

## Looking for nirvana

HERE'S A GOOD WAY to smear your image. Bring in a series of Japanese- inspired consultants, give them free rein -- and don't pay attention to what they're doing. That's what happened to Donnelly Corp., the world's largest manufacturer of automobile mirrors. How chaotic was it? On more than one occasion Donnelly chartered planes and helicopters to make its frequently late deliveries. Factory floors were so cluttered that a company car once got lost amid the debris and was reported stolen.

In short, Donnelly became, from the 1980s through the mid-1990s, the gang that couldn't shoot straight. "Like Sunday shoppers, they've gone through years and years of chasing basically every management fashion," says John Shook, director of lean manufacturing programs at the University of Michigan's Japan Technology Management Program.

Faced with the loss of business from Honda and Toyota, Donnelly finally got religion in 1996. No more piecemeal, half-cocked consulting ideas. From top to bottom it instituted a lean production system borrowed from Toyota. Yes, it's another trendy strategy. But it seems to be working. Defects have plummeted, morale among employees has surged and earnings are improving. The lesson: The most heralded factory systems won't work unless management keeps a tight watch.

If you have a car, chances are the rearview mirror was made by Donnelly: It has 95% of the North American market for that item. Based in Holland, Mich., Donnelly also produces fixed windows, interior lights, door handles and overhead consoles. For years this now-94-year- old firm was greatly admired for giving employees wide latitude in decision-making. But starting in the early 1980s production quality slipped in the face of intensifying Japanese competition. Thus began Donnelly's often disastrous experiments with changing its factory floor.

The first experiment, beginning in the late-1980s, instituted a General Motors program called "GM Synchronous." The idea, similar to Toyota's "just in time" system, was meant to ensure that materials flowed smoothly through plants. Good idea, except that Donnelly failed to supervise it, so that parts of the plants followed it and others didn't. Blown deadlines and defects remained high. GM, unhappy about Donnelly's pricing and defects, took most of its business elsewhere.

Enter Honda, which wasn't too pleased with Donnelly's nagging quality problems either. Donnelly shook up manufacturing again, introducing a Honda system known as "best practices." The outcome was less than best: Paint jobs on the backs of mirrors too often cracked and bubbled.

In the early 1990s Donnelly instituted yet another dandy plan: "empowerment." Teams were encouraged to work independently to arrive at creative solutions to problems. A fine notion, but the result was chaos.

Workers on one paint shift, for example, would adjust the machines to increase their yield -- only to foul up the strict quality controls required for all three shifts. "You're not supposed to twiddle the knobs yourself," recalls Chief Executive J. Dwane Baumgardner.

Then, in 1993, Donnelly hired a lean manufacturing specialist who started scores of vigorous but largely unsupervised kaizen [continuous improvement] projects all over. "Death by kaizen," Baumgardner puts it.

Finally, three years ago, Baumgardner brought on Art Smalley and Russ Scaffede, two former Toyota managers. What they found was "a pretty traumatized organization" and "extremely skeptical workers," says Scaffede, the 49-year-old senior vice president of global manufacturing.

They also saw plants (Donnelly has 15) dotted with conflicting workplace strategies. "You'd find lean management here, but five meters away it wasn't happening," says Smalley. That had to change, so the pair devised a companywide plan, implementing methods they had learned at Toyota. They set clear standards so that best processes are identically repeated to ensure quality. Straight assembly lines were changed to U- shaped to save space and require fewer people to do the same task.

This time around, everything is monitored and documented. Big matrix boards vividly follow the progress of each team's defects or lost work time. Says Jim Brodie, manager of the two factories in Holland: "If it's important we make it visible."

Donnelly's 5,500 workers still have the freedom to suggest changes, but they can't implement them on their own yet. One example: After viewing a videotape of their injection-mold workstation, a group of four employees devised a way to get the job done with only two. This is a nonunion plant, so there were no work rules to prevent the productivity gain. Donnelly is creating a management structure that monitors process changes to impose uniformity -- and prevent backsliding.

The changes are showing up in earnings. Baumgardner says profit for the second half of fiscal 1999, ending in June, will exceed analysts' projections of 65 cents per share. Sales for fiscal 1999 are estimated to be more than \$800 million, exceeding the previous year's \$763 million.

And since 1996 quality has finally become priority one: Defects have fallen from a steep 1,290 parts per million to 92 last year.

How far has Donnelly come? Last year it received a GM supplier-of-the-year award.