



CABOT CORPORATION:

ACTION TEAMS WITH INITIATIVE

The Cabot Corporation Ville Platte facility has been using The Manufacturing Game® for only a short time, but they are already seeing the payoffs from Action Team responses, and also from the way that employees are integrating the lessons from TMG into their day-to-day thinking. A group of Ville Platte maintenance employees who had attended the workshop in Lafayette in May were involved in a job to replace filter bags in processing equipment. The replacement filter bags were from a new supplier. There was a fit-up problem with these new bags, which caused delays. The group of installers and those maintenance personnel recently trained at TMG were on the filter walkway talking "bugs." Kent Fontenot, Colby Manuel, Ted Briley, George Broussard, Kent Saucier, and Sherron Lemelle, identified the issue as a defect. An adhoc team was formed and immediately took ownership of the issue, forming their own Action Team.

After speaking with the corporate purchasing office, and being part of the initial discussion with the new supplier, they were able (with the assistance of the purchasing office) to arrange to have the supplier arrive onsite. There, they demonstrated what the issue was and suggested a possible way to fix it. The supplier was extremely responsive to the issue, and promised to have it fixed soon, using the group's proposed changes as a model.

In the meantime, the team's feedback to the corporate office ensured that they would continue to use the old supplier until the fix for the new bags was complete. This prevented delays and saved money, by ensuring subsequent filter jobs did not suffer the same issues. The new supplier has provided samples to be tested in December and continues to work with corporate Purchasing to qualify their product. The supplier is also being asked to demonstrate new ideas on how to install, test, and increase the life of

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BUILDING A PASSION FOR RELIABILITY:

MICHELIN SPARTANBURG, SOUTH CAROLINA

BY CHARLES CURETON, TODD GODWIN, HAL MCGAUGHEY, DAN MERCHANT - MICHELIN

During 1992-93, Michelin's Spartanburg, South Carolina Truck Tire Plant explored ways to reduce manufacturing costs while improving on already outstanding product quality results. At that time, maintenance was viewed as a substantial percentage of manufacturing cost and significant reductions could be made by focusing on the "Core Business" of just fixing the equipment and reducing all other resources. Unfortunately, due to the reactive nature of the "Core Business," work demands quickly began to outstrip resources, reactivity increased and plant performance was impacted. The "work" had not truly been removed and because it was more reactive, the cost increases to maintain that workload were inevitable. In 1998, new approaches and thinking were initiated and integrated to reduce the "work" and its associated costs.

Step One - Understanding the Need For Change

In most plants, the journey toward reliability begins when people realize the need for improvement and understand that improvement can be obtained by changing the way things are done. At Spartanburg, the revelation came to the Technical Services Manager and Plant Manager. They established the initial business case for reliability and identified a Reliability Manager. Even though the three saw and understood the potential for improvement, for reliability to be completely successful at the plant, all of the other employees would need to come to the same conclusion. The importance of making a good business case cannot be overstated; very sim-

ply, if no passion for reliability is gained then the journey towards it will at best be mildly successful.

Step Two - Defining the Vision

Once the initial "believers" have identified the reasons for the journey, they must develop a simple vision statement, which will give direction to the passion. Two documents were created to direct the passion for reliability at Spartanburg. The first was a strategic direction and the second was a vision statement. The strategic direction highlighted three broad areas where the plant needed to improve and the vision provided more detail to the Asset Utilization direction.

The first direction for the plant was to create high-performance work teams to empower the hourly workforce. The second strategic direction, "Mastering the Process," described methods for machine referentials and locking down processes (rather than making constant adjustments and modifications to accommodate product and process variations). Thirdly, "Asset Utilization" described the core reliability efforts to be made. The term asset utilization was used instead of reliability to avoid the "maintenance only" mentality that reliability sometimes carries. The vision statement was used to communicate the need to move from a reactive culture to a planned, proactive and strategic culture. It detailed three basic focus areas designed to allow the plant to operate at full capacity with only 25% of the original troubleshooters.

