

# Lean Thinking and Supply Chain Management

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***Lean thinking in supply chain management is the use of lean principles to align activities across corporate functions within the firm and to manage business relationships with customers and suppliers.***

## Overview

Lean thinking provides principles and tools used to eliminate waste and to strive for perfection through continuous improvement. Though lean thinking was conceptualized to apply to all activities within the firm and across companies in the supply chain, lean principles are typically employed in operational settings within a single firm. Lean thinking in supply chain management involves the use of lean principles to align activities across corporate functions within the firm and to manage business relationships with customers and suppliers. We show how lean principles and tools can be used in the context of the supply chain management framework. Also, we describe forms of waste that result from the lack of alignment in the supply chain – wastes that need to be eliminated in order to create the greatest value for the end customer.

## Introduction

The term “lean” first appeared in *The Machine that Changed the World*<sup>1</sup> in reference to Toyota and its much heralded Toyota Production System (TPS). The book detailed the considerable differences observed between Toyota and its automotive rivals in an industry-wide study, where Toyota managed to achieve higher quality and greater output with less material, less space, and less equipment in less time making it “leaner” than the competition. The study documented the company’s discipline and relentless pursuit of perfection through continuous improvement, or kaizen. Out of the original research conducted by Womack and Jones, and others, a movement was born.

Since the mid-1990s, lean manufacturing has gained much attention in trade publications, industry reports, and case studies, where companies cite the benefits achieved through lean implementations. While reported benefits vary, a sample shows that lean principles successfully deployed in manufacturing can result in a 90% reduction in lead time, doubling of productivity, 75% reduction in inventory, near-zero defects, reduced accidents, and improved morale.<sup>2</sup> In light of these

<sup>1</sup> Womack, James P., Daniel T. Jones, and Daniel Roos, *The Machine that Changed the World: The Story of Lean Production*, New York: Harper Perennial, 1991.

<sup>2</sup> Liker, Jeffrey, *The Toyota Way: 14 Management Principles from the World’s Greatest Manufacturer*, New York: McGraw-Hill, 2004.