



Benefiting from Your Most Important Resource

Digital presses, workflow software, high-speed finishing equipment, UV ink, new substrates ... These are just a few of the topics and products I see in the various print industry trade journals that find their way to my inbox each month. There's no question these are valuable, necessary assets for printing companies to meet the demands of print buyers for higher quality, greater flexibility and shorter lead times.

Adopting new technologies and integrating state-of-the-art equipment are significant challenges that demand money, time and attention, among other resources. An even greater challenge to companies is how to improve on those new and existing processes so that waste, cost and time are continually reduced at a rate faster than the competition. As a result, many companies in the printing industry have turned to the practices of lean manufacturing and continuous improvement based on the Toyota Production System.

The fundamental elements of this system are displayed in Figure 1. This “house of quality” illustrates that the

goals of highest quality, shortest lead time, least waste and lowest cost are built on a foundation of stability, load leveling, standardized work and kaizen. This base supports the two pillars of just-in-time and build-in quality, and their respective methods — all of which supports the company's pursuit of those four goals.

Implementing Lean

Successfully transforming your business into a lean thinking and acting company is by no means an easy undertaking. The large number of stalled implementations in our industry is evidence of that. Throughout this past year, I've had opportunities to meet with the senior management of 15 printing and graphics companies that have been implementing lean and continuous improvement manufacturing practices. While some have been successful in achieving higher rates of improvement, many others have experienced only limited success, and I was curious about the reasons for the differences. My discussions with the CEOs, presidents and other senior

Continuous improvement and respect for people are completely intertwined. In fact, their mutual reinforcement is the driving force to ever greater operational performance.



By John Compton, Industry Author

Figure 1: The Toyota Production System (the basis for lean manufacturing)

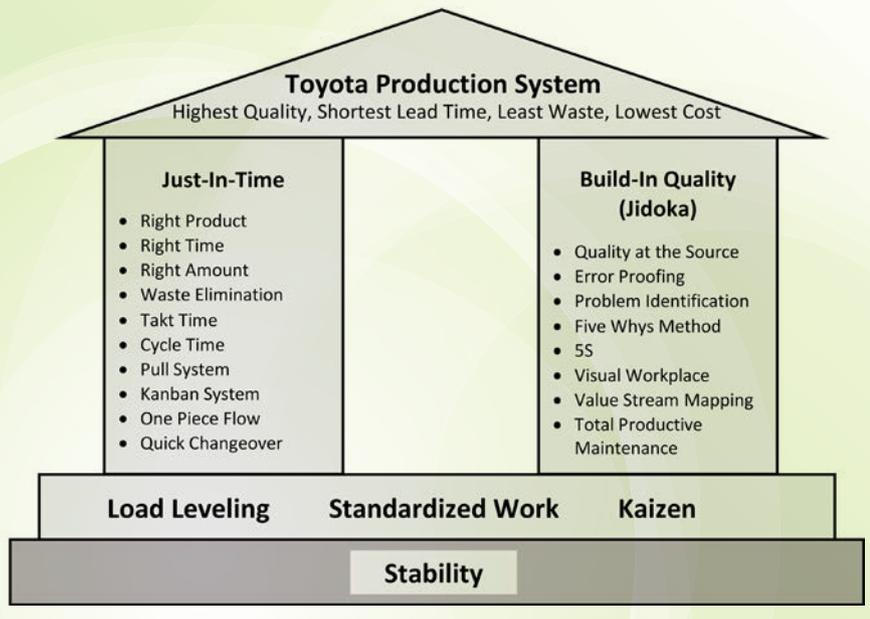
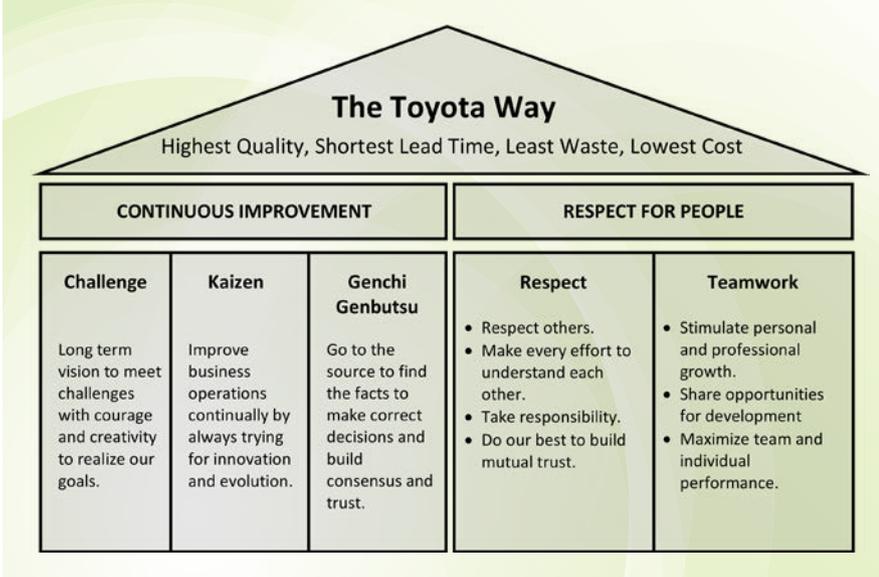


