Lean Manufacturing

- Lean manufacturing (or simply Lean is a man philosophy derived mainly from the Toyota Production System (TPS) which is focused on –

- All expenditure of people and resources on any goal other than the creation of value to the customer or end user is wasteful

Lean IT

- Lean IT is the extension of LEAN manufacturing and Lean services principles to the development and management of Information technology products and services. Its central concern, applied in the context of IT, is the elimination of waste, where *waste is work* that adds no value to a product or service.

- Lean is a philosophy focusing on reducing the timeline between a customer request or order, and the delivery of the service (or product), through the elimination of waste.

Six Sigma

- Six Sigma is a management philosophy and statistical problem-solving methodology focused on reducing operational variance.
- Improving overall quality and performance of business processes.
- Dictates that business and process decisions should be based on data, and statistical process analysis.
- Especially useful in the Service sector, where customers are more sensitive to variations (often call "stuff-ups").
- Obtaining a Six Sigma performance level requires a statistical reduction of defects under 3.4 million defects per million opportunities, or 99.9997% success rate (Critical to Airline and Pharmaceutical industries).
- Uses the 5 phase D-M-A-I-C approach to problem saving and Continuous Improvement.

D-M-A-I-C

- **Define** the problem, the goal and the impact or cost benefits
- **Measure** the current process performance state, and collect all required and relevant data
- **Analyse** the Root Cause of the problem
- **Improve** the process to eliminate errors and instability
- **Control** the performance of the process, ensuring that the improvements are sustained (against Key Performance Indicators)

QualityHelp
Community Guide

Lean
8 Areas of Waste

Smart Guide (V.01)

(Overview of Lean and Six Sigma, and the 8 areas of Lean waste)

(Created by the QualityHelp Community at qualityhelp.org)

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Waste	Lean Manufacturing	Lean IT and Service
Defects	Inspection, production or correction of defective parts or products	Any non-conformance or inspection failure requiring rework, review, retest
Over-production	Producing products not ordered by the customer, or parts not required by the next process	Providing more services than required, requested or can be handled in a process step
Waiting	Waiting for material, suppliers or processing delays	Any time when work is not being performed on a customer request
Unnecessary Transport	Moving material or people unnecessarily	Non-value added processing. Movement of files, data or customer requests
Excess Inventory	Holding excessive stock, or raw materials	Work in process and excessive office infrastructure and materials
Unnecessary Motion	Excess motion of equipment or employees (searching, walking, stacking, filing)	Movement to transport information or data or compensating for inefficient processes
Over-processing	Inefficient, incorrect processing or unnecessary steps in production	Any effort that adds no value to the product, service or customer
Non-utilised Talents	Unused employee creativity, skills or ability	Unused employee creativity, skills or ability. Also unused tool functionality