

## linking Six Sigma analysis with human creativity

### John Biedry

DURING MY CAREER IN THE BUSINESS OF CONTINUOUS improvement initiatives, knowing when to rely on what we know to be good old common sense has gradually grown into what I call a core insight to understanding the change process. In almost every case, it's a matter of appreciating the power of human motivation. Here's a case in point, Paul Whiteaker, one of our company's qualified Six Sigma Black Belts and a veteran of several continuous improvement programs, said recently, "When you see people spending their time away from work on these projects, you know you can't lose with that kind of enthusiasm. The positive behavior of front-line employees has been amazing."

He was describing a new change program we have at IMC Global, a combination of Six Sigma and the Action Workout™ System. Action Workout is a high-speed performance improvement methodology that motivates managers and line employees to roll up their sleeves and solve obvious problems.

Action Workout is not theoretical, analytical, or especially suited for long, arduous, training-based continuous improvement campaigns. We have combined it with Six Sigma, clearly one of the most powerful defect-reduction programs ever devised.

By complementing our Six Sigma commitment with Action Workout support from Leap Technologies in Chicago, we devised a more flexible and powerful change acceleration program than IMC has ever had. We have definitely increased the return on investment we have in the program.

Real performance improvement is happening because front-line employees are making it happen. Whiteaker and the full staff of Black Belts have seen how rank-and-file employees can have a dramatic impact on a giant company. They deserve all the credit we can give them.

### The decision to change and change fast

The commitment to change all started with IMC Global's top management. When I arrived in July 2000, I received a mandate to install a world-class system for continuous improvement.

The challenge was to do it in relatively autonomous production facilities spread across North America and with a work-force of more than 7,600 employees, many with little exposure to formal improvement methods.

My approach to building IMC's strategy for continu-

ous improvement was based on two principles I've learned, sometimes painfully, as a corporate change agent:

- First, tie the improvement effort directly to the bottom line.
- Second, get as many employees as possible into the game.

It almost goes without saying that there must be support from the top of an organization. Trying to convince senior leaders that change is good will simply wear you out. If the top people don't buy into something as obvious as continuous improvement, there is a 75% chance of failure from the start.

To make change happen both long term and short term, I decided to use Six Sigma and Action Workout to get both speed and lasting results.

From my work at Sears and Waste Management, I learned the pitfalls of introducing change in a large, dispersed organization. It takes patience and almost always a carefully constructed combination of theory and practical application.

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***Six Sigma is a workhorse, defect-reduction system that has a famous proponent in Jack Welch, the retired chairman of General Electric.***

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I first decided to continue IMC's investment in Six Sigma to address some very complex production and distribution problems. I am a longtime believer in Six Sigma and it's a core piece of our improvement strategy.

We strengthened the concept of training a small number of high-potential leaders as Six Sigma project leaders in each major production facility at IMC Global. These Six Sigma Black Belts were assigned to identify and lead two to three Six Sigma efforts a year to attack major process problems.

### Six Sigma and Workout

Jack Welch, former chairman of General Electric, recognized that Six Sigma alone did not always get the improvement job done, at least not quickly enough and at a reasonable cost. He sensed that some performance improvements could pay financial dividends much

quicker than typically allowed by Six Sigma's methodical pace.

Welch's insight is revealed in his quote from GE's 1997 annual report, "GE had another huge advantage that accelerated our quality effort. We had a company that was open to change, hungry to learn, and anxious to move quickly on a good idea. This learning environment came from a decade-long, soul-transforming cultural initiative called Workout!"

At IMC, Six Sigma had a positive history, but there was a piece missing from the quality improvement tool kit—all of us were very anxious to see more profitable improvements arrive sooner.

Six Sigma is only a piece of the problem-solving puzzle. There are plenty of issues that can be solved using the experience and intuition of people who've been on the job a long time. This is where the Action Workout System can be brought to bear.

I also knew that we could use Six Sigma only with a relatively few employees. This goes to the issue of getting as many people as possible involved in continuous change. After all, it takes four weeks of very intensive training just to qualify for Black Belt status.

I didn't want to overrun the budget and I wanted payoffs on some very specific problems. In other words, we wanted to use a rifle, not a shotgun. That's when we decided to simultaneously train our Black Belts on Action Workout.

Like Six Sigma, Action Workout connects critical performance outcomes to performance drivers. However, Six Sigma relies on in-depth data analysis to seek solutions, while Action Workout seeks the same answers in existing employee knowledge and creativity.

Pretty quickly after their Action Workout training, our Black Belts adopted this two-pronged strategy for continuous improvement. They had become better equipped to capture savings from low-hanging fruit. Our Black Belts first used Six Sigma to identify problems that could best be solved by front-line employees working closest to the issue's impact. Then the coaches recruited Action Workout teams and let the line employees work on implementing solutions.

### Action Workout Teams

These teams of five to seven employees operate for about 60 days, relying on a structured improvement

process-in-a-box to guide their work. Well-trained Black Belts provide expert coaching from the sidelines, thereby freeing time to lead more Six Sigma projects.

This process speeds the return on Six Sigma simply because it provides a rapid implementation tool for deploying solutions with a basis in Six Sigma. In this way Six Sigma solutions are localized by those who actually use the solutions.

