Milliken Performance System
Safety — The Foundation for Continuous Improvement
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At a time when many manufacturers are under acute pressure to improve performance in order to remain profitable (or even just to stay in business), why do so many firms fail to sustain improvement efforts — or never even get off the improvement starting blocks?

It’s certainly not for a lack of effort; some 85 percent of U.S. manufacturing plants have an improvement methodology/approach in place, with 69 percent implementing lean manufacturing. And 88 percent of plants report that process improvement is important to their success over the next five years.¹ The vast majority of companies, plants, executives and employees try to improve, yet fail for a variety of reasons:

- **Results-focus:** The allure of many improvement approaches is a promise of specific improved performances, such as inventory reductions or productivity per employee, which often make dramatic impacts on the bottom line. Yet driving an improvement effort toward an end-of-pipe metric can cause managers to lose sight of fundamentals required just to stabilize plant operations, including making sure that equipment is reliable and that stable processes do what they’ve been designed to do (i.e., create good product when needed). Trying to apply an improvement technique in an unstable plant environment can lead to disaster.

- **Executive mandates:** Results-focused improvement approaches are often triggered by an improvement mindset in which senior executives issue challenges to the organization. C-level staff want results, and too often they don’t care how managers and employees get them. Savvy executives understand the benefit of how results are achieved (via a systematic path to improvement) and care far less about seeing immediate bottom-line jumps. Then, too, a systematic approach to improvement also eliminates the stop-and-start improvement programs that many companies experience as leadership changes.

- **“Their system” imitation:** Even when “a system” is embraced — Lean Manufacturing, Toyota Production System, Six Sigma — these proven techniques and concepts are frequently consumed whole, with firms trying to mimic the efforts, language and symbols that the originators created. Every company is different, and requires a unique application of the best concepts the business world has to offer — not an improvement orthodoxy that, if not strictly followed, leads to apostasy and business hell (although in many cases, it will!).

- **Missing workforces:** Lastly, and most importantly, improvement approaches are usually announced by senior leadership and implemented by midlevel management, leaving the largest group of stakeholders with the most influence over success — the workforce — out of the equation. Plantfloor employees (associates) have deep knowledge of the processes that they perform every day, and with coaching and support they can make those processes more reliable, stable and productive. But when associates are ignored, they silently refuse to become engaged — and lasting improvement remains elusive.

### Engaging the Workforce for Continuous Improvement

Getting employees excited about changing how they work — faster and better — is a hard sell. And it’s even tougher in environments where there’s been a history of management-labor confrontation. Why should employees change what they do if the only beneficiaries are managers, executives

and shareholders? That’s why the first step to engaging a workforce is not about being faster or better — but instead about being safer.

Everyone wants to work in a healthy, safe environment, which means that the critical foundation of any improvement effort must be improving the safety and well-being of the workforce. Employees who know that the company has their interests at the top of the list can trust their managers and open up to coaching and support opportunities. And associates who aren’t preoccupied with worries about injury (or worse) can invest more effort in developing new skills, mastering new tools and applying new methods.

Engaged, safe employees also can focus on working as high-performance teams with fellow employees. They understand their own work and how it affects coworkers and adjacent work steps, and collectively begin to take ownership of connected processes by identifying problems, offering ideas and experimenting with new methods to make incremental improvements. Making sure that every employee has a stake in improvement is far more powerful than a few executives or managers with an idea for improvement. There is a saying about the Toyota Production System and lean manufacturing improvements, which says that businesses need more farmers and fewer heroes\(^2\): farmers work the land every day, nurturing their plot and ultimately harvesting the bounty; heroes are always trying to save something that has gone terribly awry.

**Safety, Engagement and Continuous Improvement**

World-class companies have adopted a safety-first approach that puts a healthy workforce at the top of all corporate objectives. Milliken & Company is one such firm; the 150-year-old multinational textile and chemical company has been on a continuous-improvement journey, with a particular focus on safety, for decades. In the 1990s, Milliken executives visited manufacturers in Japan — as did many North American executives — seeking to uncover the secrets to Japan’s rapid industrial success. Craig Long, executive director of Performance Solutions™ by Milliken, the performance consulting division of Milliken & Company, was among those executives, walking through dozens of plants and observing best practices.

“It was like going to graduate school,” Long says. “We thought we were doing these things, and they said, ‘Not at this level of detail.’” After multiple trips and seeing many industries — some 120 Milliken managers visited plants — there was a consensus within Milliken that the company could implement what they had observed. But these executives also realized that any improvement approach would also have to “fit” Milliken and its particular culture.