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Public Workshop Calendar

See you at these conferences in 2003:

American Society for Training and Development (ASTD)
Annual ASTD Conference in May 2003

For further information call ASTD at (800) 628-2783 or visit their Web site at www.astd.org.

National Petrochemical & Refiners Association (NPRA)
Annual Conference in May 2003
For further information, call NPRA at (202) 457-0480, or visit their Web site at www.npra.org

Productivity Inc.
Annual TPM (Total Productive Manufacturing) Conference in 2003
For further information call Productivity Inc at (800) 394-6868 or visit their website at www.productivityinc.com.

Society for Maintenance & Reliability Professionals (SMRP)
Annual SMRP Conference in October 2003
For further information call SMRP at (800) 950-7354 or visit their website at www.smrp.org.

Throughout the year, The Manufacturing Game® holds workshops for the general public at various universities and/or professional organizations across the country. Other workshops for 2003 may be announced at a later date. Please check our Web site at www.manufacturinggame.com for registration details and frequent updates

Please check the Project Value Game® Web site at www.practicefields.com/pvg.html for information and updates on Project Value Game workshops.

USER CONFERENCE – 2003:

A FORUM FOR SHARED LEARNING

We are announcing our 2nd User Conference sponsored by Ledet Enterprises, Inc. being held in Houston, Texas, April 30 – May 1, 2003. This conference is being offered for TMG and OEG proponents of defect elimination. We hope that you will put this on your calendar and plan to join us to share best practices with peers.

As a participant, you will see a preview of our new Dynamic Benchmarking applied directly to your site and you will be introduced to all 12 Leadership Forums and get to experience one of the Leadership Forums in its entirety. The main focus of the conference will be to create a network of people interested in spreading reliability through defect elimination. The conference will provide you with an opportunity to learn from others and share your own experiences in implementing and sustaining a reliability effort in your area, site or company.

The conference will be held at the Sofitel Hotel, 10 minutes from George Bush Airport. The hotel is holding a block of rooms for our attendees at a special rate of \$US109.⁰⁰ per night, plus occupancy tax. The conference fee will be \$US750.⁰⁰ with a \$US100.⁰⁰ discount per participant for companies with 3 or more attendees. This price will include all conference material plus continental breakfasts, refreshment breaks morning and afternoon, buffet lunch daily and dinner on the night of April 30th.

Please remember to include our conference in your meeting budget for 2003. We look forward to including you on our attendee list for this very informative and special event. This session will be highly interactive so registration will be limited to the first 50 people that sign up. We will give preference to TMG and OEG facilitators until February 28th and will accept others on the basis of the date their registration form is received in our office — so register early. Registration is open to those companies who are currently using TMG, companies who have used TMG in the past, and companies and assets that have an interest in defect elimination who are not yet using either TMG or OEG as part of their reliability program.



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Step Three - The Journey Begins

Once the vision is in place, the next step is to actually begin the work. At Spartanburg, there were two basic initiatives that were implemented initially. The first initiative was restructuring the responsibilities of certain maintenance, quality and operations personnel to enhance their ownership of equipment and to better utilize their skills. This restructuring included assigning machines to individuals, giving them responsibility for the availability and quality of their machines and providing them with the training and authority to ensure their success. A powerful effect of this change was the improved relationships between maintenance and operations areas, leading to improved operator ownership of their equipment. This initiative proved to be very successful, as the number of reactive maintenance calls began to decline within six months of implementation and have continued to decline dramatically. Work was truly eliminated, leading to an increase in availability, a decrease in variability and a decrease in reactivity. These changes meant realizing additional production capacity and improving already high quality products, which was easily seen at all levels of plant personnel, and by the customer.

The second initiative consisted of a training class, which used a plant simulation to help employees understand how reliability impacts the plant. The second part of this training involved the formation of Action Teams that selected an opportunity for improvement in their area on which to work. As the results of the Action Teams' efforts were reported to the plant staff, the need for reliability was solidified in the minds of the employees as well as the plant management. It was clear in both cases that the activities supported the reliability culture change. They provided relatively quick payback and helped to solidify reliability as a viable approach with a very real payback. Their success helped provide the stable foundation necessary to venture into more elaborate tools and systems that would help systematize reliability at Spartanburg.

