

## REAL WORLD CASE 2

# Keihin Aircon NA, Inc.: Lean Manufacturing Is a Process Whose Time Has Come

**H**enry Ford used the word ‘lean’ when referring to manufacturing,” says Mike Mitsch, VP of operations at Keihin Aircon North America, Inc., a company that has used lean-manufacturing techniques for nearly a decade to make heating, ventilating, and air-conditioning components for the automotive industry. “Lean has been around for years in different capacities, and now it’s making a comeback.”

Mitsch is referring to the practice of lean manufacturing, a methodology that seeks to eliminate all waste from the manufacturing process. With a sluggish economy and increasing competition from abroad, U.S. companies are taking a hard look at their manufacturing strategies, and lean is increasingly appealing. Fortunately, it’s happening at a time when software tools are being customized to help companies synchronize enterprise systems with lean-manufacturing processes, such as real-time communication, and to extend those processes beyond their factories’ four walls.

“In the last half of the 1990s, operations weren’t a relevant issue, and everyone was driven by a need to change their business models,” says James Womack, who introduced the term “lean manufacturing” to the American public in 1990 with his book, *The Machine That Changed the World*, an in-depth look at Japanese automakers’ manufacturing systems. “Now what companies need to do is pay attention to the operations side of the business, get costs out, and improve performance.”

The practice of lean manufacturing originated in Japan some 50 years ago at Toyota Motor Corporation. The goal is to create a production environment driven by demand that holds only a small amount of inventory and products at any given time. In a lean-manufacturing environment, whenever finished goods are sold, the sale triggers a signal to the process one level back calling for a replenishment. The replenishment generates yet another signal one level back asking for components that go into the finished product; the components process then sends a signal back asking for parts that make up components, and so on. “It’s a reverse cascade, and each step consults with the previous step in the chain,” says Womack, founder and president of the Lean Enterprise Institute, a non-profit training, publishing, and research organization.

Lean manufacturing encompasses a number of modern practices, including just-in-time inventory and delivery, kaizen, and kanban. Just-in-time processes ensure that goods arrive when needed for production, rather than ending up as inventory. A kaizen strategy calls on everyone in an organization to look for ways to improve quality, cycle times, safety, and other aspects of an operation. Kanban, the Japanese term for signal, establishes a “pull” instead of “push” system of moving goods through the factory. In short, lean manufacturing is an integration of the supplier procurement

systems with the manufacturing systems with the customer ordering and relationship management systems.

Author and consultant Art Smalley, who witnessed lean-manufacturing practices while working for Toyota in Japan, says there’s huge potential for lean manufacturing in the United States. “One measure of productivity is speed through the factory, and inventory turns are a rough measure of that,” Smalley says. “Inventory turns in the United States aren’t all that impressive.” Automotive is the one industry that has significantly improved inventories with lean-manufacturing processes, Smalley says. In addition to his time at Toyota, Smalley has led lean-manufacturing efforts at automotive supplier, Donnelly Corporation, worked at management consulting firm, McKinsey & Co., and recently coauthored a workbook, *Creating Level Pull*, published by the Lean Enterprise Institute.

Today, lean manufacturing is vital to automakers—and their suppliers. Auto-component maker Keihin Aircon North America, a 5-year-old division of Keihin Indiana Precision Technology, is renewing its lean-manufacturing initiatives by upgrading to Glovia’s latest software release. “We adopted lean manufacturing in 1995 with a goal to balance manufacturing cycles and eliminate waste, so if you double the number of contracts, in theory, you wouldn’t have to increase your resources,” says VP of operations Mitsch. Since implementing Glovia in 1999, Keihin Aircon has reduced inventory levels to half a day, down from four days. With the new version, it expects to be able to meet more stringent customer demands by delivering products at specific dates and times.

“If you have quality products, very short lead times, and are delivering what a customer wants the way the customer wants it, you can get away with charging more,” Art Smalley says. “Higher value is the only way we will be able to compete.”

An increasing number of U.S. companies see lean manufacturing as a way to approach and ensure that higher value.

### Case Study Questions

1. What are the major business advantages of lean manufacturing? Provide some specific examples.
2. Does a company’s size have any effect on the advantage gained from lean manufacturing and integrations of the various procurement systems?
3. Should all manufacturing businesses begin a process of integration toward a lean-manufacturing posture? Explain.

Source: Adapted from Beth Bachelder, “Never Too Lean,” *InformationWeek*, April 19, 2004. Copyright © 2004, CMP Media LLC.