

## Papermaker Makes 'Lean Six Sigma' Work

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NewPage Talks About Its Adoption and Implementation of Lean Six Sigma Practices

Bob Crescenzi joined NewPage in Miamisburg, Ohio, as vice president of business excellence in 2006. He shared his company's adoption and implementation of Lean Six Sigma practices when he spoke in the Management Program at the 2008 Emerson Global Users Exchange. NewPage, a coated paper products manufacturer with around 8,000 employees, has net sales of about \$4.7 billion.

"We're a fully integrated paper mill," he said. "We go from Mother Nature to finished product. I'm probably the only person in our company who doesn't know how to make paper, but I don't need to. I was brought to NewPage to make change. In fact, when I joined our company, there were too many people who knew how to make paper and not enough people tending to customers' needs."



**"The belts are in a separate part of the company, so they don't get pulled into everyday fire fighting." NewPage's Bob Crescenzi on his company's decision to dedicate 1% of its employees to full-time process improvement.**

The business challenge for NewPage, as it is for many companies in their given industries, is to make paper faster, better and cheaper—all at the same time. "We chose Six Sigma because it addresses this," explained Crescenzi. "Our goal was to get all 8,000 employees to think about it."

NewPage adopted an operating model with two priorities—lowering costs while increasing quality and focusing on customer needs to optimize value—as well as two cultural initiatives. The company chose to implement Lean Six Sigma, a combination of the speed and low cost of lean manufacturing principles and the quality and low variability of Six Sigma, to prevent a battle between Lean and Six Sigma experts at the company.

The payback has been a seven-to-one return on the dollar, claimed Crescenzi, but it didn't come without complete dedication. "We have 80 Six Sigma black belts—1% of our employees—and all of our belts are 100% dedicated to process improvements," he explained. "The belts are in a separate part of the company, so they don't get pulled into everyday fire-fighting. A lot of companies struggle because they don't make it full-time. That's where many companies suffer and fail—they don't make it a dedicated resource."

In NewPage's Lean Six Sigma, executives are held to own the vision, but the improvements are in the hands of the employees. "We have three kinds of belts we monitor—master black belts, black/brown belts and green belts," said Crescenzi. "We do a lot of training. A master black belt gets 400 hours of training. Black belts get 240 hours of training. And green belts get two weeks of training. Black belts are in their roles for three years—two years to be certified and then a year to get the knowledge out of them."

NewPage also has a repatriation program, in which a senior executive works with the belt holder who has completed the role and needs to find where to go within the organization. "In a lot of companies' cultures, that's the biggest fear or risk," explained Crescenzi.

The candidates for belts are interviewed and chosen by upper management from among the employees. That was one of the key lessons learned early on. NewPage picks the company's go-to people to earn their black belts, rather than taking volunteers from the ranks. This becomes part of the company's leadership development initiative.

Crescenzi reported other key lessons, as well. "Top leadership support is key to driving this process," he said. "And you must invest in infrastructure with dedicated full-time resources. Lean Six Sigma projects also must be aligned with strategic initiatives; they can't be viewed as extra work. The payback is real."

One of the areas stressed by Crescenzi was choosing the right tools for the jobs or processes at hand and avoiding the methodology-slave mentality. "We have a tool for selecting which methodology to use," he said. "The simpler the tool, the easier it is to solve many problems."

He cited the Rapid Lean Six Sigma Roadmap, which NewPage uses to tap local know-how for performance improvement. "A team has a 60-day time limit to solve a problem," he explained. "After 60 days, managers tend to forget why they even formed the team." For Rapid Lean Six Sigma, he emphasized focusing on areas that can yield quick returns. "Grab the low-hanging fruit and then use that analysis to launch Six Sigma projects," he said.

Crescenzi did have a bit of a head start when it came to getting senior-level buy-in for the initiatives. "Because NewPage was sold off from a larger corporation, the leadership team thought Six Sigma would be helpful," he said. "The same day I started at NewPage, they hired a new president who came from GE, so he had Six Sigma as part of his DNA. He made it easy to do. I've been at other companies though where the CEO would say, 'This is a good idea. Tell me when it's done.'"

Crescenzi also emphasized the importance of communication of the initiatives across the organization. "Our Six Sigma organization has a website," he explained. "We also have brown-bag lunches. At the corporate level, we have a monthly newsletter that acknowledges improvements that have been done. Recognition and reward are hard to do, but important."