Long and 12 other managers were charged with turning their observations from Japan — such as concepts from the Toyota Production System and Lean Manufacturing — into “Milliken.” The process took longer than anticipated but eventually evolved into the unique Milliken Performance System, a measurable, daily management system under which all Milliken manufacturing locations operate to this day. “This became the way we did work, our common language, our common process,” says Long.

The Milliken Performance System is structured on a foundation of safety with eight pillars supporting how Milliken works (Figure 1). The safety foundation, though, wasn’t initially obvious. The company had already focused for 10 years on improving safety as it strived to become a high-performance company. That safety emphasis increased, however, in the early 1990s when CEO Roger Milliken challenged management to “stop hurting people in my company.” Safety became the first item on board-meeting agendas, with the CEO setting the tone as an unofficial “chief safety officer.” Milliken, the company, had a safety objective, but it had not yet realized how to reach it.

During the Japan tours, Long and fellow executives would discuss the extraordinary metrics they’d seen — equipment reliability, quality, productivity — and how they could hit those figures in their plants. “During these trips to Japan, they would always start with safety — green footprints to walk in, safety metrics on the wall — in every plant,” Long recalls. “We finally said, ‘We’re not here to learn about safety.’ Their response was, ‘You don’t understand. We have to start with safety to earn the trust of our people.’ That was a big ‘Aha!’ moment. The best way to engage the workforce is to start with safety.”

“We realized — and we see it in every company — that, ‘It’s management’s job to keep people safe,’ was a fundamental thought process we had to break,” says Long. Milliken changed management’s role from trying to make the workplace safer to instead providing resources and coaching to associates, who could actually make the workplace safer. The role of hourly associates changed from being told what to do to taking full ownership of safety. “It’s more of a mindset change. Very few people have moved into the mindset of continuous improvement for safety — an improvement mindset rather than a compliance mindset,” says Long.

“We were fortunate that we had a committed safety mindset even before the Milliken Performance System,” says Phil McIntyre, director of business development, Performance Solutions™ by Milliken, “and then improved safety by empowering the workforce. We had a workforce that was already inclined to improve.”

Since the visits to Japan and implementation of the Milliken Performance System, Milliken has captured numerous industry awards (Malcolm Baldrige National Quality Award, European Quality Award, British Quality Award, Canadian Quality Award, Japan Institute of Plant Maintenance TPM Excellence Award, America’s Safest Company, Fortune’s 100 Best Companies to Work For, World’s Most Ethical Companies) by turning safety and employee engagement into exemplary corporate performances. Although the company has yet to hit its primary objective of zero injuries, it’s continuously moved toward that goal:

- 90% fewer incidents than the national average.
- 100% OSHA-certified Voluntary Protection Program (VPP) Star domestic sites.

Safety is, first and foremost, about the health of employees at Milliken and at other companies. But there’s a strong correlation between a safe workforce and one that’s able to perform at a world-class level. U.S. plants that indicate they have “fully achieved” or made “significant progress” toward world-class manufacturing status have an OSHA injury and illness rate of 2.53 (median); plants that have made “no progress” or only “some progress” toward world-class status have an OSHA injury and illness rate of 4.17 (median).2 What’s important about these MPI Manufacturing Study statistics (Figure 2) is that they hold up across a range of plant types, such as the nature of their operations or the volume and mix of their products. Simply put, better plants have better safety records.

And U.S. world-class plants typically practice (engaged workforces) and perform (reliability, capability, productivity) like world-class plants well beyond their safety metrics:

- Majority of production employees in empowered work teams: 52 percent of plants at or near world-class status vs. 32 percent of plants furthest from world-class status.
- Machine availability: 90 percent (median) at plants at or near world-class status vs.

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2 2010 MPI Manufacturing Study, The MPI Group, 2010. OSHA rate computed from U.S. plant data using an approximate 2,000 annual hours per plant employee.
84 percent (median) at plants furthest from world-class status.

- Scrap and rework as a percentage of sales: 1.5 percent (median) at plants at or near world-class status vs. 2 percent (median) at plants furthest from world-class status.
- Sales per employee: $187,650 (median) at plants at or near world-class status vs. $160,000 (median) at plants furthest from world-class status.

**Developing Safer Workplaces**

In many businesses and industrial environments, the prospect of zero injuries seems impossible: monumental pieces of equipment, highly complex and automated machinery, and/or lightning-fast processes all challenge safety-conscious management. Milliken has faced the same challenges and developed solutions that are transferable and customizable to a range of industries, environments and workforce cultures.
“We challenge companies to do what we did. See it, but make it fit your culture,” says Long. Performance Solutions™ by Milliken (referred to Performance Solutions) helps organizations become safer and more competitive, but it’s not a traditional consulting firm. Instead of consultants and theory, Performance Solutions invites executives, managers, and work teams to Milliken sites to see firsthand what stellar safety is all about, and then MPS “practitioners” help companies customize those systems to their companies and cultures.

