**Supply Management and Procurement**

**Key Terms, Acronyms,**

**And Definitions**

***A***

**ABC Analysis -** The technique of classifying purchased goods and services for purposes of prioritizing in order of criticality or importance. Typically, items that are critical, high dollar, or difficult to source are classified as "A" items. Items that are important but not critical and have multiple sources of supply are classified as "B" items. "C" items are classified as COTS, standard, always in stock, low cost, and readily available.

# **Absolute Advantage in International Trade -** A condition that exists when a particular country is the only one with a specific resource, or can produce a commodity with fewer resources than others countries.

**Acceptance Sampling -** Acceptance sampling is a quality control statistical procedure used to determine sample and test both produced and purchased items to detect the number of defects discovered in a random sample. Defective items are recorded and if pre-established quality requirement levels are not attained, the entire batch, lot, shipment, etc. is rejected and returned to the supplier.

**Actual Authority -** Refers to Agency relationships and the degree of authority bestowed upon an individual by an organization to make decisions and act upon their behalf. *Example:* A purchasing agent has the actual authority to make purchases up to a $100,000 limit without additional approval.

**Ad Valoren Duties -** Duties and charges applied as a percentage of the appraised or retail value.

**Administrative Law -** The body of rules, regulations, and laws, that regulate the activities of governmental agencies, and their actions.

**Advantages of buying from a distributor -** Availability, on-hand inventory, variety and range of product, low volume order ability.

**Advantages of buying from a manufacturer -** Higher available volumes at lower costs, JIT applicability, special specification and design requirements capability.

**Advantages of Buying Locally -** Community image enhancement, good-will development, lower transportation costs, faster delivery times, inventory reduction.

**Advantages of Buying Nationally or Internationally -** Economies of scale, increased production capacity, and volume pricing.

**Agency Shop -** An Agency shop requires that all non-union members pay union dues and fees, but does not require membership in a union. Agency shops are only approved in some states.

**Agent -** An individual who is employed by a company that has a degree of authority bestowed by the principle to act on their behalf. There are degrees of authority and can be actual or apparent. *Example:* All employees and management of the procurement department responsible for bidding, negotiating, and awarding business have a fiduciary duty and responsibility to their organization to act as an agent for the organization and represent the organization to the best of their ability without personal gain or compensation.

**Aggregate Purchase Plan -** An [economic strategy and plan where](http://www.ask.com/wiki/Economics?qsrc=3044) the total supply of goods and services a company plans to purchase, or is willing to purchase, at given price levels during a specific time period. *Example:* A company produces Widgets that requires a differentiated amount of services, materials, parts, and supplies required to meet annual production goals. It is the responsibility of procurement to obtain those requirements at specific quantities, price levels, and supply schedules to meet the production plan goal.

**Aggregate Supply Plan -** An [economic plan where](http://www.ask.com/wiki/Economics?qsrc=3044) the total supply of goods and services a company plans to sell, or is willing to sell, at a given price level during a specific time period.

**Annual Inventory Turnover Rate Formula -** Annual cost of goods sold / average inventory value.

**ANSI -** Is an acronym for the American National Standards Institute (ANSI). It is a US non-profit organization that oversees the development of consensus standards for products, services, systems, processes, etc.

**ANSI X 12 Standards -** Is also known as ASC X 12 and is a designation for the program language of [Electronic Data Interchange](http://www.ask.com/wiki/Electronic_Data_Interchange?qsrc=3044) (EDI) standards. ANSI is an acronym for the American National Standards Institute that is standards development group.

**Anticipatory Repudiation -** Alsocalledanticipatory breach, is a term that describes a declaration by a promising party to a contract stating that they do not intend to fulfill the obligations agreed to in a contract.

#### Antitrust Laws - A body of laws that prohibits non-competitive behavior, such as monopoly, and other unfair business practices. They are designed to preserve the free enterprise and encourage competition in the marketplace.

# **APICS -** APICS is an acronym for the American Production and Inventory Control Society and is part of the Association for Operations Management which offers international organization, education, and certification programs for supply management and logistical support.

#### Apparent Authority - Refers to the level of Agency relationships and the degree of authority perceived by the seller bestowed upon an individual by an organization that is authorized to make decisions and act upon the organization's behalf. *Example:* A buyer has approval and actual authority to make purchases up to $25,000 without additional authorization but makes a purchase of $38,000 without additional authorization. The seller believes the buyer has the authority to do so.