Les Yesnik, a Black Belt in our company's potash mining complex in Saskatchewan, Canada, launched three early workout teams. Their results included:

- **Miners' shift utilization team**—This workout team looked at every aspect of how miners work throughout their shifts to find inconsistencies and to agree on best practices. Implementing improvement ideas reduced labor and materials costs by \$59,000 per year and eliminated some unsafe working conditions.
- **Energy conservation team**—This group focused on reducing the use of natural gas and electricity in the mining facility complex. New ideas implemented in the team's 60-day effort yielded \$68,000 in annual savings.
- This team came up with another idea that may ultimately save as much as \$400,000 per year. The idea, related to the operation of mining equipment used at several sites, was assigned to a multiple-site Six Sigma analysis. The Action Workout process literally pushed this idea across to the Six Sigma process.
- **Load out productivity improvement team**—This team investigated how loads of potash were transported in and around the mines, including both rail and truck transportation. Improvements in scheduling, routing, and loading procedures are now saving IMC Global more than \$33,000 per year.

Yesnik commented, "With what these three teams produced, we've changed the culture from 'wait and see' to 'get results.'"

Once some complex processes get drilled down to finite issues through Six Sigma analysis, we've found that you need input from people performing the work to best determine how to quickly apply the solution.

Whiteaker, working in our Carlsbad operation, launched two workout teams to support Six Sigma. "A Six Sigma team was trying to fix problems with the main conveyor belt that carries material out of the mines," he explained. This belt is constantly moved as

the precise excavation site changes. Splice breakdowns are commonly caused by many factors, including interaction with heavy machinery.

“We thought that the number of variables impacting on the problem made it a natural for Six Sigma, so we started collecting data. We were expecting to monitor the data and find solutions,” Whiteaker continued. “It turned out that the frequency of data occurrence didn’t cooperate and we probably would have taken a year to find answers if we’d relied entirely on Six Sigma,” Whiteaker recounted. “Now, we have an Action Workout team trying to find shorter-term answers.”

Whiteaker created a belt cleanup system workout team and it quickly produced significant savings for us. A member of the team recalled that during a significant maintenance shutdown a year earlier, miners were forced to hand shovel the belt to keep it in operation.

Whiteaker’s team found that as many as 39 employees, at a cost of \$8,000 per day, were required to hand shovel the belt along an area known as Stacker #3. During team brainstorming about the conveyor belt, a workout team member suggested a belt cleanup machine and then modified his initial concept with a method to attach the new machine to a piece of mobile equipment. Since the new cleaning machine was created for automatic belt shoveling, the Stacker #3 area in Carlsbad has saved 2,003 man-hours through the elimination of hand shoveling. It will add up to more than \$49,000 in actual savings in 2001 alone.

### **Action and speed**

Speed is the central issue in today’s business world. It’s important to show that change can actually begin within several weeks after a program gets under way. Otherwise, interest in making change wanes for the typical employee. Commitment to change is perishable.

Yesnik, and everybody else here who uses the system, is delighted with the mandated 60-day time frame required to create actionable ideas. One-hour meetings are strictly administered. Time is accounted for almost down to the minute.

During the initial rollout of Action Workout, 13 teams with more than 100 employees were working on continuous improvement. Our documented savings exceeded \$380,000 in fewer than six months.

By late summer 2001, more than 45 Action Workout

teams either completed 60-day sprints or were moving toward completion. More than \$1 million in savings was achieved with business solutions from the teams’ work.

Then by autumn 2001, we had trained 15 Black Belts in the Action Workout System and certified them as Action Workout Coaches. Action Workout applications are now being extended across the entire company.

The complementing system of Six Sigma and Action Workout has clearly become very effective for us. Six Sigma is finding solutions that can’t be seen without rigorous analysis; Action Workout is speeding implementation at the work site level when the solutions are more obvious.

Finding these obvious solutions using rank-and-file employees not only saves money but also produces better morale, an elusive commodity for any business since the impact from energizing employees is priceless.

The key issue for us at IMC Global was that Six Sigma, by its very nature, is not going to touch the whole work force. But with Action Workout, we’re upgrading the capability of all our people.

As I said earlier, the key concept is combining the analytical power of Six Sigma with the human creativity unleashed by Action Workout. When you put these two forces together, a lot of really good things can happen.



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# *Is Your Six Sigma® Deployment Running at Top Speed!*

Successful Six Sigma Deployment requires a long-term commitment. But in today's environment, top executives want results and they want them fast.

That's where the **Action Workout™ System** from Leap Technologies makes a big difference in Six Sigma Deployment.

Action Workout breaks through two critical bottlenecks that slow Six Sigma Deployment and limit results — **Project Selection** and **Solution Implementation**.

**Six Sigma Jumpstart™ Events** help leadership teams "cut through the fog to identify priority improvement opportunities and match the right ones for the results needed.

**Action Workout Team Process™** adds a rigorous methodology for involving managers and employees in solution implementation without replacing or competing with Six Sigma analytical tools or methods.

Action Workout is the latest generation of the revolutionary fast-change process used by Jack Welch to increase leadership accountability and unleash employee know-how, paving the way for General Electric's breakthrough results from Six Sigma.

Action Workout has helped more than 100 organizations — large and small; manufacturing and service; healthcare and government — get on the fast track to bigger results from improvement efforts.

Now, Action Workout is helping Six Sigma companies reduce the cycle time to bottom-line results without compromising quality.

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Speed to results is today's competitive differentiator. Our business is packaging improvement tools for fast and effective application by the people who know your business best — senior leaders, managers and front line employees running the business every day.

Since 1993, we've helped hundreds of executives and their organizations install Action Workout to improve performance "from the inside out" at today's speed of business.

Our track record speaks for itself — more than 4,000 successful change projects and over \$500 million in documented savings using the Action Workout System.

Today, through our Strategic Alliances with Breakthrough Management Group, Inc. and Motorola University, clients can access the most comprehensive, innovative products and services to increase the speed to results and sustainability from their Six Sigma efforts.