

10.2: Five Core Principles of Lean

Lean methodologies are lean because they enable a business to do more with less. A lean organization uses less human effort, less equipment, less facilities space, less time, and less capital—while always coming closer to meeting customers' exact needs. Therefore, lean is not just another cost-cutting program of the kind we often see in business organizations. Lean is much more about the conservation of valuable resources than it is about cost cutting.

In their best-selling book, *Lean Thinking*, James Womack and Daniel Jones identified five core principles of lean.¹

Let's examine them one by one:

Define Value from the Customer's Perspective

The first core principle in the Womack/Jones lean framework is that value must be defined and specified from the customer's perspective. While this seems simple enough, it requires much more than high-sounding, generic statements. To be meaningful, value must be defined in terms of specific products. This means that managers must understand how each specific product meets the needs of specific customers at a specific price and at a specific time.

Describe the Value Stream for Each Product or Service

The second core principle of lean is to describe the value stream for each product or service (or, in some cases, for groups or families of similar products). The value stream is the set of activities that the business is performing to bring a finished product to a customer. It includes both direct manufacturing activities and indirect activities such as order processing, purchasing, and materials management. Developing a detailed description or map of each value stream usually reveals huge amounts of waste. It enables managers to identify which value stream activities add value to the product, which activities add no value but cannot be immediately eliminated for various reasons, and which activities create no value and can be immediately eliminated (or at least reduced substantially).

Create Flow in Each Value Stream

The third essential principle of lean is embodied in the word flow. When a value stream has been completely described as unnecessary, non-value-adding activities have been eliminated, the basic idea of flow is to arrange the remaining activities sequentially, so that products will move smoothly and continuously from one activity to the next. However, flow means more than ease of movement. Flow is the lean principle that directly challenges the traditional "batch-and-queue" model of manufacturing, where people and equipment are organized and located by function, and products (and component parts) are manufactured in large batches. Lean organizations strive to improve flow by reducing the size of production batches, and in the process, they increase flexibility and lower costs.

Produce at the Pace (Pull) of Actual Customer Demand

Producing at the pace or pull of actual customer demand is the fourth key principle of lean. One of the greatest benefits of moving from traditional batch-and-queue manufacturing to continuous flow production is that lead times fall dramatically. Reduced lead times and increased flexibility mean that lean organizations can respond to actual customer demand rather than attempt to predict in advance what that level of demand will be. This allows lean organizations to substantially lower both finished goods and work-in-process inventories.

Strive to Continuously Improve All Business Operations

The fifth core principle of lean is continuous improvement, expressed in Japanese by the word *kaizen*. Companies that implement lean adopt the mind-set that it is always possible to improve any business activity, and they regularly conduct *kaizen* events throughout their organizations to improve specific processes or operations. Today, Toyota is recognized as one of the most "lean" business enterprises in the world. Even more daunting, and humbling, is the fact that Toyota is still striving to improve.

References

1. Womack, J. P., & Jones, D. T. (2003). *Lean thinking*. New York: Simon & Schuster

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