

Goodbye, NUMMI: How a Plant Changed the Culture of Car-Making

The GM and Toyota joint-venture plant, NUMMI, shut down on April 1, leaving behind a rich but muddy history. Here's how this auto plant changed the face of General Motors and planted its name in the history books.

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The last Toyota Corolla rolled off the line at the New United Motor Manufacturing Inc. (NUMMI) plant in Fremont, Calif., on April 1, a week after the last Toyota Tacoma pickup made at the plant received its final welds, buff and polish. The Pontiac Vibe, which was made at the joint-venture Toyota, General Motors plant rolled off the line a few months ago. The plant that has long been studied in business schools for the way it transformed a workforce is closed for the second time in 28 years.

This plant, which broke so much ground back in 1984, turning around a dysfunctional workforce, is in many ways a relic. Even before GM's bankruptcy last year forced it to make a decision to pull out of NUMMI, a preface to the plant's closure, the relationship between the two companies had soured like two people in a "zombie marriage," in which a husband and wife don't even know why they are still married other than for the kids.

Last year, the plant employed 4700 people to build Toyota Tacomas, Corollas and Pontiac Vibes. It had only been operating at half capacity the last two years, making it a substantial money-loser.

NUMMI opened in 1984 as a bold joint venture between General Motors and Toyota. It had been a GM plant between 1962 and 1982, making both cars and light trucks. GM closed the plant, one of its worst in terms of quality, productivity, absenteeism and worker safety. But a year after it was shuttered, GM CEO Roger Smith approached Toyota about the joint-venture idea in which GM would gain some technology and insights into Toyota's production system, and Toyota would get a taste of trying to apply its systems and culture on a U.S. workforce.

Just two years after NUMMI opened, Toyota built a sprawling plant of its own in Georgetown, Ky., it's biggest facility outside Japan. And since then, Toyota has opened several more, in Texas, Indiana, Ontario, Canada and West Virginia. NUMMI, though, has been Toyota's only union-organized facility in the U.S.

GM's motivation for the joint venture was clear: It couldn't make smaller cars profitably in the U.S. because of high labor costs. And it needed small cars to help its fuel-economy ratings. The result was that Toyota built its Corolla sedan and hatchback at NUMMI and sold a version of the car to GM to be marketed as the Chevy Nova.

This is where the trouble first began. GM did a dismal job of marketing the car. And when Chevy cut back its orders of the Nova, plant utilization fell to 75 percent, a level at which a plant can't make money. Besides the decision to name the car Nova, following a car of the same name marketed by Chevy in the late 1970s that was pretty awful, GM was not inclined to spend a lot of money advertising any car that came from the deal because it made no money on it. Because it was essentially a Toyota product with a Chevy badge, there was no profit for GM, especially after it had to start discounting the cars when they hit dealer showrooms.

GM had the same problem with the Pontiac Vibe. Even when the Vibe, the same vehicle as the Toyota Matrix, was redesigned for 2009, GM spent money only on modest Internet marketing. "It's hard to justify marketing dollars for a car on which there is zero profit," said then GM marketing chief Mark LaNeve.

Toyota has excess capacity in its San Antonio truck plant, as well as its Ontario factory. So closing NUMMI, which dates back to 1962 with its UAW workforce, was not a difficult business decision.

Did the venture pay off for either company despite analysis that it never made a profit?

Some have suggested that because GM still lags Toyota on quality in North America, the NUMMI experiment failed. Author Jeffrey Liker (*The Toyota Way*, McGraw-Hill) says that what makes the deal look bad in retrospect was the poor way in which GM adopted what its managers learned from the Toyota production system.

While today's "Global Manufacturing System" manual at GM is a direct copy of the Toyota Production System, Liker says, "It took fifteen years for GM to take the lessons learned at NUMMI seriously." And after it began the process, it took another five years before GM really started to see substantial impact on its overall system in things such as higher quality scores and productivity gains.

Cultural arrogance and lack of focus were at the heart of why it took so long. GM's Roger Smith launched the Saturn division in large part to provide GM with a blank canvas on which it could start a new business model within the company that would hopefully serve as an internal university. The work rules and union agreement at

Saturn's Spring Hill, Tenn., plant were modeled on the NUMMI system. GM had seen how some of the worst rated workers in the country, from the previous operation in Fremont, could be transformed under the right system—namely, Toyota's. Flexible work rules were adopted. "Team" was at the heart of the Saturn mantra: empowering workers to stop the production line if a problem needed to be fixed; rewarding workers for solving problems in production and adding to quality. These were all tenets that Toyota brought to NUMMI and that GM NUMMI managers took to Spring Hill—and that managers and workers took from Spring Hill to other GM plants. But it was a slow process.

Would the work-rules changes and quality improvements now embedded in GM have been likely if not for NUMMI? They might have taken hold under the sheer weight of pressure from Toyota and Honda and the growing influence of public quality ratings from Consumer Reports and J.D. Power and Associates. But we'll never know for sure.

Business schools have long studied the NUMMI experiment in part because of how rich the story is in now well-documented anecdotes. Toyota took over management of NUMMI from the start, and hired the shop leaders from the old plant against the advice of GM. Stories were legion of how these union leaders tolerated and even promoted drug and alcohol use in the Fremont factory before it was NUMMI, and how workers sabotaged cars to guarantee overtime pay fixing them in the factory yards. Absenteeism was rampant because workers hated their jobs and management. But Toyota transformed the workers by showing them respect and teaching them how it was vital, for example, to stop the assembly line if they saw a problem. To let a problem go down the line to be fixed later was a quality and productivity killer. The workers understood and they responded. And when they returned from Japan to Fremont, they carried the message to skeptical workers that "The Toyota Way" was better and would save their jobs.

It's worth noting that when the White House Automotive Task Force assessed GM last year during its Chapter 11 Bankruptcy, it acknowledged publicly that GM's current global production and procurement system, modeled on Toyota's, is world-class and every bit as efficient as the Japanese automaker's system. Quality, while still lagging behind Toyota, is far less of an issue with GM's latest batch of vehicles. The problem at GM, which caused it to file bankruptcy, was its enormous legacy costs connected to paying retirement and healthcare costs, as well as its dysfunctional sales and marketing operation. That last criticism from the task force has nothing to do with how much or

how well workers at Fremont or any other factory have performed, and everything to do with GM's management system and culture.

So, is that the ballgame for Fremont? Maybe not. One of the redevelopment ideas on the table to transform the nearly 50-year-old factory is to turn it into a new stadium for the Oakland A's. If the stadium opens, it will have a ready workforce to build it and work it.