



HOW SALES AND OPERATIONS PLANNING ENABLED EMD CHEMICALS TO SUCCESSFULLY NAVIGATE THE GREAT RECESSION AND BE POSITIONED FOR GROWTH

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EMD Chemicals Inc. is an affiliate of Merck KGaA, Darmstadt, Germany. Merck KGaA is a global pharmaceutical and chemical company with approximately 40,000 employees in 64 countries and roots dating back to 1668. As such, the company has weathered many storms, including global economic recessions.

Storm clouds were looming on the horizon for the global economy in early 2007, and it was the Pigments & Cosmetics business unit's good fortune that the leadership team began to focus on how to better manage the business in a more integrated way.

Disappointing return on investment from the implementation of a division-wide Enterprise Resource Planning system caused the leadership team to reassess. It took 18 months to convert disparate ERP systems onto one platform and harmonize the transactional business processes across EMD Chemicals' three business units and five sites in North America.

Despite the use of a harmonized ERP platform, the company continued to suffer the common effects of misaligned business processes: missed customer shipments, high inventories, expediting, less-than-desired financial performance



and low customer satisfaction. As part of a “Business Recovery Project” established to resolve these maladies, the need for an integrated business management process, S&OP, was identified. I put together a small team to research S&OP best practices.

In retrospect, it may have been more advantageous to our operational and business performance to have implemented S&OP before the ERP system. S&OP showed that it is a highly effective way to manage change, but we were too busy “chopping wood to sharpen our axes.”

The Oliver Wight experts are pioneers in S&OP as well as ERP, so I contacted George Palmatier and Colleen Crum of Oliver Wight Americas with the hope of setting up some training on S&OP.

Highlights

- EMD Chemicals identified the need for a Sales and Operations Planning (S&OP) process in 2007 after not realizing the desired return on investment from a recent Enterprise Resource Planning (ERP) implementation. The business unit leaders recognized the need for a more integrated approach to managing the business.
- A “fast track” approach to implementing the S&OP process was used. It was operational in two months. A “learn-while-doing” continuous improvement approach was used to operate the process. The first few monthly cycles were less than perfect, but immediate results were realized.
- Using S&OP as the integrated business management process for the company’s Pigments & Cosmetics business unit enabled the group to successfully navigate the “Great Recession” of 2009, achieve a rapid industry recovery in 2010, and to be positioned for future growth.
- The Pigments & Cosmetics business unit simultaneously reduced inventory, improved delivery performance, avoided significant costs, and captured significant market share. EMD Chemicals’ Pigments & Cosmetics unit recently achieved the Class A Capable S&OP milestone as defined by the Oliver Wight Class A Checklist for Business Excellence, Sixth Edition.



About EMD Chemicals

EMD Chemicals Inc. is a North American affiliate of Merck KGaA, Darmstadt, Germany. Sales and Operations Planning was implemented in the company's Pigments & Cosmetics business unit in North America.

Merck KGaA, Darmstadt, Germany, with roots dating back to 1668, is a global pharmaceutical and chemical company with approximately 40,000 employees in 64 countries. The company's Pigments & Cosmetics business unit provides high-quality pigments for the industrial coatings, plastics, and cosmetics industries. Effect pigments from Merck set the standard in the coatings, plastics, cosmetics, and food industries. Top quality, diversity, and a customer-centric approach to research and product development characterize the Pigments & Cosmetics business.

George visited our headquarters and interviewed our executives, directors, and managers to assess our current state relative to the Oliver Wight Class A Checklist for Business Excellence, Sixth Edition. Like many other companies who are not using S&OP as an integrated way for the executive leadership team to manage the business, it was apparent that we had significant deficiencies across most business practices.

With the need for S&OP clearly identified, I received go-ahead from our Executive Committee to organize an Executive Education Session to educate the senior management team on the principles of Class A S&OP. The participants in the session included executives and their direct reports, key players, and special guests.



During this two-day session, the fundamentals of S&OP as “THE WAY” to manage the business were presented. Senior management agreed upon the process design, key players, and the implementation approach and authorized further design and education sessions across the entire enterprise. The goal was to get up and running quickly, get early results, and “learn while doing” as we improved the process. We educated ourselves, designed the process, and implemented S&OP within two months!



As project manager, my initial role was to facilitate education and, frankly, become educated myself. After that, my focus shifted toward the three elements of any change: People and Behaviors, Processes, and Tools.

I found the concepts of S&OP quite simple, but execution requires an engaged and involved leadership. The people and behaviors side requires constant vigilance, and I had frequent contact with my executive sponsor and business unit owners to manage and assess the people side of the implementation. The process side was the easiest. It was clear that Oliver Wight has developed a best practice

process over the course of decades, so we adopted the standard model with minor changes. Finally, I engaged our Information Technology group to purchase the Oliver Wight ESOP Tool as a shared database and reporting engine. The IT group also made minor modifications to our ERP system to facilitate easier reporting.



