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Term
80-20

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Term
Appraisal costs

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Term
Buffer

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Term
Constraint

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Term
Continuous improvement (CI)

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Term
Continuous process improvement (CPI)

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Term
Control chart

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Term
Cost of poor quality

Those costs associated with the formal evaluation and audit of quality in the firm. Typical costs include inspection, quality audits, testing, calibration, and checking time.

A term referring to the Pareto principle. The principle suggests that most effects come from relatively few causes; that is, [a larger] percent of the effects (or sales or costs) come from [a smaller] percent of the possible causes (or items). See: ABC classification.

Any element or factor that prevents a system from achieving a higher level of performance with respect to its goal.

In theory of constraints, time or material that supports throughput and/or due date performance.

A never-ending effort to expose and eliminate root causes of problems; small-step improvement as opposed to big-step improvement. Syn.: continuous improvement. See: kaizen.

The act of making incremental, regular improvements and upgrades to a process or product in the search for excellence.

The costs associated with performing a task incorrectly and/or generating unacceptable output. These costs would include the costs of nonconformities, inefficient processes, and lost opportunities. See: quality costs.

A graphic comparison of process performance data with predetermined computed control limits. The process performance data usually consists of groups of measurements selected in the regular sequence of production that preserve the order. The primary use of [these] is to detect assignable causes of variation in the process as opposed to random variations. [This] is one of the seven tools of quality. Syn.: process control chart.

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Term
Define, Measure, Analyze, Improve, Control (DMAIC) process

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Term
Heijunka

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Term
Inventory shrinkage

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Term
Just in time (JIT)

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Term
Kaizen

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Term
Kaizen blitz

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Term
Kaizen event

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Term
Key performance indicator (KPI)

In just-in-time philosophy, an approach to level production throughout the supply chain to match the planned rate of end product sales.

A six sigma improvement process composed of five stages: (1) Determine the nature of the problem. (2) Measure existing performance and commence recording data and facts that offer information about the underlying causes of the problem. (3) Study the information to determine the root causes of the problem. (4) Improve the process by effecting solutions to the problem. (5) Monitor the process until the solutions become ingrained.

A philosophy of manufacturing based on planned elimination of all waste and on continuous improvement of productivity. It encompasses the successful execution of all manufacturing activities required to produce a final product, from design engineering to delivery, and includes all stages of conversion from raw material onward. The primary elements of [this] are to have only the required inventory when needed; to improve quality to zero defects; to reduce lead times by reducing setup times, queue lengths, and lot sizes; to incrementally revise the operations themselves; and to accomplish these activities at minimum cost. In the broad sense, it applies to all forms of manufacturing—job shop, process, and repetitive—and to many service industries as well. Syn.: short-cycle manufacturing, stockless production, zero inventories.

Reductions of actual quantities of items in stock, in process, or in transit. The loss may be caused by scrap, theft, deterioration, evaporation, and so forth. Sometimes referred to as shrinkage.

A rapid improvement of a limited process area; for example, a production cell. Part of the improvement team consists of workers in that area. The objectives are to use innovative thinking to eliminate non-value-added work and to immediately implement the changes within a week or less. Ownership of the improvement by the area work team and the development of the team's problem-solving skills are additional benefits. See: kaizen event.

The Japanese term for improvement; refers to continuing improvement involving everyone—managers and workers. In manufacturing, [this] relates to finding and eliminating waste in machinery, labor, or production methods. See: continuous process improvement.

1) A financial or nonfinancial measure that is used to define and assess progress toward specific organizational goals and that typically is tied to an organization's strategy and business stakeholders. Should not be contradictory to other departmental or strategic business unit performance measures. 2) A metric used to measure the overall performance or state of affairs. SCOR level 1 metrics are an example.

A time-boxed set of activities carried out by the cell team during the week of cell implementation. [It] is an implementation arm of a lean manufacturing program. See: kaizen blitz.