Step Four – Expanding the Boundaries

"Mastering the Process" concepts were ap-

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plied to areas of the plant that had traditionally worked diligently to accommodate process variations. Plant-specific training courses were developed to help employees gain a better understanding of the plant's direction and their role within it.

In addition to area-specific tools, Spartanburg implemented other tools to systematize reliability concepts so improvements could be sustained. One such tool was a comprehensive predictive maintenance system developed within a quality system already in place in the plant. Another very important step to systemizing reliability came with the inclusion of reliability objectives into personnel objectives. This has occurred at every level, from the plant manager to the hourly employees. By including reliability goals, such as system implementation and defect elimination in management's indicators of success, the plant's goals and the employees' goals very quickly align.

cluding presentations, a reliability Web site on the company's intranet, communication of plant successes and plant needs, to name a few.

The Future for Spartanburg

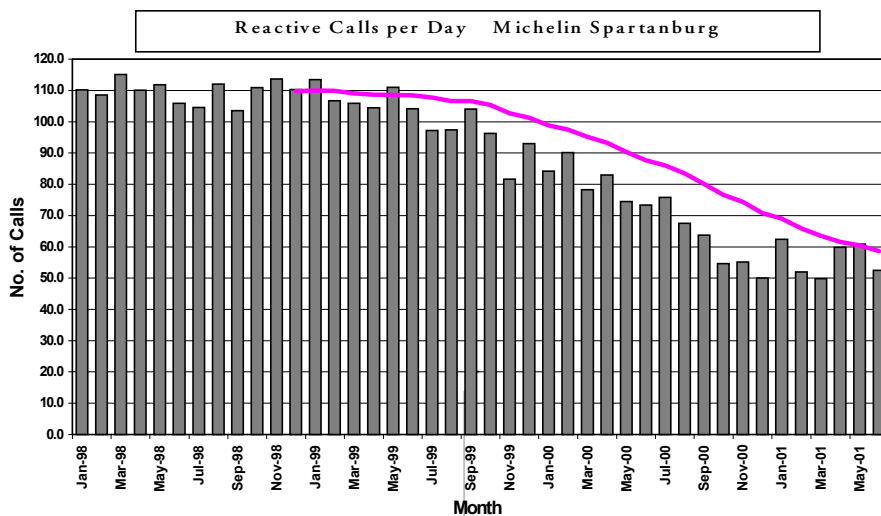
Spartanburg has seen significant improvements due to the reliability initiative and the future is extremely bright. Through vision, leadership and an open-minded approach, reliability has been embraced and implemented at a very rapid pace. What lies ahead is to continue to improve the plant's internal systems while influencing other plants and service providers within the company. The plant's five year plan includes a focus to make the plant perform at a world class level in all aspects of its activity. Very simply, we want to produce the best tire, at the best price, in every segment of the market while providing the greatest level of performance for our shareholders.

LEADERSHIP FORUM SERIES: CREATING PROACTIVE LEADERSHIP

Ever since our last User Conference it has been obvious that successful clients surround our Manufacturing Game® workshops and Action Teams with a leadership process to continue the effort to drive improvement and defect elimination. We have written about various aspects of this process in this newsletter over the last few years. We have also worked with clients to create a leadership process at their site. Over the last few months we have worked to produce a leadership series at the same quality and level of polish as the game itself. As of January 1st we will be releasing this product for use by trained and certified facilitators.

