (Agility Definition or S&OP Goal) at 90% or higher level of confidence

Figure 14. The Degree of Functional Team Alignment

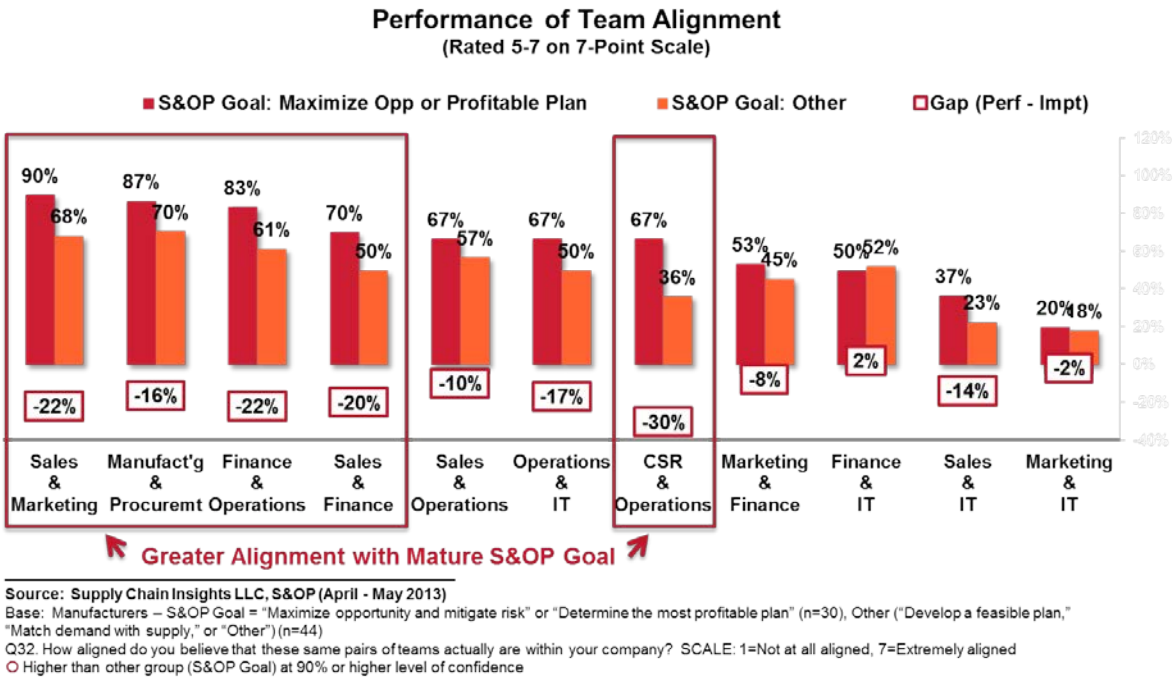


Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers (n=92)
Q31. In your opinion, how important is it for each of the following pairs of teams to be aligned within your company? SCALE: 1=Not at all important, 7=Extremely important
Q32. How aligned do you believe that these same pairs of teams actually are within your company? SCALE: 1=Not at all aligned, 7=Extremely aligned

Organizational Alignment

One of the greatest issues with organizational alignment is between the functions of sales and operations. As shown in figure 14, closing this gap is important and normal performance is low. The original goal of S&OP was to close this gap.

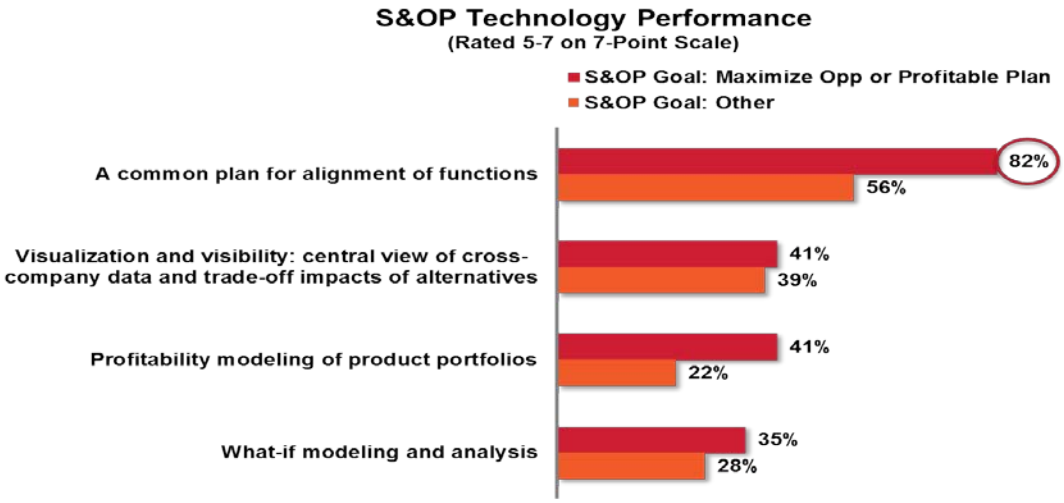
Figure 15. Team Alignment of Mature S&OP Respondents



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – S&OP Goal = "Maximize opportunity and mitigate risk" or "Determine the most profitable plan" (n=30), Other ("Develop a feasible plan," "Match demand with supply," or "Other") (n=44)
Q32. How aligned do you believe that these same pairs of teams actually are within your company? SCALE: 1=Not at all aligned, 7=Extremely aligned
○ Higher than other group (S&OP Goal) at 90% or higher level of confidence

As shown in figure 15, those with mature S&OP goals show greater alignment of many functions, including 22% points greater alignment of sales and operational teams. The difference is shown in figure 15b.

Figure 15b. Total Impact on Supply Chain Alignment



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – S&OP Goal = "Maximize opportunity and mitigate risk" or "Determine the most profitable plan" (n=30), Other ("Develop a feasible plan," "Match demand with supply," or "Other") (n=44)
Q21A. How well does your company perform on each of these same elements of S&OP technology to improve agility? SCALE: 1=Poor, 7=Excellent
○ Higher than other group (S&OP Goal) at 90% or higher level of confidence

