Productivity methodologies, tools, and techniques

Lean Management—John Parsons

What is lean?
Lean is a systematic, continuous improvement approach that concentrates on creating more value for customers by eliminating activities that are considered waste, i.e., any activity or process that consumes resources and adds cost or time without creating value. Lean applies to the entire organization and supply chain and can provide the foundation for widespread organizational improvement. To "think lean" is to switch from an internal to an external focus. After becoming accepted in the manufacturing industry, lean is increasingly being applied across other sectors from healthcare, retail stores, and banks to offices, call centers, hospitals, and government departments.

What are the origins of lean?
Lean principles had their beginnings in the manufacturing industry in the mid-1950s as the Toyota Production System (TPS). The TPS rejected the belief that productivity could be raised by working "longer, harder, and faster" and instead directed efforts to delivering the right products to the right place at the right time; anything not involved in achieving that objective was deemed suspect waste. Waste covered anything from overproduction to excess waiting to unnecessary process steps. Toyota's success was truly astonishing as, by the 1980s, the average vehicle took only around 17 hours to build while Mercedes spent as much time simply undertaking rework.

What are the basic principles of lean?
Following the publication of *Lean Thinking: Banish Waste and Create Wealth in Your Corporation* by James P. Womack and Daniel T. Jones, we now tend to view lean as embracing five main principles:

- Specify what creates value from the customer's perspective, i.e., what the customer is willing to pay for.
- Identify all the steps across the whole *value stream* from raw materials to finished goods which deliver customer value.
- Make sure those steps *flow* better: eliminate delays and interruptions to create a smooth process.
- Let the customer *pull* value and deliver it when the customer wants it, not when you want to supply it.
- Strive for *perfection* by continually removing successive layers of waste.

The principles of lean also apply to the product development process and the provision of service and back office support. Lean thinking can also be extended to product design and development by identifying bottlenecks in those processes that add unnecessary delays.

Building a "House of Lean"
Sustainable lean programs are best built from the ground up. Figure 1 shows the typical elements of the building process.

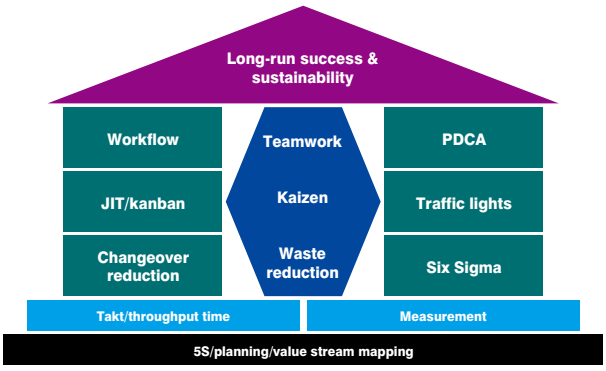

Figure 1. House of Lean (After UniSA, Adelaide)

What benefits and performance improvements does lean bring?
The benefits of lean are proven and well documented. Typical results include:

- Significantly reduced lead times and doubling of inventory turnover;
- Up to 50% reduction in floorspace requirements;
- Up to a 40% increase in overall equipment effectiveness;
- Higher productivity with quality improvements;
- Improved customer satisfaction; and
- Reduced costs and enhanced profitability.

As so many will testify, these are not just potential benefits. Having already increased productivity by more than 20%, the managing director of an electronics company stated, "In the spirit of lean excellence, we are confident that we can raise productivity by a further 5% to 10%." Similarly, the general manager of a packaging company indicated that, "By challenging traditional practices our productivity has increased, quality has improved, and staff morale is soaring."

Contributed by Principle of Resource Alternatives Australia John Parsons, resource speaker for the APO training course on the Development of Productivity Practitioners: Advanced Program. Parsons is a fellow of the World Academy of Productivity Science and of the Institute of Management Consultants and has over 25 years of experience as an executive with National Productivity Organizations in three countries.

p-Glossary

To provide easy reference to productivity-related terms including methodologies, tools, and techniques, the APO developed the p-Glossary, available on its Web site (www.apo-tokyo.org).