“After only two cycles with S&OP in place, we’ve made progress. We haven’t solved all the problems, but now we’re starting to figure out where the problems lie.”

-Meiken Krebs, President of EMD Chemicals Inc., when S&OP was implemented.

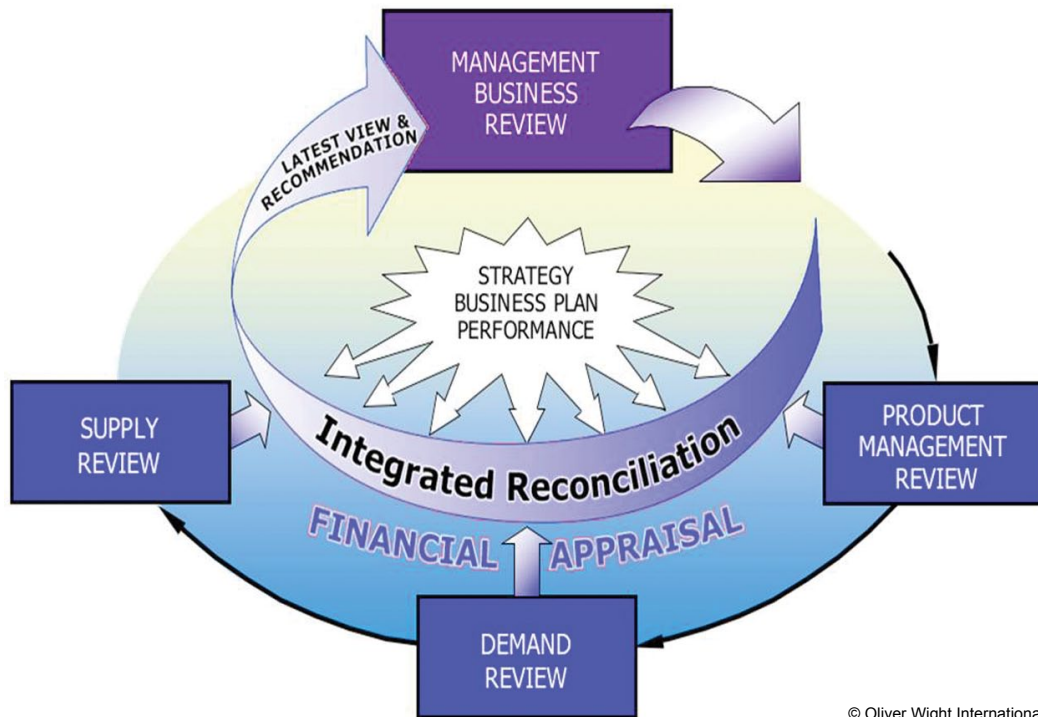
Ultimately, the hard work of an excellent team of coordinators was the key to our success. There was a coordinator responsible for each step of the S&OP process as well as an overall S&OP coordinator, which was my role. In my role, I was to keep leadership engaged, focused, and involved to ensure we had education and training resources available and to remove obstacles to enable the teams to succeed.

What is Sales and Operations Planning?

Sales and Operations Planning is a process led by senior management that, on a monthly basis, evaluates revised, time-phased projections for supply, demand, and planned changes to the product portfolio and the resulting financials. It is a decision-making process that ensures that the tactical plans in all business functions are aligned and in support of the company strategy and the business plans and goals. The objective of S&OP is to reach consensus on a single operating plan that allocates the critical resources of people, capacity, materials, time, and money to most effectively meet the marketplace in a profitable way.

(Source: Oliver Wight International)

Figure 1. Sales and Operations Planning Model Used by EMD Chemicals



S&OP is now the fundamental integrated business management process at EMD Chemicals. It is a disciplined, regular, and routine monthly cycle, owned by senior management, and comprised of five elemental steps: Product Review, Demand Review, Supply Review, Financial Reconciliation, and Management Business Review (see Figure 1). Each review is chaired by the appropriate senior manager of the department and the Management Business Review is chaired by the owner of the business unit.

The output of the process is a full picture of the business over a 24-month planning horizon. Product launches and discontinuations, demand plans (in revenue, profit, and volume), supply capabilities, and full financial statements are reviewed monthly, resulting in consensus on a plan moving forward. Finally, an Executive Review brings the latest projections and assumptions of all business units together during this monthly review session.