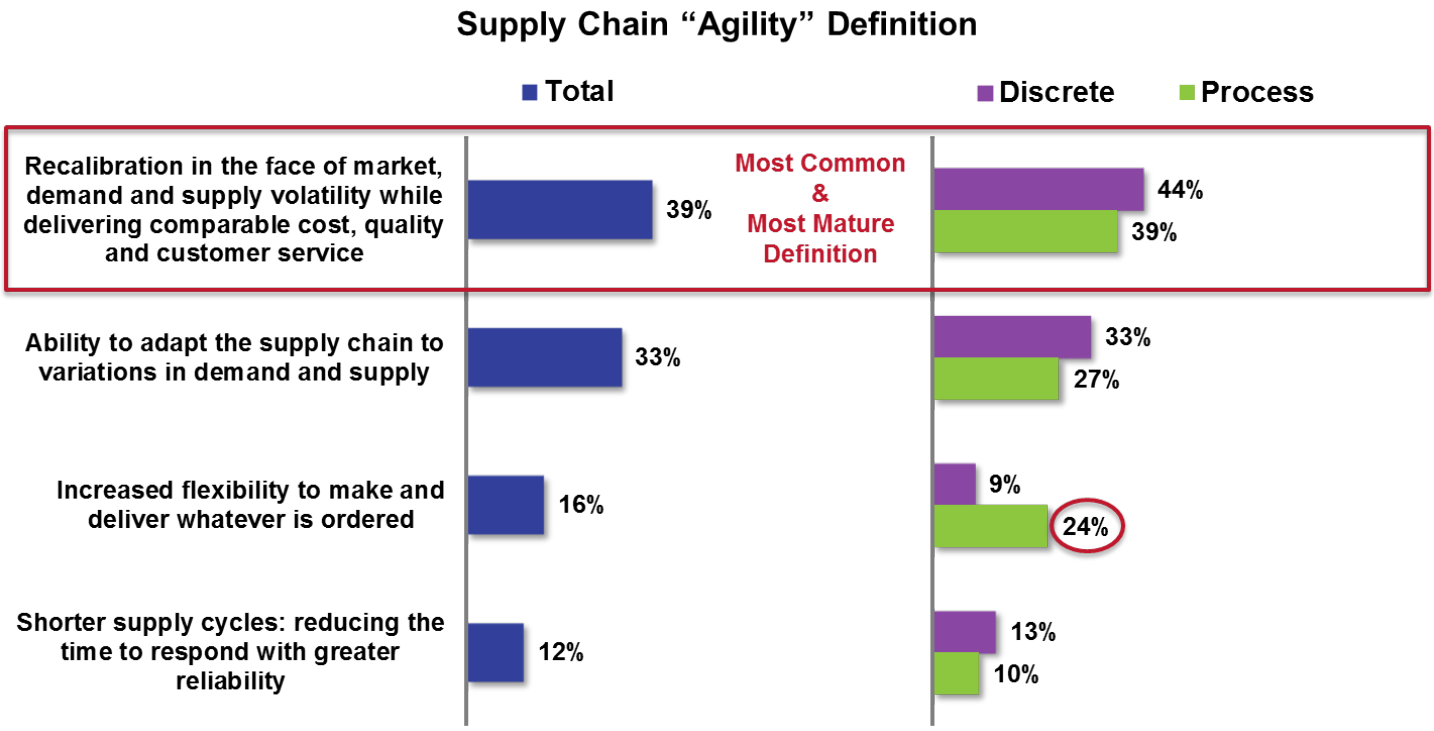
S&OP and Its Impact on Agility

Most organizations will state that they want to be "agile," but the definition of agility is often not clear. There is no industry standard or accepted practice. As a result, organizations use the word "agility" in many different ways with many different meanings.

As demand and supply volatility increases, the importance of agility increases. As organizations have become more global and complex, achieving agility has also become more difficult.

One of the goals of this study was to understand the impact of S&OP maturity on organizational agility. We first started with the definition of agility as outlined in figure 16. The most mature definition is the ability to recalibrate the organization in the face of demand and supply volatility to deliver comparable cost, quality and customer service.

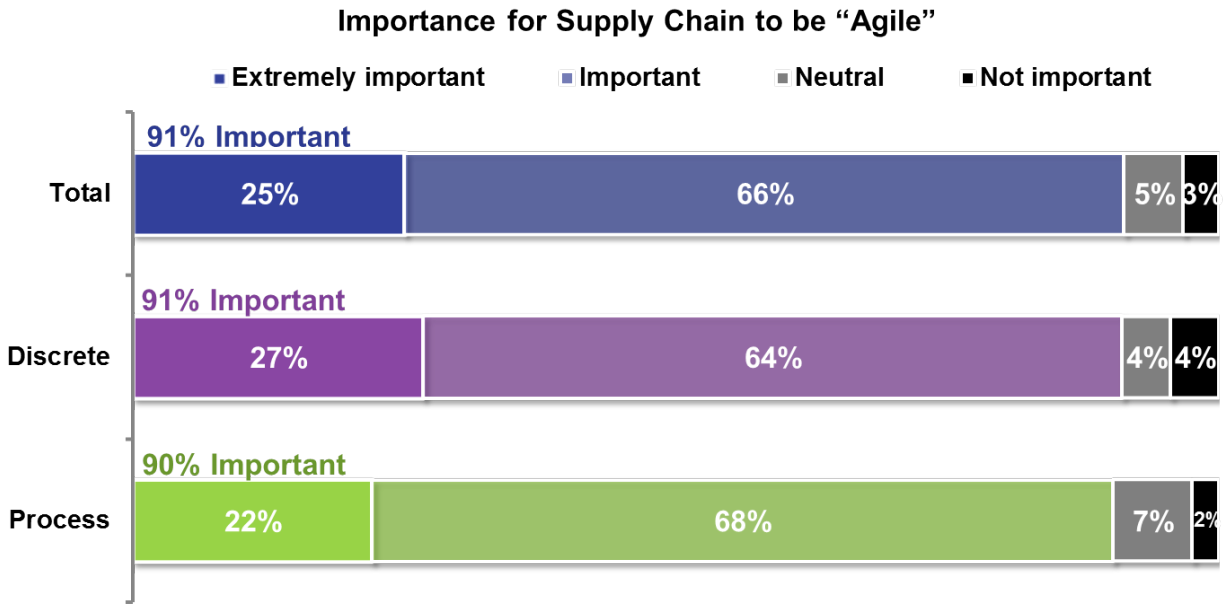
Figure 16. Definition of Agility by Respondents in the Survey



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Discrete (n=45), Process (n=41)
Q11. How would you define what it means for your company's supply chain to be "agile"? Please select the one that fits best.
O Higher than other group (Process vs. Discrete Industries) at 90% or higher level of confidence

Improving enterprise agility is highly valued, with over 90% of respondents desiring to improve organizational agility. As shown in figure 17, this goal was equally high for both process and discrete organizations.