Just as safety and employee engagement form the foundation of how Milliken works, they’re also the basis of how Performance Solutions encourages organizations to change, visualized in what Long calls an improvement layered cake (Figure 3).

1. **Bottom layer**: associate engagement (safety and high-performance teams).
2. **Second layer**: equipment is reliable, capable and stable (predictable operations).
3. **Third layer**: Operational improvements (quantifiable change).
4. **Top layer**: Velocity (“leaning it out” and “putting the pedal to the metal”)

Long says thatfewer than 5 percent of companies have the bottom layer of the cake firmly in place, and only another 10-25 percent are beginning to engage their workforces. Through a process called “accommodate, educate and demonstrate” (AED) opportunities, executives and teams visit a Milliken site for two to three days of presentations and facility tours, witnessing how improvements are made and what the changes have meant to Milliken—culturally, financially and operationally:

- **Accommodate**: Performance Solutions hosts key decision makers and influencers at its headquarters in Spartanburg, S.C. (individuals pay only for travel).
- **Educate**: Attendees review the processes used by Milliken and discuss with practitioners how that system can be developed, maintained, and customized for their own companies.

- **Demonstrate**: Attendees tour one or more Milliken facilities and observe cultural safety in action.

“We observed a consistent approach to safety at each Milliken site we visited regardless of the type of manufacturing operation (chemical plant, yarn plant, corporate office),” says Joseph Fierst, vice president operations, Wausau Paper-Rhinelander Mill, Rhinelander, WI, a location and company that has been working with Performance Solutions since April 2009. The 500-employee Wausau facility produces specialty papers, such as food papers, baking papers and microwave bags; it’s a work environment that poses many potential hazards. “[Milliken] had a consistent track record of improvement, and all employees seemed bought into the process. We spoke with workers about the process and not management. We were impressed with the consistent approach and the ownership that employees took with the process.”

Tom Watts, president of Prudential Overall Supply, says, “In looking at their facilities, we saw that they just were not hurting their employees. They were going years without hurting employees.” Prudential Overall Supply is an industrial laundry company that rents, launders and delivers uniforms, mats, etc. It has been working with
Performance Solutions for about three years, and its operations include massive washers (up to 1,200-pound capacity) and multiple conveyors and lifts. “When I toured, I never spoke to managers: all production employees of some type, employee-driven, not management-driven. I saw the potential for other benefits, benefits beyond the safety aspect.”

Based on what AED attendees see and hear, more than 80 percent of executives continue their relationships with Milliken consulting series, says McIntyre. The next step in the relationship is a safety assessment at the client’s site, where a company finds out how its operation stacks up and where it needs to improve. The safety assessment is conducted by Performance Solutions practitioners. (Practitioners have spent, on average, more than 20 years working within at least six different Milliken facilities, and have held at least 10 different job assignments.)

The rigorous two- to three-day assessment (Figure 4) encompasses everything from workforce culture to technical limitations and process challenges. The assessment enables a practitioner to evaluate the client’s safety performance (maturity level) and highlight strengths and weaknesses. With conditions observed and audit information documented, the practitioner works with clients to plan a safety-improvement process customized to the client site. Milliken learned from its own efforts that starting at a specific facility or model site is necessary to begin the process in large organizations, with change work implemented on a location-by-location basis.

Planning addresses the “absolutes for success,” says McIntyre: “How do you reward, how do you educate, how do you take this over? How do you share best practices across the company, by department, by plants?” It’s important for clients to understand the scalable nature of the Milliken Performance System so that they can own the improvement process and lead the expansion of the safety effort across multiple sites.

A key first step in client safety transformation is developing a steering committee of approximately 15 members who will guide and communicate a 20-step safety process to the entire workforce. Steering-committee members first become fluent with tools and techniques — continuous skills development, auditing behavioral safety, incident investigation, recognition programs, etc. — and how they’ll be applied in their own facilities. Sub-committees of plantfloor employees/associates are then pulled together that will be responsible for various aspects of the safety program, with authority
over safety procedures such as lock-out/tag-out, visual organization and personal protection.

Watts of Prudential Overall Supply says that while a Performance Solutions practitioner is actively engaged in education throughout the planning and implementation process, he also takes a hands-off position. For example, a practitioner will often help with skills necessary to communicate the safety-improvement effort, such as teaching committee members how to hold and lead a meeting, but not conduct the meeting himself, because facility employees must make change actually happen. Says Watts: “We saw the 20 steps as a proven template and moved forward with it.”

