

(Still) learning from Toyota

Deryl Sturdevant

A retired Toyota executive describes how to overcome common management challenges associated with applying lean, and reflects on the ways that Toyota continues to push the boundaries of lean thinking.

In the two years since I retired as president and CEO of Canadian Autoparts Toyota (CAPTIN), I've had the good fortune to work with many global manufacturers in different industries on challenges related to lean management. Through that exposure, I've been struck by how much the Toyota production system has already changed the face of operations and management, and by the energy that companies continue to expend in trying to apply it to their own operations.

Yet I've also found that even though companies are currently benefiting from lean, they have largely just scratched the surface, given the benefits they *could* achieve. What's more, the goal line itself is moving—and will go on moving—as companies such as Toyota continue to define the cutting edge. Of course, this will come as no surprise for any student of the Toyota production system and should even serve as a challenge. After all, the goal is continuous improvement.

Room to improve

The two pillars of the Toyota way of doing things are *kaizen* (the philosophy of continuous improvement) and respect and empowerment for people, particularly line workers. Both are absolutely required in order for lean to work. One huge barrier to both goals is complacency. Through my exposure to different manufacturing environments, I've been surprised to find that senior managers often feel they've been very successful in their efforts to

emulate Toyota's production system—when in fact their progress has been limited.

The reality is that many senior executives—and by extension many organizations—aren't nearly as self-reflective or objective about evaluating themselves as they should be. A lot of executives have a propensity to talk about the good things they're doing rather than focus on applying resources to the things that aren't what they want them to be.

When I recently visited a large manufacturer, for example, I compared notes with a company executive about an evaluation tool it had adapted from Toyota. The tool measures a host of categories (such as safety, quality, cost, and human development) and averages the scores on a scale of zero to five. The executive was describing how his unit scored a five—a perfect score. “Where?” I asked him, surprised. “On what dimension?”

“Overall,” he answered. “Five was the average.”

When he asked me about my experiences at Toyota over the years and the scores its units received, I answered candidly that the best score I'd ever seen was a 3.2—and that was only for a year, before the unit fell back. What happens in Toyota's culture is that as soon as you start making a lot of progress toward a goal, the goal is changed and the carrot is moved. It's a deep part of the culture to create new challenges constantly and not to rest when you meet old ones. Only through honest self-reflection can senior executives learn to focus on the things that need improvement, learn how to close the gaps, and get to where they need to be as leaders.

A self-reflective culture is also likely to contribute to what I call a “no excuse” organization, and this is valuable in times of crisis. When Toyota faced serious problems related to the unintended acceleration of some vehicles, for example, we took this as an opportunity to revisit everything we did to ensure quality in the design of vehicles—from engineering and production to the manufacture of parts and so on. Companies that can use crises to their advantage will always excel against self-satisfied organizations that already feel they're the best at what they do.

A common characteristic of companies struggling to achieve continuous improvement is that they pick and choose the lean tools they want to use, without necessarily understanding how these tools operate as a system. (Whenever I hear executives say “we did *kaizen*,” which in fact is an entire philosophy, I know they don’t get it.) For example, the manufacturer I mentioned earlier had recently put in an *andon* system, to alert management about problems on the line.¹ Featuring plasma-screen monitors at every workstation, the system had required a considerable development and programming effort to implement. To my mind, it represented a knee-buckling amount of investment compared with systems I’d seen at Toyota, where a new tool might rely on sticky notes and signature cards until its merits were proved.

An executive was explaining to me how successful the implementation had been and how well the company was doing with lean. I had been visiting the plant for a week or so. My back was to the monitor out on the shop floor, and the executive was looking toward it, facing me, when I surprised him by quoting a series of figures from the display. When he asked how I’d done so, I pointed out that the tool was broken; the numbers weren’t updating and hadn’t since Monday. This was no secret to the system’s operators and to the frontline workers. The executive probably hadn’t been visiting with them enough to know what was happening and why. Quite possibly, the new system receiving such praise was itself a monument to waste.

Room to reflect

At the end of the day, stories like this underscore the fact that applying lean is a leadership challenge, not just an operational one. A company’s senior executives often become successful as leaders through years spent learning how to contribute inside a particular culture. Indeed, Toyota views this as a career-long process and encourages it by offering executives a diversity of assignments, significant amounts of training, and even additional college education to help prepare them as lean leaders. It’s no surprise, therefore, that should a company bring in an initiative like Toyota’s production system—or any lean initiative requiring the culture to

¹ Many executives will have heard of the *andon* cord, a Toyota innovation now common in many automotive and assembly environments: line workers are empowered to address quality or other problems by stopping production.

change fundamentally—its leaders may well struggle and even view the change as a threat. This is particularly true of lean because, in many cases, rank-and-file workers know far more about the system from a “toolbox standpoint” than do executives, whose job is to understand how the whole system comes together. This fact can be intimidating to some executives.