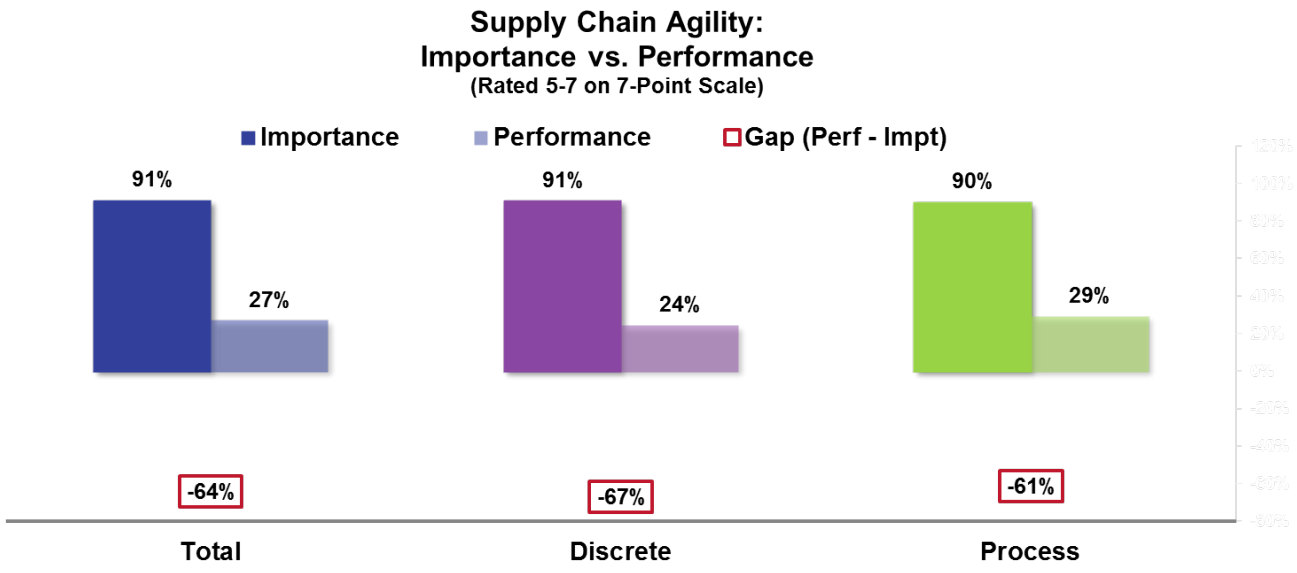
Figure 17. Importance of Supply Chain Agility



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Discrete (n=45), Process (n=41)
Q12. How important is it for your company's supply chain to be "agile" in 2013? Please base your answer on however your company defines agility. SCALE: 1=Not at all important, 7=Extremely important

The current gap between desired and perceived agility is large for respondents. As shown in figure 18, there is no substantial difference between discrete and process organizations with both sectors having substantial gaps.

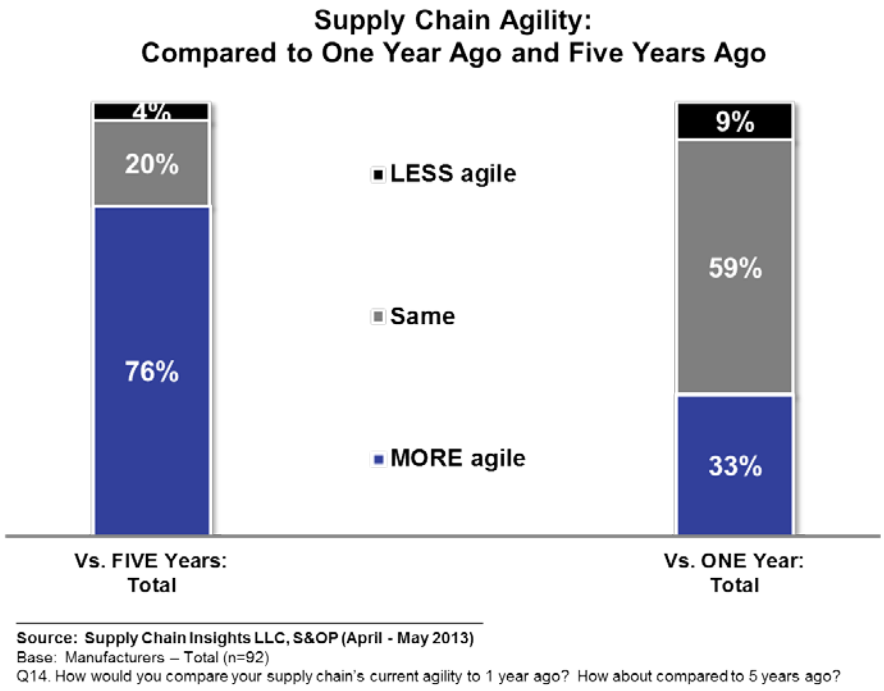
Figure 18. Current Gap in Perceived Organizational Agility



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Discrete (n=45), Process (n=41)
Q12. How important is it for your company's supply chain to be "agile" in 2013? Please base your answer on however your company defines agility. SCALE: 1=Not at all important, 7=Extremely important
Q13. How would you currently rate your company's supply chain in terms of being "agile"? SCALE: 1=Not at all agile, 7=Extremely agile

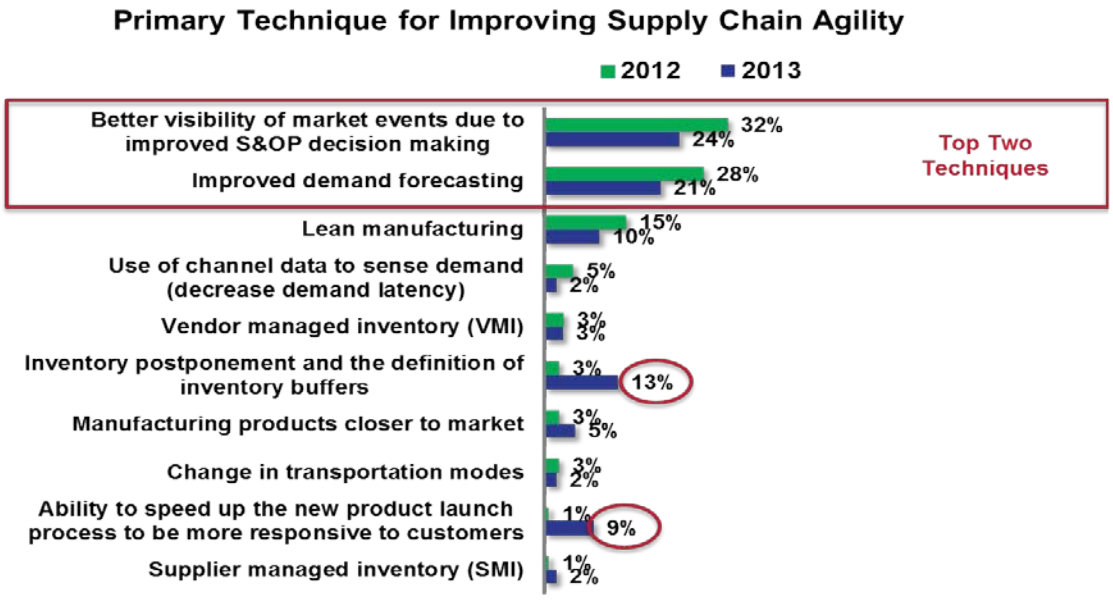
Many, many efforts have been launched to improve agility. The typical organization from the survey believes that they are more agile than five years ago, but has marginal improvement when compared year-over-year. In both the 2012 and 2013 studies, as shown in figure 19, a mature S&OP process had the greatest impact on organizational agility.

