Lunch Box Boys Show Up Six Sigma

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When talking about **Six Sigma**, Dr. Pradeep Deshpande invariably tells the story of Mumbai's dabbawallahs. For more than 100 years, the dabbawallahs, or lunch box boys, have been delivering home-cooked meals to workers in Mumbai, India. About 5,000 dabbawallahs work throughout the day to pick up about 200,000 hot meals from homes outside the city and deliver them to workers in Mumbai, previously known as Bombay. The dabbawallahs then return the empty boxes to the workers' homes. To accomplish this task, the dabbawallahs, who have little formal education, collect the boxes from homes in the morning and then transport them to the train stations where they are sorted according to symbols on the top of the lunch boxes. The boxes are then taken into the city and delivered in time for lunch. The dabbawallahs then escort the empty lunch boxes back to the same homes from which they were retrieved that morning. Although the dabbawallahs use a seemingly archaic process to complete their task, they make only one mistake for every 6 million lunches delivered.

Deshpande, a professor of chemical engineering at the University of Louisville in Louisville, Ky., and president of **Six Sigma** and Advanced Controls (SAC) Inc., also in Louisville, says the dabbawallahs' performance is better than **Six Sigma**. **Six Sigma**, which originated at Motorola in the 1980s, is a measure of quality defined as 3.45 defects out of 1 million opportunities.

Many companies looking to implement **Six Sigma** are turning to consultants like Deshpande. Through SAC, he has worked with firms such as DuPont, Wilmington, Del., Zeon Chemicals, Louisville, Ky., and Pidilite Industries Ltd., Mumbai, to implement **Six Sigma** to increase their global competitiveness. He stresses that buy-in from the leaders of an organization is required to make **Six Sigma** successful.

Doug Pratt, director of **Six Sigma** Process Excellence for Dow Corning Corp., Midland, Mich., agrees that the success of any **Six Sigma** implementation requires a high level of commitment from an organization. Pratt says Dow Corning's success can also be attributed to its full-time Black Belt Project Leaders.

There are five phases in the **Six Sigma** methodology: define, measure, analyze, improve and control. Deshpande warns that skipping steps ensures the failure of a **Six Sigma** program. "Humans have a notorious habit of articulating both the problem and the solution in the same breath," he says. By following the five phases, **Six Sigma** directs you to evaluate all aspects of a problem before determining the best solution.

Pratt estimates **Six Sigma** has saved Dow Corning tens of millions of dollars; Deshpande says DuPont is estimated to have saved \$1 billion annually. He says General Electric reported corporate-wide savings of about \$2 billion in 2000.

Several engineers I spoke with have doubts about whether **Six Sigma** can improve their companies. One, whose company is just starting to use the tool, fears it is a "flavor of the month" solution. Another, having had some exposure to it at a former job, tells me his company is "just fine" without **Six Sigma**. Yet another engineer I spoke with feels the monetary savings attributed by companies to **Six Sigma**'s success are dubious. Another engineer doubts **Six Sigma** is a methodology that can be applied to work process improvement projects at a chemical company.

Deshpande disagrees. He says **Six Sigma** can be used to improve the performance of any process that involves a series of steps. Progress can be measured in terms of reduced standard deviation and the mean moving in a favorable direction. Deshpande even applied **Six Sigma** methodologies when he planned his son's wedding.

Pratt likens **Six Sigma**'s success to the chicken and egg debate: Is the company successful because its leadership chose to implement **Six Sigma**, or is the company's success due to good leaders, who happened to implement **Six Sigma**? He says both good leaders and **Six Sigma** are needed in a successful organization.

Your company's management may be thinking about how **Six Sigma** might add to its bottom line. Is **Six Sigma** worthy of the hype it has received? Or, like the dabbawallahs, can your company do without it?