Leading Change

Improving reliability and driving out defects fundamentally requires a change in the behaviors of almost all employees. These reactive behaviors are often deeply rooted and perhaps in the past highly rewarded. Changing these behaviors and achieving world-class performance requires superb leadership. John Kotter of the Harvard Business School is perhaps the best known expert on leading change. His eight-step approach to leading change is one of the best frameworks for understanding what is required. (Figure 1)



Step Five – What Lies Ahead

At this point in the reliability journey, great efforts have been made to implement reliability concepts and to institute systems to ensure that improvement is sustained. As stated above, the Spartanburg implementation began at the plant staff level and great progress has been made in defect elimination in all areas under the plant's control. In addition to continuing the efforts at the plant, efforts are being made to influence our suppliers, engineering, purchasing, etc. to embrace reliability principles so that the full benefits of reliability can be achieved. This influence manifests itself in many ways in-

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filter bags. "In this way," says Capital Manager Bernie Beethe, "the objective is to use the supplier's knowledge, to make it work for the plant, not just in terms of competitive pricing, but in total lifecycle costs of filter bags.

"The technicians installing these filter bags feel ownership, holding the supplier accountable and for making sure we get true benefit from making changes like that," said Beethe. "Involving people in problem-solving and the implementation of the solution will be the secret to success in this."

Figure 1
THE EIGHT-STAGE PROCESS
OF CREATING MAJOR CHANGE

- 1 Establishing a Sense of Urgency
- 2 Creating the Guiding Coalition
- 3 Developing a Vision and a Strategy
- 4 Communicating the Change Vision
- 5 Empowering Broad-Based Action
- 6 Generating Short-Term Wins
- 7 Consolidating Gains and Producing More Change
- 8 Anchoring New Approaches in the Culture

The Manufacturing Game® and Action Teams are really geared toward the middle three of these eight steps: 4) communicating the vision, 5) empowering broad based action, and 6) creating short term wins. To be successful the other five steps must come from somewhere. That is the role of our new Leadership Forum Series.

The New Proactive Heroes

Most of our myths about large scale change focus on a single heroic figure who almost

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single-handedly turns the organization around; think Sam Walton, Jack Welch, George Washington and John Wayne. In this myth of leadership, the sheer determination, guts, and charisma of the heroic leader powers the change. This command and control, warrior archetype hero is as popular as it is misleading. Creating the change to proactive operations demands new kinds of heroes. First, we have to forget about the notion of a single hero riding in on a white horse – the change to the proactive approach requires lots of heroes. Secondly our notion of a hero has to change. Rewards, recognition, systems and decision making all need to support a hero that eliminates potential problems instead of the hero who rescues the organization from the most recent disaster. The Leadership Forum Series helps to build an alliance of leaders to begin the process of creating the new heroes.

From Theory to Action

The series is twelve Forums over twelve months. The Forums are designed to be 4

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hours long and each one follows a similar format that we have modeled from successful client approaches. The first step is to prepare for the Forum by reviewing Action Team and defect elimination efforts, setting parameters for decisions that will be made in the Forum and dealing with any related issues. The second step which occurs in the Forum is to review progress over the last month and celebrate successes. The third step is to introduce a new concept by way of a story. This story builds throughout the series and it focuses on the roles of leadership and heroism. The fourth step is to decide how the site will implement the concept and create an action plan to make it happen.

The Series

The Forums are broken into 5 phases that link to Kotter's approach. Participants in Forums:

1. Build urgency around defect elimination with a Forum on rewarding and recognizing success and a Forum on creating a business case for defect elimination.
2. Create a vision for the site with a Forum on creating and evolving a vision and a Fo-

rum on sharing best practices and creating the stories of the new proactive hero.

3. Remove the roadblocks to change. The first Forum in this phase helps to redesign systems for authority and accountability. The second Forum focuses on improving decision making. In the third Forum the leadership eliminates issues with the systems for authorizing work.

4. Capitalize on the success to date with a Forum that helps to create the stories and myths of the new approach and a Forum on using the energy and resources freed up to focus on innovation.

5. Institutionalize the change in culture with a Forum on orienting new people to the culture and a Forum on creating sustainable defect elimination systems.

These twelve Forums put in place all of the building blocks to launch additional waves of defect elimination, and to support a new culture for the new proactive heroes.

