

Customer-Centric Approach Drives

The steel manufacturing industry has never been known for being particularly responsive to market needs. In fact, until recently, the industry has been plagued by extremely long lead-times, poor customer service and high levels of manufacturing inefficiencies. But there's a quiet revolution going on, serving up more change in the last decade than in the 150 years preceding it. The use of leading-edge technology has driven business efficiencies, and continued globalization has created further economies of scale, with both fueling rapid industry consolidation.

Tata Steel, the flagship of India's \$22 billion Tata Group, is Asia's first and India's largest private-sector steel company. One of the lowest cost producers of steel in the world, it was ranked fifth in the *Asian BusinessWeek* 50 performers in 2005, and has twice topped the "World-Class Steel-makers" list issued by World Steel Dynamics, a leading steel information service. Tata recently purchased Thailand's Millennium Steel and Singapore's NatSteel Asia, and in January 2007 announced the acquisition of Anglo-Dutch Corus Group in a \$12 billion transaction.

Tata's strategic drivers were improved customer satisfaction and higher asset utilization.

"Before we started looking at supply chain optimization, we suffered from all of the typical problems manufacturers face: non-optimized asset utilization, long cycle times, disparate IT systems and lack of visibility into demand, orders and shipments," says Anand Sen, vice president of Tata's Flat Product Division. "We knew that we simply couldn't meet our strategic objectives by maintaining the status quo."

Customer satisfaction

Customer satisfaction was a real issue at Tata Steel. When orders were placed, customers were promised a due date that was not based on hard data, plant capacity or raw-material availability. Orders were delivered when promised only about 50 percent of the time. To make matters worse, customers would generally not receive advance notice if their order would not be ready as promised, and this lack of communication burdened customer resources down the line, in the finishing and distribution channels.

The plant would often scramble to address the needs of high-priority customers, further alienating customers whose orders may have been just as important but less urgent. Without any method to analyze forecast versus



actual performance, it was impossible to design improvements in the overall delivery system.

Realizing that its industry-leading position was hanging in the balance, Tata started the improvement process by articulating its strategic drivers: improved customer satisfaction and higher asset utilization. To address customer needs, the company conducted an exhaustive survey to establish detailed customer requirements. The survey yielded three imperatives. First, provide an accurate promise as to when the order would be delivered. Second, in the event that the order due date would be missed, notify the customer early in the process—not at the point of the missed delivery. And third, accurately project a revised delivery date so that the customer could modify its schedules accordingly.

Business process reengineering

After mapping the entire supply chain process in great detail, Tata engaged in an extensive business process re-engineering effort. The objectives were to evaluate the gaps in current supply chain processes with respect to industry demands, to redesign the processes to achieve a dominant service position and to identify the IT enablers that could make this happen. "We saw the relationship with i2 as a critical partnership," says Biswajit Roychowdhury, chief of planning for Tata's Flat Steel Division. "Our final

Global Growth for Tata Steel



decision to go with i2 Sales and Operations Planning, i2 Factory Planner and i2 Material Allocator was the culmination of a long process of due diligence and included all members of executive management.”

The business issues Tata wanted its process reengineering and IT implementation to address included:

- Optimizing inventory investment, including raw materials, work-in-process and finished inventories
- Maximizing the value of supplier relationships
- Improving the accuracy of price and volume forecasts
- Determining the best product mix
- Making reliable customer delivery promises
- Utilizing key assets optimally
- Prioritizing orders for key customers
- Improving quality and product yields through better scheduling decisions
- Improving transportation efficiency

Tata Steel completed its technology implementation earlier this year and has seen significant improvements already in critical areas. Most importantly, 85 percent of orders are promised within the desired delivery week and do not require any manual intervention or adjustment—up from 50 percent. “Sometimes it’s even as high as 92 percent,” asserts Roychowdhury. “Now, when we understand that an order is in jeopardy, we have the tools in place to troubleshoot the order and can often take corrective

action to fix the problem before we even have to notify the customer.” In addition, late orders running in the production line have been reduced to less than 10 percent, and order booking efficiency has risen to above 80 percent.

Forecasting capability

Tata’s forecasting ability has also improved dramatically. Prior to implementing supply chain software, the company had no systematic insight into how to evaluate the accuracy of its forecasts for demand as well as for raw materials. Now, it has the tools to analyze its forecast predictions against actual results, enabling root-cause analysis capabilities to identify what has caused the differences.

“Improving our ability to forecast allows us to use due-date-based planning, which helps us to meet demand with higher utilization of assets,” says Roychowdhury. “Also, instead of manually balancing resources as before, we can now automatically identify bottlenecks deep in our processes, and take corrective action to increase our overall production efficiency, thus realizing the benefits of continuous improvement. In support of our strategic objectives, our supply chain data are fully integrated with the rest of Tata Steel’s business infrastructure, so we’re able to scale effectively as we grow.”

The new-generation software from i2 has given Tata planners several capabilities they lacked prior to implementation. Planners can now project business over a year’s time and monitor performance against those projections. They can also make product-mix decisions based on profit optimization goals and take orders as late as possible with postponement strategies. Tata’s planners can also refresh the expected time of arrival with up-to-the-minute information.

Prognosis

The rapid pace of change in the steel industry—and, for that matter, in heavy industrial manufacturing in general—is not expected to slow down. Stoked by these results, Tata executives are optimistic. “We’re shifting from being order-takers in a relatively controlled pricing environment 20 years ago to being sophisticated marketers adroitly negotiating the profitable space between supply and demand across multiple markets on an almost daily basis,” says Sen. “Someday, we’ll be able to predict not just the delivery date, but the actual hour that our truck will be pulling up to a customer’s warehouse. It opens up a whole world of possibilities.”

— Elizabeth Greer