

## At Toyota, a Global Giant Reaches for Agility

Micheline Maynard



Ayumi Nakanishi for The New York Times

The assembly line at Toyota's Tsutsumi Plant, where "medium class" cars like the Prius and the Camry are produced.

At Toyota's training center inside its Motomachi assembly complex here, workers use golf balls to limber up their fingers before they learn new tasks on the factory floor.

Holding two balls in each hand, they try to make them revolve in opposite directions, which requires a surprising amount of concentration.

The exercises are just a small part of Toyota's plan to search continually for ways to streamline methods to build its cars, breaking down the steps used in thousands of tasks on the assembly line in order to teach them to new employees and managers.

Toyota sees the training centers — one here, and another in Georgetown, Ky., as well as more planned for elsewhere in the world — as an important tool as it gears up for its next major phase of growth.

With plants in 27 countries, more new factories under construction and workers speaking languages that include Russian and Turkish, Toyota's top executives are trying a difficult balancing act — replicating the company's success and operating principles in other countries while ceding more control to these new outposts at the same time.

Such thinking represents not just a challenge of reconciling conflicting goals — to control and let go simultaneously — but also a fundamental shift for Toyota, where senior management jobs are held entirely by Japanese executives, and whose major operations, from engineering to design to strategic planning, remain based in this city about 200 miles west of Tokyo.

"It's extremely important to have the same common Toyota Way infiltrated to employees in all corners of the world," said Katsuaki Watanabe, the company's president. "But on the other hand, in each corner of the world, in each region, there are inherent characteristics that need to be respected."

For example, Mr. Watanabe has asked foreign managers to assess which tasks they can handle on their own, which they can handle with help from Japan, and which areas Japanese officials still need to supervise.

Toyota needs to act quickly. Next year, it expects to sell more than 10.4 million cars worldwide, double what it sold in 2000. At the same time, Toyota is under pressure to put an end to the recalls of the last three years that have damaged its reputation for bulletproof quality.

"As a global company, there are many, many things I believe Toyota has to do," said Fujio Cho, its chairman. "We cannot go back to what we were in the past."

Mr. Watanabe said that Toyota had learned, especially through experience in the United States, that it could not simply impose Japanese practices on workers in other countries. It also has learned it cannot spend decades gradually handing off responsibilities. "What took us 20 years is now concentrated down to five years," Mr. Watanabe said.

John Paul MacDuffie, a professor at the Wharton School of the University of Pennsylvania, said of Toyota's new strategy: "This is about a greater maturity about globalizing and transferring knowledge."

Toyota's expectation that its sales will surpass 10 million next year would put it well ahead of General Motors, which is roughly tied with Toyota for the top spot in the global auto industry. (G.M. has not given its own global sales target, but its sales around the world this decade have grown an average of about 1.5 percent a year, while Toyota's have averaged about 7 percent.)

Toyota's sprawling organization includes American operations that have become a smaller version of the parent company, with a 51-year-old sales organization based in California. That entity oversees 1,300 dealerships, which are supplied with vehicles built in Japan and by plants in Kentucky, Indiana, Texas and, soon, Mississippi. Toyota also has a design center in California and another under construction in Michigan.

European locations are quickly gaining the same kinds of operations, run from a headquarters outside Belgium, and supplied by a plant in France that turns out the small Yaris cars 24 hours a day.

In China, however, Toyota's production has long trailed other global auto companies because it hedged its bets with a modest venture that builds only a few thousand vehicles a year. It regrouped in 2003 in a deal with a major Chinese player, First Automotive Works, and Toyota is making plans, according to media reports, to build its first assembly plant there.

To be sure, Toyota is not alone in taking a global approach to its business. Ford Motor, which is reorganizing after billions of dollars in losses the last few years, is realigning its product development so that it uses the same underpinnings, or platforms, for most of its vehicles around the world.

Asked in December what company he viewed as a model, Ford's chief executive, Alan R. Mulally, immediately cited Toyota. Meanwhile, G.M. has been on its own drive to share platforms among its operations in North America, Europe, Latin America and Asia, said a spokesman, Dee Allen.

"For all intents and purposes, our globalization is set," Mr. Allen said. Using the same platforms "really is a natural progression as the world has become smaller, and products are being sold in a lot more places than they used to be," he added.

But Toyota has a leg up on its American rivals, because it has spent decades leveraging its basic lineup in world markets.

Toyota sees teaching its production system in the new training center here as crucial to maintaining quality, and reducing the recalls that have plagued the company in recent years.

Such training is essential in places like China, where Toyota found that some of its newest employees had never driven the cars they were hired to build.

At Motomachi, more than 3,000 tasks on the assembly line have been translated into video manuals that are displayed on laptop computers above 30 simulated workstations, situated where their functions would be carried out inside the factory.

The videos show everything from the correct way to hold a screw to the best way to hold an air gun so that a worker's hand will not tire in a few hours.

This month, workers from Toyota's plant in Thailand took part in training required for jobs in their plant's paint shop. Listening as an interpreter translated from Japanese into Thai, the workers were shown how to bend their knees and spray a water gun across a clear panel of Plexiglas.

Their first goal was to learn to aim the spray between two lines of tape across the Plexiglas, representing the side of a car. A second exercise was intended to teach them not to use the spray too liberally by capturing the water sprayed against the glass in three containers, which bore lines marking 200 grams. If the water rose above the line, the worker was spraying too much.

The walls of the production center bear flags from various countries and states where Toyota has factories, including the Czech Republic, West Virginia and Brazil. Before they leave, workers sign their home flag, like the one from China that is nearly covered with signatures.

But new ideas do not apply only to the trainees. At Toyota's Tsutsumi plant, which builds the hybrid-electric Prius, Toyota has overhauled the way it delivers parts to the assembly line. The top floor of the plant, built in 1970, has been emptied and turned into a sprawling parts warehouse.

Workers on the plant floor used to choose the parts they needed to install on each vehicle from bins next to the assembly line. Now, a crew of workers upstairs loads the required parts into containers. The bins are placed inside the empty car bodies. Workers need only reach for the appropriate parts. After use, the bins are collected and sent upstairs to be refilled. The process will be part of the operation at Toyota's new plant in Mississippi. It has cut Tsutsumi's labor costs by 20 percent, said Osamu Ushio, general manager for the final assembly division, for two reasons.

First, cutting out the need to pick out parts shortened the training time for temporary workers, who make up one-third of the work force at Tsutsumi.

Second, older Japanese workers who are guaranteed lifetime employment by Toyota but can no longer handle the physical tasks of building cars can shift to loading containers.

That allows Toyota to deploy younger workers, often the temporary ones, who can work faster than their elders at lower wages. They earn about two-thirds of what permanent workers do, or as little as \$10.50 an hour, with few benefits. Said Mr. Ushio: "We have to adapt to the changing environment."

**Disponível em: <<http://www.nytimes.com>>. Acesso em 22/2/2008.**