Figure 2: The Toyota Way (the basis for lean management)



managers of those struggling companies uncovered several common issues.

Perhaps the most glaring revelation was that most of the stalled companies focused their lean implementation almost exclusively on applying lean tools and techniques during kaizen events. Methods such as 5S, make-ready reduction, kanban scheduling and standardized work were, and still are, used to improve targeted processes. While they can produce significant improvement in their early application, in most cases, these methods were simply grafted on to the existing

systems of production and management. In short, the culture didn't change.

With only a superficial understanding of how different lean manufacturing is from traditional production practices, it's not surprising this approach yields diminishing returns. Areas that were improved through 5S are unable to hold, let alone improve on, their gains, and eventually revert to their old state.

The same limited outcomes occur in the use of kanban systems, standardized work and make-ready reductions. Problems are not revealed and solved while small

batch sizes are not reduced, inventory builds up and shortcuts are taken. Though the tools and methods of lean will help targeted areas, the improvements are not captured, sustained and built upon, and improvement initiatives can slow down and stall out. This has been the case for nearly 80% of the printing organizations I've worked for directly and as a consultant.

The Toyota Way

In 2001, Toyota further articulated its approach to continuous improvement by publishing information about "the Toyota Way." As seen in Figure 2, the thinking behind the Toyota Way consists of two fundamental elements: continuous improvement and respect for people, which are completely intertwined. In fact, their mutual reinforcement is the driving force to ever greater operational performance. Most of the senior managers at the companies disappointed with their results had implemented a lean/continuous improvement initiative without the respect for people element driving their efforts.

Additionally, I learned the companies that had experienced significant and sustained improvement had made serious investments in developing people and tapping into their brainpower for problem-solving activities. This included a behavioral change as supervisors and managers shifted from a fire-fighting/directing role to a listening/coaching role — a difficult transition to achieve.

Let's take a deeper look at the Toyota Way's five elements, i.e., the basis of lean manufacturing.

Challenge

Challenge is about highlighting specific improvement targets for every job based on the needs of the company for meeting customers' requirements. The act of challenging brings an influx of energy and constructive tension to get teams focused on the right problems they need to solve. It raises the quality and quantity of the work and is built from a set of obstacles that must be overcome. Challenge leads to progress and satisfaction with the work being performed, which leads to personal growth.

Kaizen

For the challenge to be appropriate for a person or team, it should be beyond their current capabilities, and therefore require kaizen. Kaizen literally means "change for the better," but implies something more: a systematic methodology for learning how

to achieve a new level of performance. Thus, kaizen refers to the process of improving. While everyone is expected to continually improve their kaizen capabilities, this is a prime responsibility of the manager as coach. In this respect, a person's job has two elements: work and improvement.