The safety effort is led by employees, but it also requires changes in the mindsets of leaders and managers. Performance Solutions educates and encourages executives and managers to employ soft skills such as effective communication (listening skills, giving and receiving feedback, delegating and motivating). While C-level staff are typically on board with a Milliken safety engagement — they signed the contract, after all — middle managers must learn and understand how their roles are changing, too: from authority figure to coach, from “I’ll fix it” to “Tell me how you’ll fix it.” It’s a big change for midlevel managers.

“We now have a structure for safety with hourly leaders running the process; management supports the process,” says Fierst. “This structure is what we are working through to make safety change happen [at Wausau]. The employees now feel that this safety process is here to stay and is not some flavor of the month.” Fierst understands the impact on managers: “Everything used to go through them, and now we’re empowering the hourly. There is a changing role of the supervisor/midlevel manager that happens. You’ve got to get them to be more coaches.”

Safety Benefits

The obvious benefits of safety engagements with Performance Solutions are fewer injuries as clients embrace continuous improvement for safety and a culture driving toward zero injuries. Yet along with a safer working environment comes improved workforce morale, a more productive workplace (e.g., a cleaner workplace, which helps in identifying issues that can negatively impact reliability and capability), improved productivity, and cost benefits (e.g., lower insurance premiums and compensation costs).

“First and foremost, our number of injuries has dropped,” says Watts. “It’s not zero, but that’s our goal. That’s the reason we started on this.” He’s also pleased to see cultural barriers breaking down within the workplace, with hourly employees and managers interacting and challenging each other with new ideas. “I like that we’re cutting the injuries and accident rates, and cutting costs appeals to me. But, secondarily, it’s changing some of the culture, which I like. More of a team culture as opposed to management and employees.”

At the Wausau plant, Fierst reports that the total injury rate has declined about one point to approximately 3.2 in 2010. “The bigger change is that we now have 107 out of 500 associates (employees) involved in the safety process in some type of role, either as a steering team member or as a member of a subcommittee. There have been numerous safety improvement projects implemented by our associates as a result of our safety journey, which is called M.U.S.T (Management Union Safety Team). Our union leaders are involved in the safety process and are members of the safety steering team. There is a much higher level of employee involvement in safety, but also in other aspects of our business as well.”

Fierst notes that there were skeptics at his plant initially, but by having union leaders involved early on in the AED process at Milliken headquarters and taking on positions in the steering committee, the prospect of a safer workplace brought the majority of employees on board. In some cases those former skeptics have now actively joined in the safety
process. And while some salaried middle managers were initially skeptical, too, the longer the Wausau plant has been involved with the process, the more receptive and supportive those managers have become.

Although safety improvements never really end as companies pursue zero injuries, the role of Performance Solutions™ and that of the safety practitioner does change as improvement takes hold. In particular, the frequency of practitioner interactions with a facility can be reduced from weekly to monthly followups — to encourage sustainable growth, to evaluate new issues that may have arisen, and to work with employee steering committees and subcommittees as members rotate out (thus creating a larger base of safety expertise in a plant).

As with all aspects of Performance Solutions™ by Milliken, the relationship is customized to the client company; practitioners stay for longer or shorter periods as needed. Many clients also bring in practitioners to address other areas of their operations once the safety and engaged workforce foundation is firmly in place. In fact, McIntyre says that approximately 80 percent of our overall engagements are broader business-performance efforts. But, he adds, of that 80 percent, all of them involve safety improvements.

Fierst says, “Our practitioner Gary Newman has been a great leader for safety and has tremendous credibility with our workforce at Rhinelander—both salary and hourly. He works well with us, and I am confident we will see further improvement in our safety record in the coming months. The process works, and we will stay the course.”

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Put Performance Solutions to Work For You

Each experienced practitioner uses Milliken’s world-class and award-winning approach that has been developed through two decades of benchmarking best practices around the world. Milliken’s approach is grounded within an organic, associate-based culture. Discover how Milliken’s practitioners work alongside leadership, management and associates from all manufacturing disciplines to create higher performing and safer organizations.

Visit www.performancesolutionsbymilliken.com to learn more about Milliken’s consulting and education services.

Worldwide Contacts:
Phil McIntyre, Director, Business Development & Marketing
864-503-1780
Phil.McIntyre@Milliken.com

Jeff Rosenlund, Director, Business Development
864-503-1780
Jeff.Rosenlund@Milliken.com

European Contacts:
Chris Poole, European Business Development Manager
+44-(0) 7834-608-255
Chris.Poole@Milliken.com

Nick Bailey, European Business Development Manager
+44-(0) 7747-756-208
Nick.Bailey@Milliken.com