Figure 19. Changes in Organizational Agility



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92)
Q14. How would you compare your supply chain's current agility to 1 year ago? How about compared to 5 years ago?

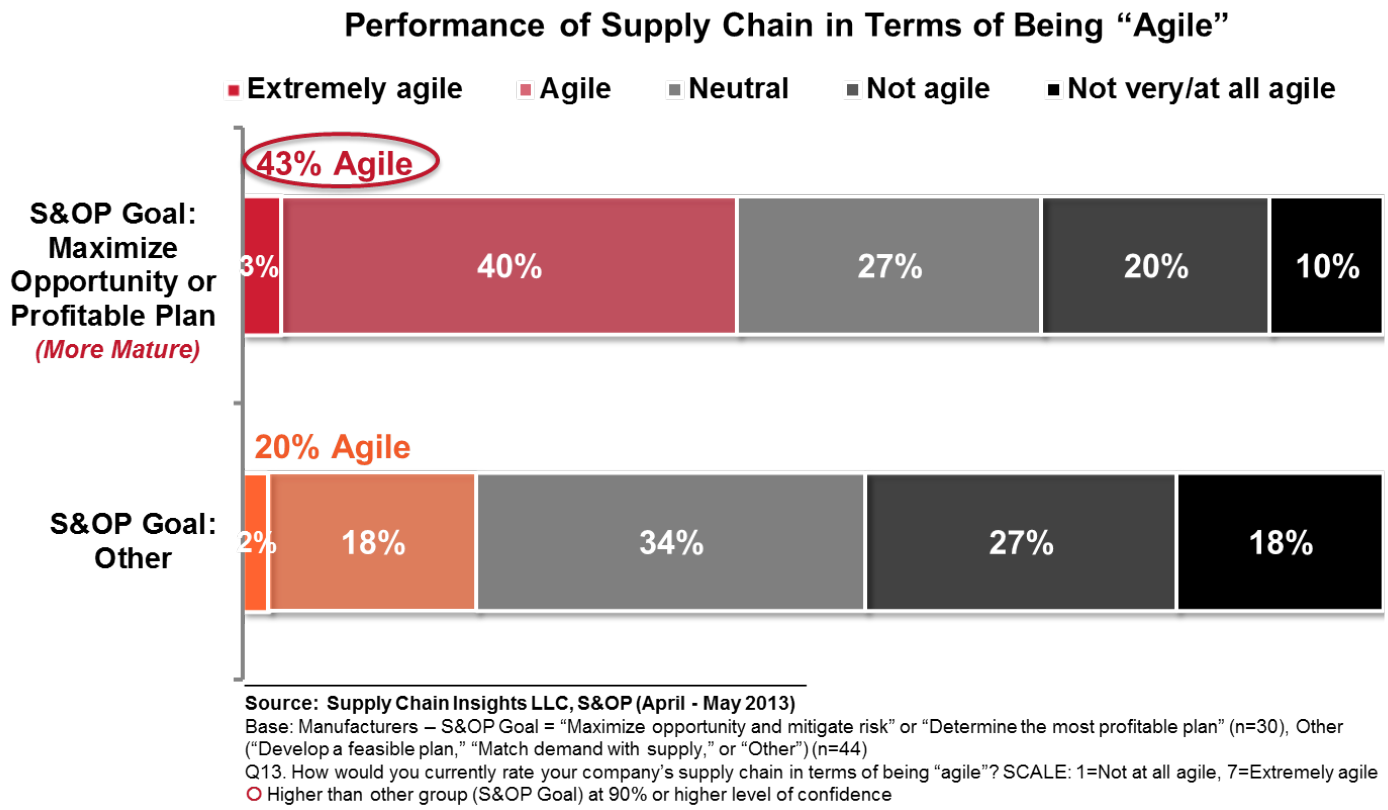
Figure 20. Techniques to Improve Agility



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Total 2012 (n=117), Total Manufacturers 2013 (n=92)
Q15. What is the primary technique your company currently uses to improve supply chain agility?
O Higher than other group (2012 vs. 2013) at 90% or higher level of confidence

As organizations mature, their self-reported agility ratings improve. Note that in figure 21, organizations with S&OP maturity at Stage 3, 4 or 5 on the maturity model are twice as likely to consider their supply chain agile.

Figure 21. Changes in Agility based on S&OP Maturity



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – S&OP Goal = "Maximize opportunity and mitigate risk" or "Determine the most profitable plan" (n=30), Other ("Develop a feasible plan," "Match demand with supply," or "Other") (n=44)
Q13. How would you currently rate your company's supply chain in terms of being "agile"? SCALE: 1=Not at all agile, 7=Extremely agile
O Higher than other group (S&OP Goal) at 90% or higher level of confidence

Potholes and Pitfalls

S&OP is a popular topic today. There are many consulting organizations and technology providers touting S&OP best practices and technologies. Before engaging with one of the myriad firms offering to help you with S&OP, remember seven findings from this study:

- **The Role of the Executive Team.** The largest barrier to S&OP performance is the Executive team's understanding of supply chain. The most mature S&OP teams have worked on the education and alignment of the executive teams. When you hear one of these firms suggest that you "drive executive participation and alignment" ask yourself the question, *"What is the best way to educate and onboard the executive team?"* Do not ask for executive involvement without education and alignment of the team on the supply chain as a complex system.
- **Agility and Alignment Improve with S&OP Maturity, But Only if You Build with the Goal in Mind.** Consciously craft the organizational map for improvement with a clear definition of process impacts and technology evolution as the goal changes. Each step requires a redefinition of process and

technology. The greatest impact for organizational alignment happens when there is movement from a focus on volume to profitability; while the greatest improvement in agility happens when the organization moves from inside-out to outside-in thinking. Both are important.