Lean methods refer to the point where the tools of lean are used to assist with kaizen. The most fundamental of these is standardization of work as it defines the way things should be and what we should be striving for. A standard is simply the currently established best known way of performing a task or operating a process. Departures from standard — often spotted visually — identify problems that should be worked on through kaizen. To quote Taichi Ohno, the father of the Toyota Production System: “Without standardization, there can be no kaizen.”

Genchi Genbutsu

The most important improvement of people and processes happens where the work is actually done. “Genchi genbutsu” is a Japanese phrase that simply means go and see for yourself. It means going to the source yourself to fact check and be sure you have all the right information to make a good decision. It means that people, especially managers — including senior managers — shouldn't spend all their time in offices and conference rooms, relying on information via meetings, reports, email and reporting tools. Rather, they should frequently go to the place of real work, stay there and see and understand for themselves — eliminating any distortion from indirect information — what is really going on and needs improvement.

Lean requires a high level of management presence on the shop floor, so that if a problem exists, it can be fully understood before being solved. This is often accomplished through what is known as a “gemba walk,” with the word gemba meaning “the place where real work is done.”

Gemba does not mean the place of supporting or secondary work, such as accounting or human resources. It means the value-adding work that directly creates or delivers the product or service the paying customer cares about. For example, the place where people are creating layouts, making plates or operating presses — not sitting in a meeting room or office near the workers.

If you want to know the status of an important product shipment, get up and go to the shipping area to check. If there is

a problem with quality in the pressroom, go to the shop floor to fully understand it. If there is a customer complaint, go to the customer's place of work to grasp the situation.

While data give us indicators, the facts are discovered by going to where the actual work is being done. There is high value in seeing and deeply understanding what is really happening.

Respect

Respect for people means respect for the brainpower and capability of all employees. It's the fundamental belief that people have the capacity to think, develop and improve, which is the basic enabler of continuous improvement. It's not about being nice, nor is it about having great “people skills.” It's about challenging people to perform to their peak ability. It means challenging everyone to think critically and improve something every day. When there is limited or no respect for thinking, no recognition of ideas or no expectation for improvement, people's capability to develop new skills is stifled, their desire to improve is muted and their performance will be limited. Investments in personal development don't necessarily yield immediate results. Yet, without engaging and developing people after the tools have been tried, companies will inevitably slide back to their original state.

The handful of printing companies that have achieved rapid performance improvement have developed a culture where people develop and improve while processes are being improved. They have learned that people improve processes and solve problems, thus respecting and developing people leads to sustained rates of operational improvement.