The Executive Committee gets a full picture of the entire business in four hours or less, once a month. They can see future gaps between the latest projections and our business goals, targets, and strategies and make decisions on actions that need to be taken to close the gaps. They also have a regular view of performance and can work with the organization to take actions to ensure that performance improvements are made so that we better execute the approved plans and strategies.

The implementation of S&OP could not have been timelier. The Great Recession was looming, and early indicators were evident in S&OP.

The Pigments & Cosmetics business unit was most affected by the economic storm. Consumers stopped buying cars, automotive manufacturers cut their production and weren't buying coatings, and we weren't selling pigments used in these coatings - a core component of our revenue. Our cosmetics and plastics product lines also suffered as shoppers tightened their belts.

Luiz Vieira, VP of Pigments & Cosmetics, was a strong proponent of the S&OP process from the beginning and led his team to continuously improve S&OP while using the process to manage through the crisis. Todd Ahern, Demand Manager and S&OP Central Coordinator, lives and breathes the process as well, so together they made a formidable team. His team ran multiple scenarios, supported by full financial analysis, and achieved consensus on one set of numbers. In the end, the clarity of information allowed the team to “manage to the bottom line,” which provided precious time to prepare the business and employees for scheduled shutdowns, enabling the avoidance of millions of dollars in costs and production of unneeded inventories.





When 2010 dawned, the opposite but welcome “problem” emerged. Sales rapidly picked up during the first quarter, and the Pigments & Cosmetics management team was able to quickly adjust, using the same technique of scenario planning and reaching consensus on one set of numbers.

As a result, the supply chain organization was prepared, and we gained market share from our less-capable competitors. Furthermore, our management team was in complete control of the business, so inventories remained low as we increased market share and customer satisfaction.

“Leadership is the essential ingredient; taking genuine interest, rolling up your sleeves and, most importantly, not only showing that you care but truly caring, and valuing mistakes as part of the growth process of individuals and the team itself.”

-Luiz Vieira, VP Pigments & Cosmetics

“Because we effectively forecasted the downturn of 2009 and the subsequent recovery of 2010, we were well-positioned to avoid costs, reduce working capital, and gain significant market share,” says Todd Ahern, Demand Manager and S&OP Coordinator, Pigments & Cosmetics.

The visibility and decision-making power enabled by S&OP is an essential part of our ongoing success. The tested and proven methodology of the process and the experience gained during the economic storm allowed us to build a solid platform for growth in the future.



“The business had the perfect setting; a great crew, robust products, and strong ties to customers. What the S&OP process delivered was the ‘navigation tools’ to enable us, with proper bearings, to set the course and not necessarily avoid the storms but, rather, be ready to go head to head with it and come out stronger at the end.”

-Luiz Vieira, VP Pigments & Cosmetics

What is Class A?

When a company achieves Class A Business Excellence, as measured by The Oliver Wight Class A Checklist for Business Excellence, Sixth Edition, it means the company effectively uses its operational and management processes companywide to achieve a strong, competitive footing. Oliver Wight introduced the first checklist in 1977 and updates it regularly to reflect new standards of competitiveness.

As a direct result of a disciplined S&OP process, the Pigments & Cosmetics business unit was able to:

- Decrease inventory by 40%
- Increase delivery performance to >95% from a level of around 70%
- Avoid millions in costs during the recession
- Capture millions of revenue from increasing market share during the recovery
- Recover their investment on implementation costs in less than six months
- Build greater cooperation, teamwork, and set an example for the rest of the organization.



About the Author



Prior to joining Oliver Wight, Eric held several management positions in manufacturing, logistics, and supply chain with Merck KGaA (EMD Chemicals in North America). While working with Merck KGaA, Eric led teams through an Enterprise Resource Planning (SAP) implementation, several mergers and acquisitions, and major corporate restructuring.

He was also instrumental in leading their effort to implement Sales and Operations Planning. As project manager, Eric led the S&OP implementation across four diverse business units simultaneously. The divisions achieved significant operational and financial performance results from Sales and Operations Planning. The business received Class A Capable certification from Oliver Wight as well.

Eric Deutsch, principal with Oliver Wight Americas, is a coach and educator who partners with companies to improve their integrated planning and management processes.

Eric has 15 years of hands-on experience in implementing Master Scheduling, Demand Management, and Sales and Operations Planning / Integrated Business Planning processes in a multi-national, specialty chemical and biotech company.

Eric earned Certified Supply Chain Professional (CSCP) recognition from APICS and is also a member of the Council of Supply Chain Management Professionals. He received a Bachelor of Science degree in Bacteriology from the University of Wisconsin – Madison.

The logo for Oliver Wight, featuring the name in a black, elegant cursive script. A thin red horizontal line is positioned below the text.

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