



## Cut through Complexity and Unlock Value with Supply Chain Management

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The effect of globalization and changing economic landscape has enormous effects on the chemical industry. Many businesses have yet to achieve a truly integrated business. This means that they need the latest technology to support demand driven strategies to unlock the potential in their supply chains. Each aspect of the business should be addressed holistically and not in isolation. Thus, aligning supply chain business processes with leading-edge software is fundamental to improving customer satisfaction, reduced inventory and cost reduction to achieve greater profitability.



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A 2012 report titled “McKinsey on Chemicals” states that India has been living in China’s shadow for the past decade when it comes to growth in the chemical sector. This was especially defining in 2010 when China overtook the United States as the world’s largest chemical market. Comparatively, India was ranked eighth. However, McKinsey is now predicting an inflection point with strong tailwinds in India’s economic outlook. India is also home to a burgeoning middle class population with increasing consumerism driving the local economy. In particular, the specialty chemicals sector looks set to be a growth engine for the industry. Local players can capitalize on this shifting technology trend and stay ahead of competition with better supply chain management strategies. This can be achieved by cutting through complexity and increasing value via supply chain management. This strengthens overall business sustainability for the Indian chemical sector.

### Cutting through complexity

In this dynamic marketplace, manufacturers have to manage rapidly growing product portfolios and operational issues. With conflicting production strategies and pressure to reduce cost, it is harder to remain competitive. Manufacturers need to better integrate key functions to drive greater productivity and increase profitability. Thus, they can leverage software solutions to drive well-informed decisions, greater agility and higher margins.

With uncertain global economic conditions, businesses face frequent revisions and reviews of demand forecasts, supply plans and inventory positions. Cash flow and production costs, excess market capacity and intense competition force chemical companies to pay close attention to service levels and still meet customer demands. Reducing cost is important in today’s marketplace – this includes logistics, demand and supply strategies. It also helps to tackle mounting risk and complexity existing throughout the supply chain. With greater visibility and agility, companies can make better informed decisions that affect margins. These decisions can have competing objectives – for instance, focusing too much on one business goal can sacrifice overall performance in other areas. This means that a balanced strategy is required to be successful, so as not to leave money on the table.

### Unlocking value

Chemical companies need to deliver more responsive processes that seamlessly integrate between strategic, tactical

and operational levels. Supply chain management professionals touch every aspect of the business process and they need to make decisions in a timely manner, guided by the best demand response to maximize market potential while mitigating risk. Companies unlock greater value and achieve increased profitability with a well-executed demand driven strategy.

Globalization opens up new emerging market opportunities. This means that more needs to be done to address process efficiency, cost reduction, operational agility and margin maximization. For instance, a typical medium sized integrated chemical site produces between \$5 – 10M worth of products on a daily basis. This site also purchases raw materials, supplies and energy approximately equal to 75% of the produced value, tying up millions of dollars in working capital. Successfully managing an organization requires needing to know what/when to buy, which equipment to run, when to produce, what to sell and by when.

Indian chemical companies also need to recalibrate plans to meet market demand and supply volatility to achieve an efficient, responsive and agile supply chain guided by the most profitable decisions for the business. Companies need to incorporate critical success factors such as improving customer satisfaction, decreasing inventory, reducing cost, and enhancing business agility as follows:

### Improve customer satisfaction

Customer satisfaction is often measured in terms of on-time shipments of the right product in proper quantity. Demanding customers can threaten margins, as manufacturers are tasked to produce products that can meet customer specific requirements. The need for differentiation and higher margins necessitates better customer relations. Factors contributing to improved customer satisfaction include rapid responses to demand changes, improvements in forecast accuracy, supply chain visibility and information quality.

### Decrease inventory

With better supply chain management, chemical companies can manage inventory more optimally. This reduces or eliminates inventory buffers, which can be a side effect of the lack of visibility into current or projected inventory levels. Buffers are often used to maintain customer service levels and protect against critical stock-outs.

Good supply chain management allows chemical companies to minimize their inventory and reduce the cost of capital while still being able to meet customer demand. Getting this balance right is essential in the chemicals sector due to the industry’s inherent volatility.

When inventory is unavailable, plant efficiency can be compromised to produce products to meet a specific customer demand. Visibility into forward inventory positions and optimal inventory positioning throughout the supply chain network can help mitigate these inventory issues.

**To be truly efficient, chemical companies must integrate their supply chain processes and use balanced metrics to support the business. Planners and schedulers also need the right tools to achieve visibility to relevant information and not be overwhelmed by supply chain complexity. They need to be able to assess tradeoffs between inventories, cost and customer service. The right software helps manufacturers react quickly to unexpected events.**

### Reduce cost

Potential cost reduction areas include procurement, working capital, inventory storage, distribution, expedition, labor, etc. In the chemicals industry, raw material costs fluctuate with the market and can be based on pre-determined contract prices. More cost reduction can be achieved with better forecasting, as well as the planning and scheduling of a complex supply chain. For example, the cost incurred due to emergency expedition to meet a delivery date can be eliminated if the scheduler has greater visibility as to when the product will be available. Good supply chain management allows chemical companies to minimize their inventory and reduce the cost of capital while still being able to meet customer demand. Getting this balance right is essential in the chemicals sector due to the industry's inherent volatility.

### Enhance business agility

The ability to respond quickly and profitably to an unplanned occurrence (such as a new order, equipment failure, raw material shortage, labor constraints, etc.) is extremely valuable. A well-structured, cost effective and agile global supply chain helps to identify exactly where in the supply chain for value creation take place. This is because the best supply chains are fast, cost-effective, agile and adaptable. This ensures that all stakeholder interests are aligned. The ability to react in a timely fashion drives improvements in customer service, asset utilization and inventory management.

Software is important and chemical companies need to look to two key areas in order to put best practices into place. These two areas are sales and operations planning (S&OP) and dynamic plant scheduling. Getting this strategy right can increase profit by millions of dollars in additional revenue yet some chemical producers still use spreadsheets and manual data handling methods. This increases the risk of human errors. Other issues include siloed processes/work practices and a lack of integration

between departments.

According to a recent report from Gartner titled "Demand-Driven Value Network Orchestration Key Initiative Overview" as of June 14, 2013 – it is noted that demand-driven supply chain strategies can result in 10% higher revenue and 5 – 7% better profit margin. To be truly efficient, chemical companies must integrate their supply chain processes and use

balanced metrics to support the business. Planners and schedulers also need the right tools to achieve visibility to relevant information and not be overwhelmed by supply chain complexity. They need to be able to assess tradeoffs between inventories, cost and customer service. The right software helps manufacturers react quickly to unexpected events. Decision support tools also provide the ability to optimize production and keep it running to deliver products consistently. This allows chemical manufacturers to compete effectively.

### One cut above the rest

Today, supply chain management professionals are involved in every facet of the business process. They strive to produce and deliver products better, faster and cheaper in an increasingly complex global environment. Best in class supply chain management software can help to cut through complexity and deliver significant business benefits in the form of higher customer service, lower inventory levels and reduced supply chain costs. Companies now can leverage these solutions to drive profits and are better positioned to build long term sustainability.

