

Work with customers to solve problems



**RICK
BRIMEYER**
Brimeyer
LLC

He is president
of the Ames, Iowa,
consulting firm

I've facilitated more than 250 formal improvement events during the past 13 years. One of the most challenging improvement activities was also one of the most rewarding — funny how that works out.

While working for Sauer-Danfoss (now Danfoss Power Solutions) we supplied a custom-designed transmission to a well-known tractor manufacturer. Orders from the customer were sporadic — periods of lax orders followed by requested emergency partial truck shipments were the norm. The crazy orders resulted in our on-time delivery being below both our and the customer's goal.

How could this be? Due to its popularity with consumers, our transmission was practically a standard component on the tractor, included on more than 90 percent of the models. The output of the assembly line simply couldn't vary that much day-to-day.

Our frustration reached a breaking point when we were informed that no units were required from us for the next several weeks. Now, what to do with two shifts with a half dozen workers apiece and no demand for six weeks?

We agreed that we had to work an improvement project with the customer — a bit of an awkward situation since they were the customer. We first had to overcome the paradigm that the customer always is right.

Fortunately, aside from their erratic ordering patterns, we had an excellent relationship with the customer. We collaborated closely during the design of the innovative transmission whose features set its tractor apart from its competitors.

We always accepted the fact that they hired us for our transmission design expertise. So in this case we reasoned that they now needed us for our supply chain expertise. We had a good 10-year head start in practicing Lean principles.

Value Stream Mapping is a Lean tool that looks at the chain of processes linked within a facility — from the receiving dock to the shipping dock in the case of a factory — to produce a product or service.

It addresses the waste that often occurs between departments, perhaps after years of focused sub-optimization within the individual processes.

Extended Value Stream Mapping takes an even bigger picture view to remove the waste between facilities. If the opportunity for sub-optimization is significant between departments within the same facility, the prospect across facilities is enormous.

Our visit to the customer's tractor assembly line confirmed our suspicions. Output was 100 tractors per day, plus or minus five. The root cause for its crazy order patterns was a computer-based ordering system that no one really understood.

The customer defined the minimum and maximum number of units they wanted to have on hand. We designed and painted a floor template so pallets of transmissions always were stored in the same place and counting the number of loads on-hand was a cinch.

At the end of each workday one of the customer's material handlers communicated the number of units on hand.

For the first time, we received a clean signal of what the customer had instead of a computer-calculated value based on an algorithm created by Rube Goldberg.

Based on the customer's inventory, our shipping team removed the appropriate number of pallets of finished units from a small "supermarket" and loaded them onto a trailer that the trucking company kept at our plant.

When the trailer was a day from being filled we notified the trucking company that a driver would be needed the following day for shipment. The assembly cell then built new units to replace the empty spots in the supermarket.

Simple. In essence, each day we built the number of transmissions to replace those assembled into tractors at the customer's factory 1,000 miles away. The solution was a smashing success:

- The customer's average inventory was significantly reduced, freeing up cash and saving space.

- Partial truck shipments were eliminated, saving the customer thousands of dollars in annual shipping costs.

- We realized level demand, avoiding unnecessary overtime and occasional worker surpluses.

- Our on-time delivery went to 100 percent.

Perhaps the biggest benefit, however, was that the cause of animosity toward the customer was eliminated. Everyone involved with the tractor transmission was now connected to our customer. Walking through the factory one day, I noticed the transmission assembly cell wasn't working.

When I asked one of the workers who typically worked the cell, he explained that a squirrel had gotten into a transformer and shut down the plant. Now that's really knowing your customer.

RICK SAYS

We agreed that we had to work an improvement project with the customer — a bit of an awkward situation since they were the customer. We first had to overcome the paradigm that the customer always is right.