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Term
Lean metric

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Term
Lean production

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Term
Load leveling

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Term
Operational performance measurements

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Term
Pareto chart

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Term
Pareto's law

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Term
Process map

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Term
Quality

A philosophy of production that emphasizes the minimization of the amount of all the resources (including time) used in the various activities of the enterprise. It involves identifying and eliminating non-value-adding activities in design, production, supply chain management, and dealing with customers. [It also employs] teams of multiskilled workers at all levels of the organization and use highly flexible, increasingly automated machines to produce volumes of products in potentially enormous variety. [It] contains a set of principles and practices to reduce cost through the relentless removal of waste and through the simplification of all manufacturing and support processes. Syn.: lean, lean manufacturing.

A metric that permits a balanced evaluation and response—quality without sacrificing quantity objectives. The types of metrics are financial, behavioral, and core-process performance.

1) In traditional management, performance measurements related to machine, worker, or department efficiency or utilization. These performance measurements are usually poorly correlated with organizational performance. 2) In theory of constraints, performance measurements that link causally to organizational performance measurements. Throughput, inventory, and operating expense are examples. See: global performance measurements, local performance measurements, strategic performance measurements.

Spreading orders out in time or rescheduling operations so that the amount of work to be done in sequential time periods tends to be distributed evenly and is achievable. Although [this ideally applies to] both material and labor, specific businesses and industries may load to one or the other exclusively (e.g., service industries). Syn.: capacity smoothing, level loading. See: level schedule.

A concept developed by Vilfredo Pareto, an Italian economist, that states that a small percentage of a group accounts for the largest fraction of its impact or value. In an ABC classification, for example, 20 percent of the inventory items may constitute 80 percent of the inventory value. See: ABC classification, 80-20.

A bar graph that displays the results of a Pareto analysis. It may or may not display the 80-20 variation, but it does show a distinct variation from the few compared to the many.

Conformance to requirements or fitness for use.

A diagram of the flow of a production process or service process through the production system. Standardized symbols are used to designate processing, flow directions, branching decisions, input/output, and other aspects of the process.

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Term
Setup time

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Term
Six sigma

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Term
Statistical process control (SPC)

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Term
Stock keeping unit (SKU)

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Term
Total productive maintenance (TPM)

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Term
Total quality management (TQM)

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Term
Value stream

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Term
Velocity

A methodology that furnishes tools for the improvement of business processes. The intent is to decrease process variation and improve product quality.

The time required for a specific machine, resource, work center, process, or line to convert from the production of the last good piece of item A to the first good piece of item B. Syn.: setup lead time.

1) An inventory item. For example, a shirt in six colors and five sizes represents 30 [of these]. 2) In a distribution system, an item at a particular geographic location. For example, one product stocked at the plant and at six different distribution centers would represent seven [of these].

The application of statistical techniques to monitor and adjust an operation. Often used interchangeably with statistical quality control, although statistical quality control [also includes acceptance sampling.]

A management approach to long-term success through customer satisfaction; based on the participation of all members of an organization in improving processes, goods, services, and the culture in which they work.

Preventive maintenance plus continuing efforts to adapt, modify, and refine equipment to increase flexibility, reduce material handling, and promote continuous flows. It is operator-oriented maintenance with the involvement of all qualified employees in all maintenance activities. Syn.: total preventive maintenance.

1) The rate of change of an item with respect to time. See: inventory turnover, lead time. 2) In supply chain management, a term used to indicate the relative speed of all transactions, collectively, within a supply chain community. [The maximum of this] is most desirable because it indicates higher asset turnover for stockholders and faster order-to-delivery response for customers.

The processes of creating, producing, and delivering a good or service to the market. For a good, [this] encompasses the raw material supplier, the manufacture and assembly of the good, and the distribution network. For a service, [this] consists of suppliers, support personnel and technology, the service “producer,” and the distribution channel. May be controlled by a single business or a network of several businesses.

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Term

Waste

1) Any activity that does not add value to the good or service in the eyes of the consumer. 2) A by-product of a process or task with unique characteristics requiring special management control. [The] production [of this] can usually be planned and somewhat controlled. Scrap is typically not planned and may result from the same production run as [this term]. See: hazardous waste.