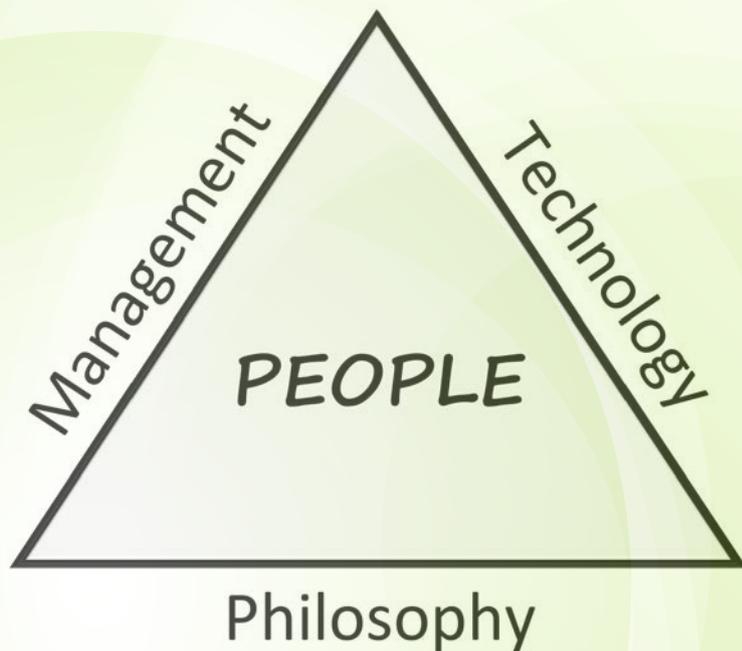
Teamwork

Teamwork means respecting others' opinions and embracing shared objectives. It also means being able to separate the individual from the problem — being tough on the problem without placing blame so that a win-win outcome is achieved. Teamwork translates into knowing how to solve problems with colleagues across departmental borders, creating stronger working relationships across the business.

By coaching their team members to identify and solve problems, lean managers challenge them to think and act differently when they encounter issues at work. As a result, individual employees and teams continually improve their problem-solving

Lean requires a high level of management presence on the shop floor, so that if a problem exists, it can be fully understood before being solved.

Figure 3: The central role of people in a lean system.



Take a deeper dive into lean thinking and more at the **2019 Continuous Improvement Conference (April 14–17, Dallas)**. Register today at ci.printing.org.

and critical-thinking skills through guided practice.

Making Lean Work

In my experience, the key to a successful lean implementation is the total commitment of everyone involved to make it work. All levels of the organization — from operators to senior managers — must be aware of the fundamentals of lean and make their best efforts to practice and improve them daily.

One of lean's basic elements that management must be fully committed to is the "customer-first" philosophy. Most printing companies are dedicated to satisfying their external customers, but lean organizations also take a process view. Essentially, each succeeding process, function or department is the internal customer. The people in lean companies work hard to ensure that all team members and all departments realize their dual role: They are the customers of the previous operation and the supplier to the next operation downstream. For this concept to thrive, there must be no artificial barriers between areas or departments. The entire organization shares problems and must work together to ensure a solution is found.

Lean is an integrated and interdependent system involving many elements. You can think of it as a triangle, as seen in Figure 3, where the three sides represent philosophy, technology and management. Cradled in the middle of the triangle is what lean and continuous improvement is all about — people. Personal development

is at the core of lean and continuous improvement. Unfortunately, this is frequently overlooked as management is drawn to the tools and technical elements such as kanban, just-in-time, visual control and 5S.

Of course, these tools are important to manage and improve the day-to-day production system as efficiently as possible. But the basic tenet of lean manufacturing is that people are the most important asset, which is why management must have a shop floor focus. Managers must understand that all value-added activities start on the shop floor and their job is to support the team members. Production staff appreciate management on the shop floor only when they can see that they are out there to help them do their jobs, rather than as part of the command structure telling them what to do.

Lean is not simply a set of concepts, techniques and methods that can be implemented by command and control. It is a fully integrated management and manufacturing philosophy that must be practiced throughout the organization from top to bottom and consistently applied and improved day after day.

The human dimension is the single most important element for success. Of all the resources that exist inside a printing company, people are the only asset that appreciates. Management's most critical role is coaching and helping large numbers of people work together to achieve a common goal. This includes defining and explaining what that goal is, sharing a path to achieving it, helping people to take the journey with you and assisting by removing obstacles. Striving to achieve a lean and continuous improvement initiative without respect for people is like trying to walk with only one leg.

Are you getting maximum value from your people?

John Compton is owner and principal of Compton & Associates, a consulting organization dedicated to improving the people, processes and profits of its clients. He is Professor Emeritus at the Rochester Institute of Technology, where he taught quality systems and process improvement for 25 years and served as Director of the Center for Quality and Productivity in the Graphic Arts. He was Vice President of Quality and Organizational Development at Fort Dearborn Company and later Vice President of Quality and Training at Vertis. Currently, he advises the Printing Industries of America on matters related to lean manufacturing and continuous improvement.