Senior executives who are considering lean management (or are already well into a lean transformation and looking for ways to get more from the effort and make it stick) should start by recognizing that they will need to be comfortable giving up control. This is a lesson I’ve learned firsthand. I remember going to CAPTIN as president and CEO of the company and wanting to get off to a strong start. Hoping to figure out how to get everyone engaged and following my initiatives, I told my colleagues what I wanted. Yet after six or eight months, I wasn’t getting where I wanted to go quickly enough. Around that time, a Japanese colleague told me, “Deryl, if you say ‘do this’ everybody will do it because you’re president, whether you say ‘go this way,’ or ‘go that way.’ But you need to figure out how to manage these issues having absolutely no power at all.”

So with that advice in mind, I stepped back and got a core group of good people together from all over the company—a person from production control, a night-shift supervisor, a manager, a couple of engineers, and a person in finance—and challenged *them* to develop a system. I presented them with the direction but asked them to make it work.

And they did. By the end of the three-year period we’d set as a target, for example, we’d dramatically improved our participation rate in problem-solving activities—going from being one of the worst companies in Toyota Motor North America to being one of the best. The beauty of the effort was that the team went about constructing the program in ways I never would have thought of. For example, one team member (the production-control manager) wanted more participation in a survey to determine where we should spend additional time training. So he created a storyboard highlighting the steps of problem solving and put it on the shop floor with questionnaires that he’d developed. To get people to fill them out, his team offered the respondents a hamburger or a hot dog that was barbecued right there on the shop floor. This move was hugely successful.

Another tip whose value I've observed over the years is to find a mentor in the company, someone to whom you can speak candidly. When you're the president or CEO, it can be kind of lonely, and you won't have anyone to talk with. I was lucky because Toyota has a robust mentorship system, which pairs retired company executives with active ones. But executives anywhere can find a sounding board—someone who speaks the same corporate language you do and has a similar background. It's worth the effort to find one.

Finally, if you're going to lead lean, you need knowledge and passion. I've been around leaders who had plenty of one or the other, but you really need both. It's one thing to create all the energy you need to start a lean initiative and way of working, but quite another to keep it going—and that's the real trick.

Room to run

Even though I'm retired from Toyota, I'm still engaged with the company. My experiences have given me a unique vantage point to see what Toyota is doing to push the boundaries of lean further still.

For example, about four years ago Toyota began applying lean concepts from its factories beyond the factory floor—taking them into finance, financial services, the dealer networks, production control, logistics, and purchasing. This may seem ironic, given the push so many companies outside the auto industry have made in recent years to drive lean thinking into some of these areas. But that's very consistent with the deliberate way Toyota always strives to perfect something before it's expanded, looking to “add as you go” rather than “do it once and stop.”

Of course, Toyota still applies lean thinking to its manufacturing operations as well. Take major model changes, which happen about every four to eight years. They require a huge effort—changing all the stamping dies, all the welding points and locations, the painting process, the assembly process, and so on. Over the past six years or so, Toyota has nearly cut in half the time it takes to do a complete model change.

Similarly, Toyota is innovating on the old concept of a “single-minute exchange of dies”² and applying that thinking to new areas, such as high-pressure injection molding for bumpers or the manufacture of alloy wheels. For instance, if you were making an aluminum-alloy wheel five years ago and needed to change from one die to another, that would require about four or five hours because of the nature of the smelting process. Now, Toyota has adjusted the process so that the changeover time is down to less than an hour.

Finally, Toyota is doing some interesting things to go on pushing the quality of its vehicles. It now conducts surveys at ports, for example, so that its workers can do detailed audits of vehicles as they are funneled in from Canada, the United States, and Japan. This allows the company to get more consistency from plant to plant on everything from the torque applied to lug nuts to the gloss levels of multiple reds so that color standards for paint are met consistently.

The changes extend to dealer networks as well. When customers take delivery of a car, the salesperson is accompanied by a technician who goes through it with the new owner, in a panel-by-panel and option-by-option inspection. They’re looking for actionable information: is an interior surface smudged? Is there a fender or hood gap that doesn’t look quite right? All of this checklist data, fed back through Toyota’s engineering, design, and development group, can be sent on to the specific plant that produced the vehicle, so the plant can quickly compare it with other vehicles produced at the same time.

All of these moves to continue perfecting lean are consistent with the basic Toyota approach I described: try and perfect anything before you expand it. Yet at the same time, the philosophy of continuous improvement tells us that there’s ultimately no such thing as perfection. There’s always another goal to reach for and more lessons to learn. ○

² Quite honestly, the single-minute exchange of dies aspiration is really just that—a goal. The fastest I ever saw anyone do it during my time at New United Motor Manufacturing (NUMMI) was about 10 to 15 minutes.

Deryl Sturdevant, a senior adviser to McKinsey, was president and CEO of Canadian Autoparts Toyota (CAPTIN) from 2006 to 2011. Prior to that, he held numerous executive positions at Toyota, as well as at the New United Motor Manufacturing (NUMMI) plant (a joint venture between Toyota and General Motors), in Fremont, California.