Case Study: Paper and Packaging

Packaging-Product Plants Implement the Milliken Performance System

Plants in the paperboard and packaging industry face challenging customer requirements — from companies that use these products directly and those that convert paper stocks into other goods — as well as regulatory and financial pressures. The commodity nature of the business makes continuous improvement a must.

Client Company: This $3 billion packaging-products manufacturer manages more than 200 plants and 10,000 employees worldwide, with a mix of both union and non-union workforces. In business for 75 years, the company makes roll stock for converting operations and flexible printing and plastics, primarily for the food industry. The manufacturer contracted with Performance Solutions by Milliken in 2009, and our practitioners now assist in 27 different locations, primarily in North America and Europe.

Performance-Improvement Opportunity: This client faces a changing customer environment common in many industries: smaller orders, smaller run sizes, and increased complexity due to customization. For many of this company’s customers, packaging must change by season, product type, and marketing strategy.

The client was operationally excellent before Performance Solutions arrived, but executives there sought to raise the bar with continuous improvement to sustain profitable growth. “We’re building off what they already have in place,” says Doug Skaggs, a Performance Solutions practitioner who works with a dozen of the client’s plants, “taking them to a world-class level.”
Of particular concern were issues with common production problems, including poor machine uptime, excess product rework, slow equipment changeovers, high employee turnover, and legacy safety processes driven by managers rather than associates. “There were a lot of gaps in the way they managed downtime situations,” says Skaggs. “They were just managing downtime instead of working to eliminate it. They lacked standardization around both the work itself and how they trained associates.”

Working with Performance Solutions Practitioners: Client leaders became acquainted with Performance Solutions via our “Accommodate, Educate, and Demonstrate” program. These executives traveled to Milliken headquarters, where they learned about the Milliken Performance System and toured high-performance Milliken facilities. “We present our Milliken journey and explain what they can expect out of the same process,” says Skaggs. “We take them to model plants, where they see what the performance system looks like, and how it could change their plants’ futures.” After the visit, the client contracted for an organizational assessment, which led to a corporate master planning session and then plant implementations.

The focus of our work with this client is consistent with most of our engagements. We started with a zero-loss analysis: i.e., if it were possible to remove all waste from operations — including time, money, and resources — what cost savings would that return to the organization? In other words, what is possible if the client eliminates all downtime, rework, etc.

“At almost every company, there’s money wasted that nobody even measures,” says Skaggs, “because most executives are willing to accept some level of imperfection. But we ask: How
much could you gain if a plant ran with zero breakdowns, zero minor stops, zero changeovers? We often see clients realize that millions of dollars are at stake — which then inspires an intense desire to change.”

This engagement was structured around educating the company’s steering team on its roles, responsibilities, and expectations, and developing a one-year plan that addresses the pillars of the Milliken Performance System (MPS): e.g., continuous skills development, focused improvement, planned maintenance, daily team maintenance, 5S, quality management, safety, early equipment management, and new product development. For each pillar there are defined objectives that must be met, starting with a model area in each plant.

The model line or machine is typically highly visible and plant performance critical, with high potential to exhibit the loss-analysis process to the entire plant. Key pillars are addressed within the model area over eight months to a year, with a continuous focus on loss reduction. “They’re building a system and driving out losses through DMAIC (define/measure/analyze/improve/control) practices or PDCA (plan/do/check/act) practices and kaizen projects,” says Skaggs. “We start by stressing better daily management practices — equipment inspections, monitoring, and housekeeping — and then move on to auditing these processes to make further improvements.”

Once the model area was established in each client plant, the MPS was expanded to the rest of the facility. These launches were celebrated with official kickoff events, where associates leading the MPS initiative shared success stories, highlighted achievements, and invited employees in other areas of the plant to join them. Modeling is the first of three phases; Phase 2 is complete when 50 percent of a plant’s A-ranked (priority) equipment and
systems are redesigned and improved; and Phase 3 culminates when the remaining 50 percent of A-ranked processes and equipment have been addressed.

“Modeling is about learning and making small mistakes,” explains Skaggs. “It’s our time to build skillsets and pillar leaders. We can’t stay and manage the plant for them. We want them to become practitioners, so that when we leave, they have a process that is sustainable.” As the engagement has progressed and expanded, the client has successfully developed its own group of practitioners, taken over the education role previously led by Performance Solutions. These home-grown practitioners standardize and document best practices, before teaching colleagues how to deploy them in ways that reduce losses across the enterprise.

**Powerful Improvements:** The client has earned an overall 15 to 1 return on investment (ROI) with Performance Solutions. A manufacturer’s current condition prior to an engagement is reflected in the ROI. Some client engagements with Performance Solutions have earned returns as large as 37 to 1; no engagement has returned less than 7 to 1.

Examples of performance improvements at the packaging-products manufacturer, based on a summary of plants that have reached Phase 3, include:

- Breakdown performance improvements from 60 to 70 percent
- Minor stops reduced by 50 to 60 percent
- Rework reduced by 50 percent
- Waste reduced by 80 percent
- Equipment changeover times reduced by 50 to 60 percent.
“Changeover times have been reduced so much, they didn’t have to add another day to their plant schedule. They’re down to a five-day week,” adds Skaggs.

Future Success: The client plants are continuing their implementations, and eventually all the facilities engaged with Performance Solutions will demonstrate that MPS is now their operating system and the way they manage. Progress is tracked through a detailed scorecard that measures MPS sustainability along with metrics specific to the organization. The aggregated tally of a scorecard triggers movement for a plant from Phase 2 to Phase 3, and decreases the frequency of Performance Solution practitioner visits — a process well under way at this client.

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