- **Manage the Supply Chain as a Complex System.** Work cross-functionally with a consistent set of metrics that includes forecast accuracy, customer service, inventory levels (days of inventory or inventory turns), profitability and revenue growth/market share. Focus on helping the organization gain a system understanding. There are two important aspects of this recommendation:
    - **Avoid Spreadsheets.** The trade-offs of the supply chain cannot be adequately modeled in a spreadsheet. The trade-offs of the complex time-series data elements are just too difficult. Encourage planners and participants to move off of Excel spreadsheets by improving the usability of S&OP applications.
    - **Do Not Manage Metrics in Isolation.** One of the great benefits of an effective S&OP process is the management of organizational trade-offs. However, as you train the members of the team, help them to understand the trade-offs between metrics for your organization and to never manage metrics as single entities in the absence of a total system approach.
- **Avoid Religious Arguments. Stay Focused.** The discussion of S&OP maturity has become a political, sometimes almost a religious, war within organizations. Avoid this pothole. The political issues revolve around the definition of supply chain as a function versus focusing on the supply chain as an end-to-end process, and the evolution of S&OP as Integrated Business Planning (IBP). Sidestep these issues, use the best-accepted name, and focus on business results. Do not get mired in the politics.
- **Be Sure the Organization Knows the Quarterback. Connect S&OP Planning to S&OP Execution**. Use “what-if” capabilities in today’s technology solutions to build organizational playbooks and orchestrate the S&OP process from planning to execution. Ensure that the “plays” are well-understood and there is alignment of the organization to the calls of a single, universally recognized quarterback for action.
- **Define Clear Regional/Global Governance.** S&OP processes have become more complex. Spend time educating the organization on S&OP maturity and evolution, and work to clearly define governance. This may not be trivial. For one multi-billion dollar manufacturer, the definition of global/regional governance took two years.
- **Avoid Cookbook Approaches.** There is no technological silver bullet, but the most mature S&OP processes have focused on visualization and “what-if” analysis.

Conclusion

Interest in S&OP is growing. This thirty-year old process is experiencing a renaissance. Technology advancement makes greater capabilities available, but industry progress is inching along. It is almost at a snail's pace. Part of the issue is the number of religious arguments introduced into the market by well-intentioned consultants and technology providers. The other half of the battle is the lack of the clear value of a more mature S&OP process. It is our hope that the increase in organizational alignment and improvement in agility are sufficient to drive substantial change in S&OP projects. Next year, when we report on S&OP maturity and benefits, we hope to report exponential change and improvement.

Appendix

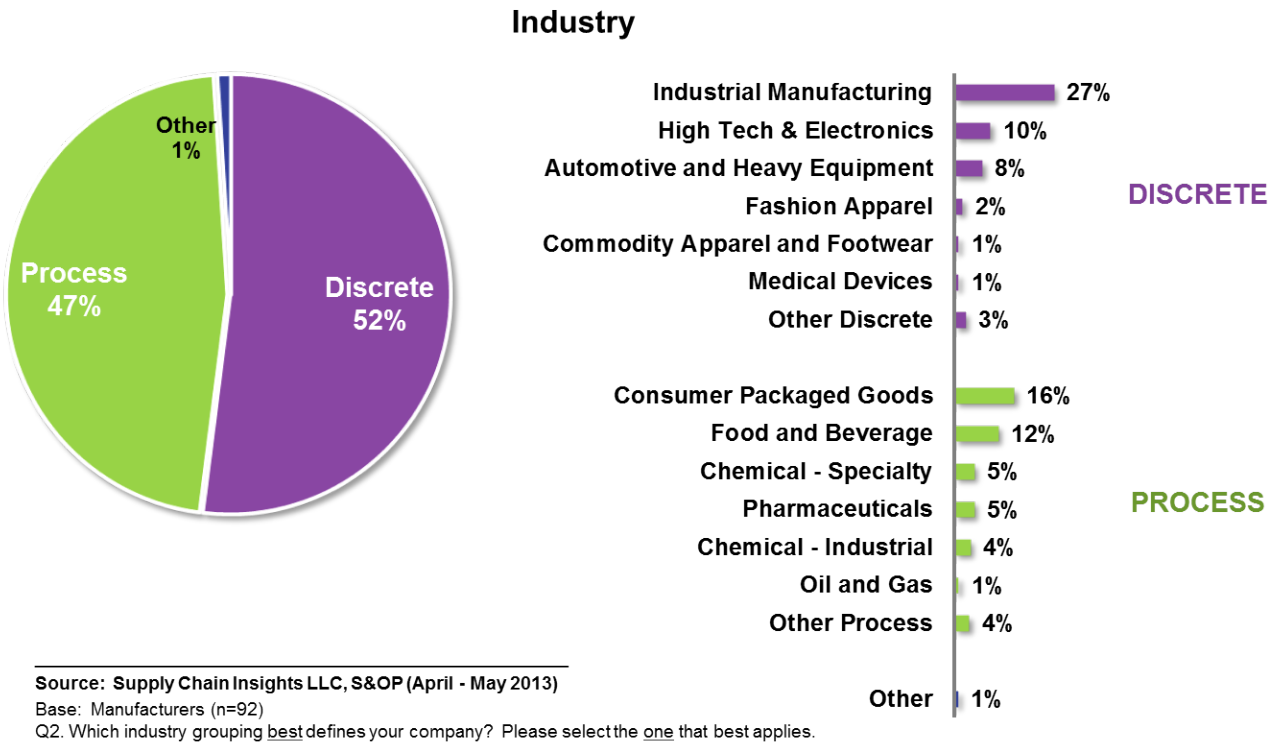
In this section, we share the demographic information. Over 80% of respondents to this survey had an S&OP process. In this survey, the presence of an S&OP process was slightly stronger in process than discrete industry respondents.

The data from this report primarily came from an online, quantitative survey fielded by Supply Chain Insights during the spring of 2013. The respondents were equally distributed between process and discrete manufacturing companies. The average company had $3 billion in revenue with 17,000 employees. The respondents were dispersed across the globe with a concentration in North America and Europe. Of the responses, 42% were from North America, 32% were from Europe. The remainder of the responses came from Asia/Pacific, Africa/Middle East and South America.

The respondents answered the surveys of their own free will. There was no exchange of currency. The only offer made to stimulate a response was to share the survey results in the form of Open Content research at the end of the study.

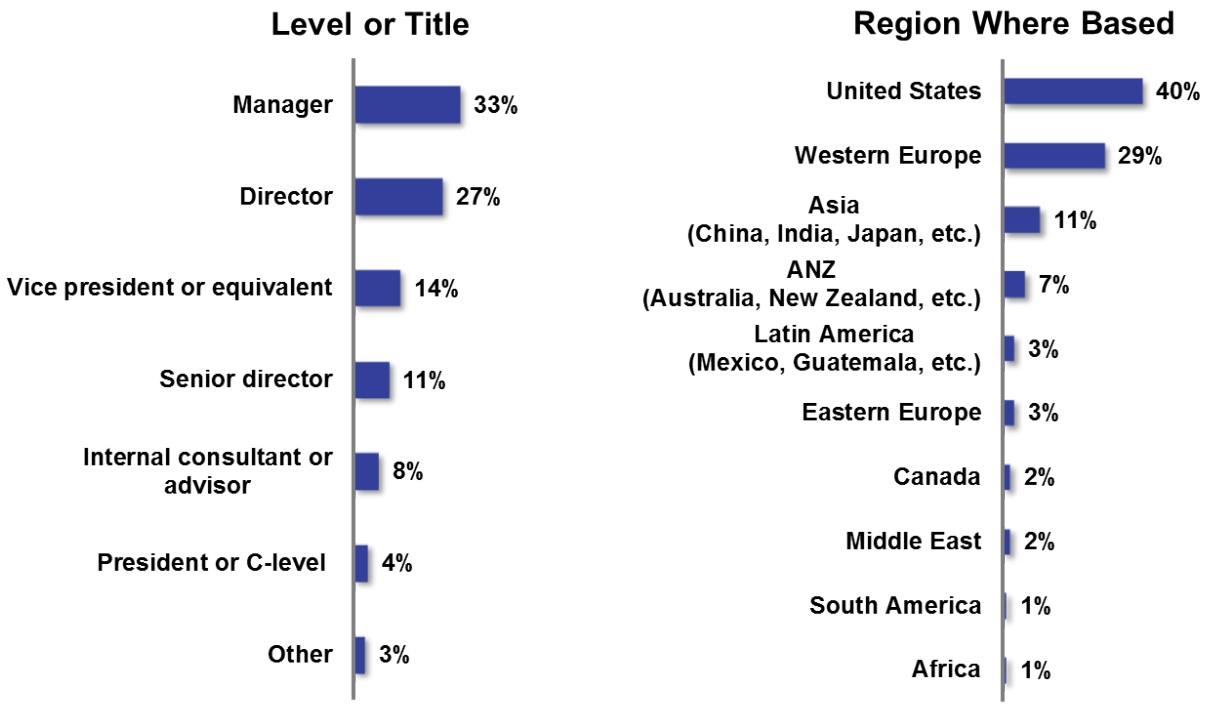
The names of those that completed the surveys are held in confidence, but the demographics are shared to help the readers of this report gain a perspective on the respondents. The demographics supporting these figures are found in figures A-G.

Figure A. Industry Demographics of the Respondents



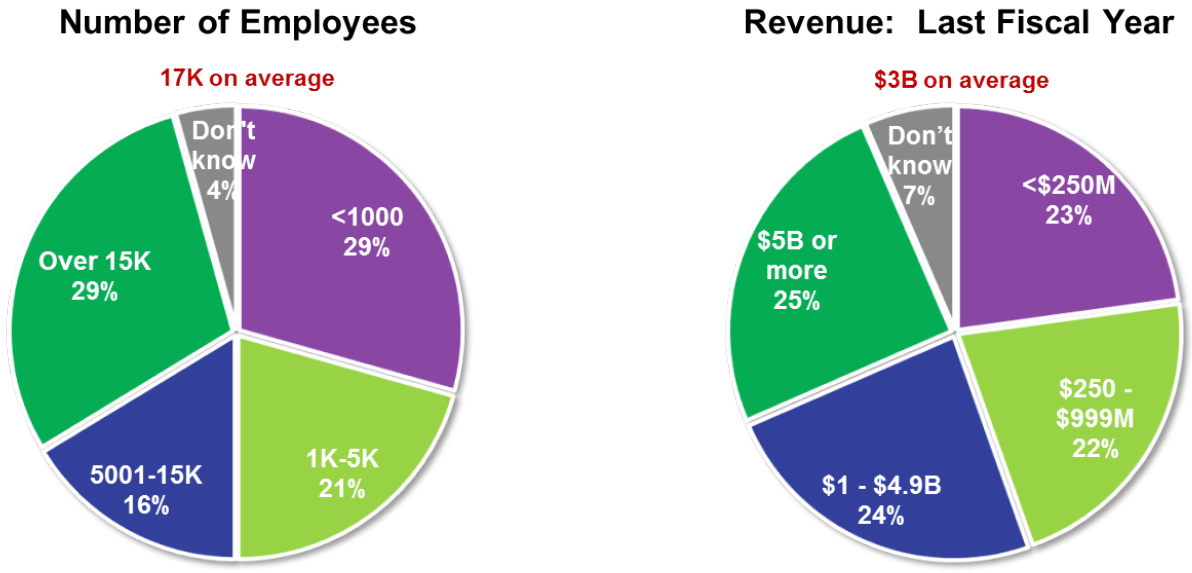
Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers (n=92)
Q2. Which industry grouping best defines your company? Please select the one that best applies.

Figure B. Role/Location of the Respondent



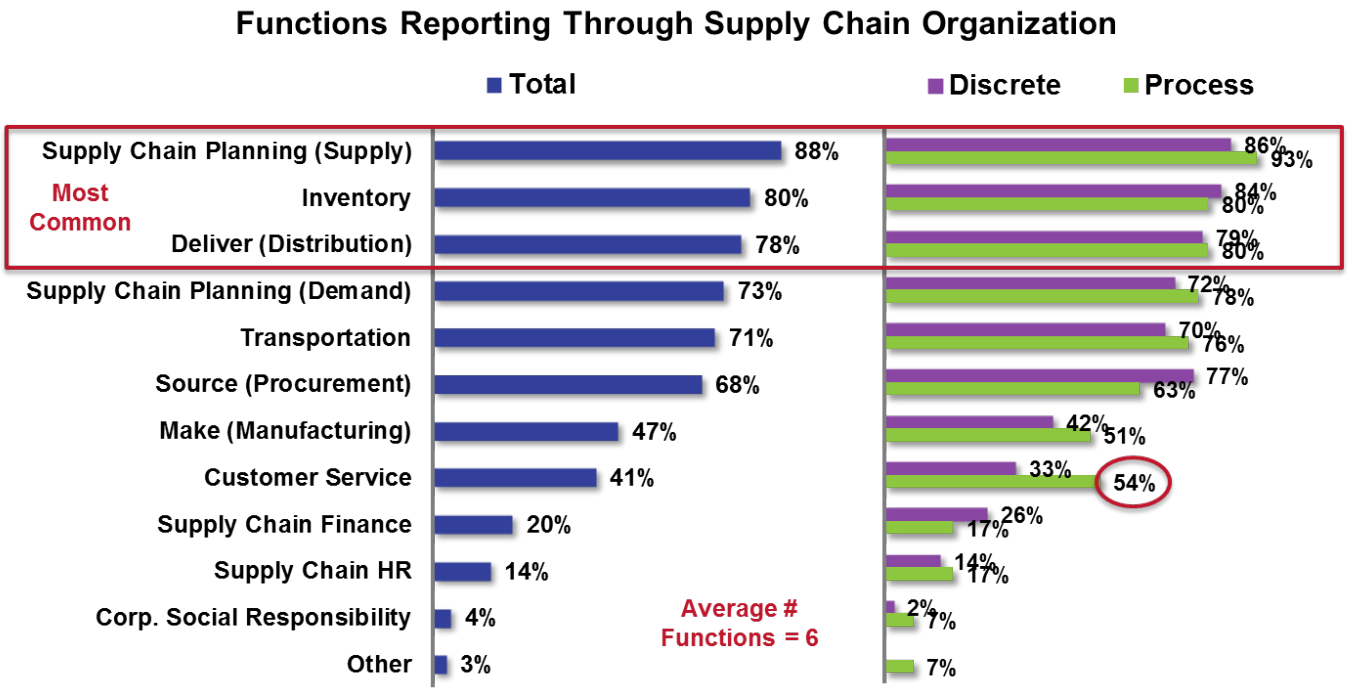
Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers (n=92)
Q4. Which of the following best describes your current position? Please select the one that best applies
Q4A. In what region of the world are you personally based at this time?

Figure C. Company Size



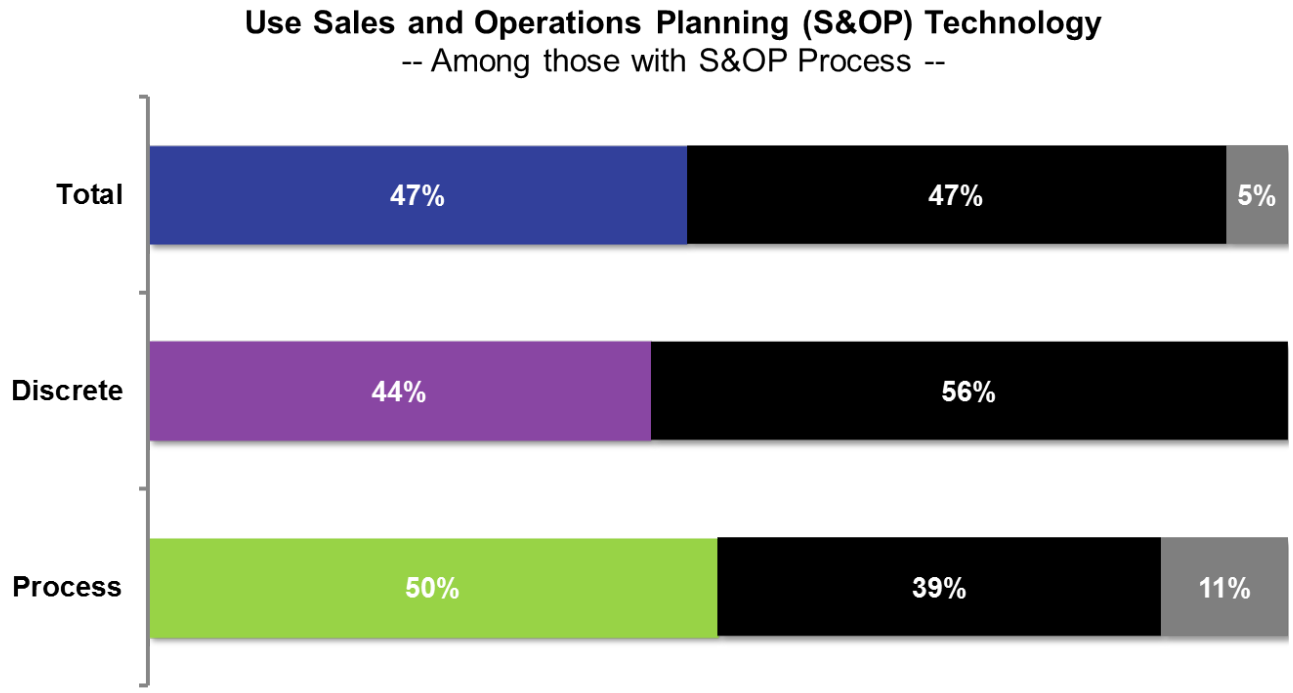
Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers (n=92)
Q3. What is the size of your company, in terms of number of employees? Please write in your best estimate below. NUMERICAL RESPONSE
Q3A. Approximately, what was your company's last fiscal year revenue? Your best estimate is fine.

Figure D. Supply Chain Reporting Definitions



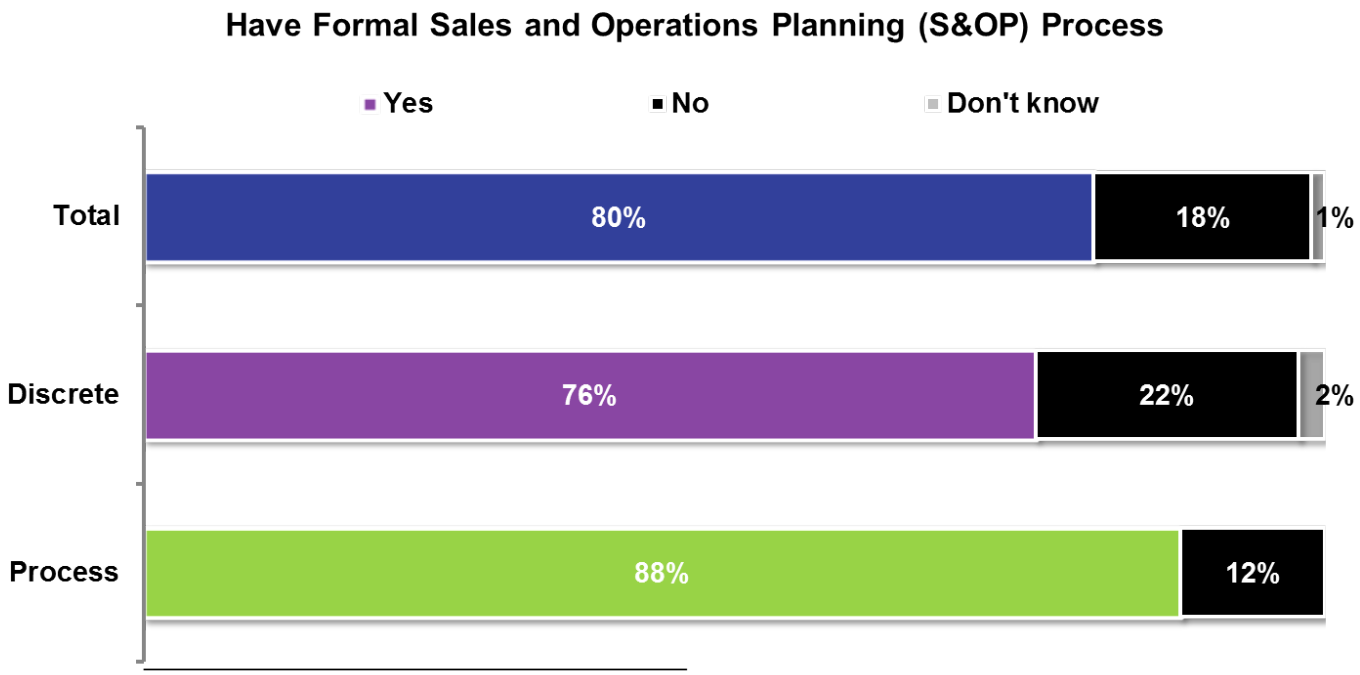
Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers with a supply chain organization – Total (n=90), Discrete (n=43), Process (n=41)
Q5. Companies define their supply chain organizations in different ways. Please tell us how you define your company's supply chain organization by selecting which function(s) report through the supply chain organization. Please select all that apply.
O Higher than other group (Process vs. Discrete Industries) at 90% or higher level of confidence

Figure E. Use of Sales and Operations Technologies



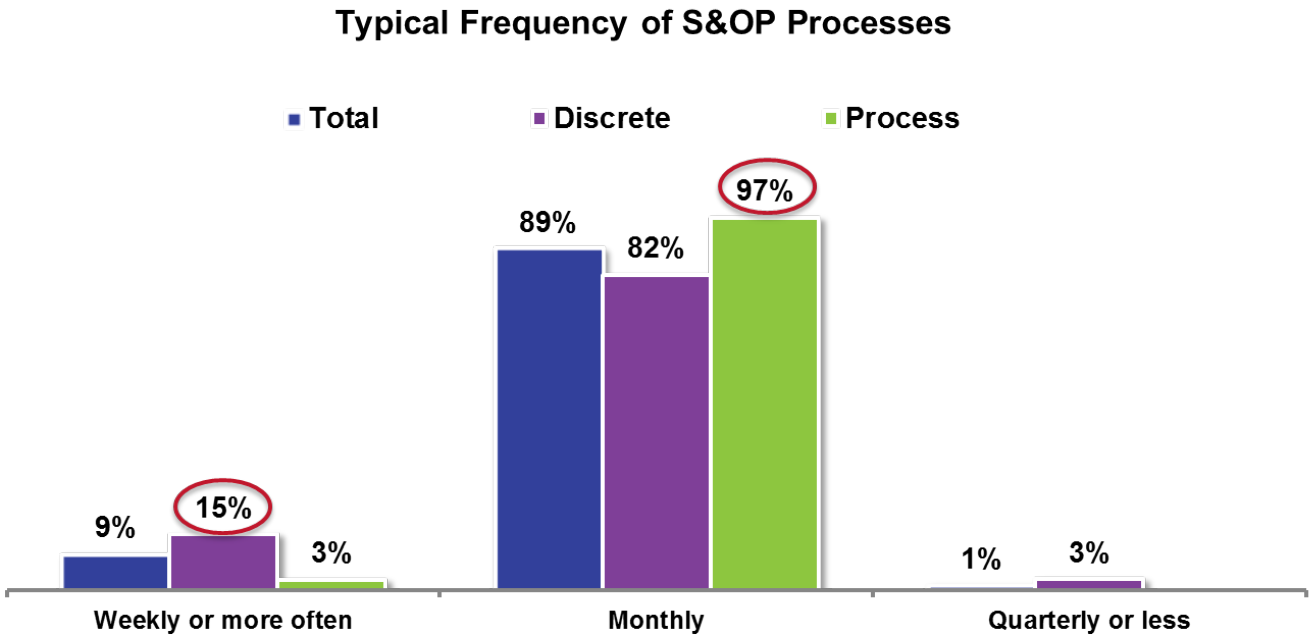
Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers and have S&OP process – Total (n=74), Discrete (n=34), Process (n=36)
Q20. Does your company currently use S&OP technology?

Figure F. Presence of S&OP Process



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers – Total (n=92), Discrete (n=45), Process (n=41)
Q17. Does your company have a formal Sales and Operations Planning (S&OP) process? A S&OP process is a tactical planning process to forecast sales and plan operations.

Figure G. Frequency of the S&OP Process



Source: Supply Chain Insights LLC, S&OP (April - May 2013)
Base: Manufacturers and have S&OP process – Total (n=74), Discrete (n=34), Process (n=36)
Q23. What is the typical frequency of your S&OP process? Your best estimate is fine.
O Higher than other group (Process vs. Discrete Industries) at 90% or higher level of confidence

Other Related Reports

How S&OP Drives Agility
Published by Supply Chain Insights in May 2012

Market-driven S&OP
Published by Supply Chain Insights in July 2012

Putting Together the Pieces: A Guide to S&OP Technology Selection
Published by Supply Chain Insights in August 2012

Voice of the Supply Chain: Leaders Speak on Technology
Published by Supply Chain Insights in January 2013

About Supply Chain Insights LLC

Supply Chain Insights LLC is a research and advisory firm focused on reinventing the analyst model. The services of the company are designed to help supply chain teams improve value-based outcomes through research-based Advisory Services, a dedicated Supply Chain Community and public training. Formed in February 2012, the company is focused on delivering **independent, actionable and objective advice for supply chain leaders**.

About Lora Cecere

Lora Cecere (twitter ID @lcecere) is the Founder of Supply Chain Insights LLC and the author of popular enterprise software blog Supply Chain Shaman currently read by 5,000 supply chain professionals. Her book, ***Bricks Matter***, (co-authored with Charlie Chase) published on December 26th, 2012. She is currently working on a second book, **Metrics That Matter**, to publish in 2013.

With over nine years as a research analyst with **AMR Research, Altimeter Group, and Gartner Group** and now as a Founder of Supply Chain Insights, Lora understands supply chain. She has worked with over 600 companies on their supply chain strategy and speaks at over 50 conferences a year on the evolution of supply chain processes and technologies. Her research is designed for the early adopter seeking first mover advantage.

---

[i] Forecast Value-add Analysis. What is the Big Deal? Mike Gilliland