**Arbitration -** Is a part of alternative dispute resolution (ADR), and is a legal technique used to resolve disputes between parties outside the courts. Parties engaged in a dispute agree to refer it to one or more persons called "arbitrators" or "arbiters", whose decision they both agree to accept. A ruling by an arbitrator is binding, and cannot be appealed.

**ASAR -** Is an acronym that stands for an Automatic Storage and Retrieval System used in inventory storage and management.

#### ASME - Is an acronym that stands for The American Society of Mechanical Engineers (ASME). The ASME is a professional, engineering society dedicated to mechanical engineering.

**Assignment -** An assignment is a legal term used in contracts and agreements that defines the transfer of rights and/or title held by one party (the assignor) to another party (assignee) unless expressly prohibited by other specific contract language.

**ASTM -** Is an acronym that stands for the American Society for Testing and Materials. It is an international organization that develops and sets technical standards for a variety of products, materials, systems, and services.

**Attachment -** Alegal process in a court of law in which a creditor (plaintiff) designates specific property owned by the debtor and may acquire a lien on a defendant’s (debtor) property as security for the payment of any judgment which the plaintiff may obtain.

**Automatic Renewal Provision -** Also known as an Evergreen Clause, is a clause in a contract that allows renewal of a provision of the contract automatically, usually on a yearly basis or as otherwise noted. This provision is valid unless one party gives notice of termination to the other party at a specific point in time. If this clause is contained in a contract, it is also wise to include another clause that permits both parties the opportunity to terminate at any time during the term of the contract.

**Average Cost of Storage -** An **i**nventory valuation method that uses an average cost of all items as the basis for the total dollar amount held in inventory.

**Avoidable Costs -** The specific costs of an activity or process of a business which would be avoided if that activity or process did not exist.

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**Backflush Accounting -** An accounting procedure that uses product costing for JIT., i.e., suppliers are not paid until goods are finished. Once finished, costs are then "flushed backward" and costs are assigned to products at that point. *Example:* A company makes and supplies mufflers for an automobile manufacturer and delivers on a JIT delivery schedule. The supplier is not credited or paid for mufflers delivered until they are installed and cars completed during a defined period (production run).

**Barter -** A commercial transaction where goods and services are "traded" for other goods and services. Dollar and value are usually not equal and a one-for-one situation does not exist so an adjustment in quantity is usually required. *Example:* Due to adverse market conditions an exporter of coal arranged the barter of a vessel of coal to a Spanish cement manufacturer for a vessel of cement which it sold to a company in a third country,

**Barcode Symbologies -** A binary code form of language used by computers to translate barcode symbols into predetermined numbers and letters. Barcodes vary from bars and spaces, to dots, rectangles, circles, etc. Information such as quantity, item and/or serial number, supplier name, shelf life date, price, date received, and many other things can all be contained within a bar code (depending on configuration). The bar code is scanned and information transferred and displayed as numbers and letters.

**BEA -** An acronym that stands for the Bureau of Economic Analysis, which is part of the U.S. Department of Commerce. Through analysis and published opinions, the BEA provides information on the U.S. economy.

**Benefits of International Procurement -** There are many benefits to pursuing procurement of goods and services in other countries. The benefits can include lower price per unit, lower total cost, increased competition, higher quality, counter trade, and barter opportunities.

**Benchmark -** A standard established against which to measure actual performance. A goal set that is desired to be obtained. Benchmarks are a strategic supply management and procurement tool used to strive for and achieve success. Benchmarks may be established based on internal information and historical activity or selected for an internal source that is considered best in class in a particular process, function, or industry.

**BER -** An acronym that stands for Beyond Economical Repair. Many parts, components, machinery, and instruments that are used in an operation are repairable when they break or stop working. However, there comes a time in the life of any part, etc. where it becomes uneconomical to repair it and should be replaced by a new part, etc. *Example:* A key piece of automated machinery required to make Widgets is prone to break down after an average of 2,500 production cycles and parts have to be replaced. The cost of repairs and out of service times are within the acceptable range but due to the age of the machine, it is breaking down more and more frequently to the point that the out of service times have become disproportionate to acceptable levels. Therefore, operations and P.E. have determined that the machine is BER and should be replaced.

# **Bid Bond -** Also called a performance bond, is a guarantee that if something is awarded to a bidder such as a job, order, or contract, the bidder will accept the award. If the bidder refuses to accept, then the bond is paid to cover extra costs of securing another source.

**Bid Factors -** Refers to conditions present or used in the preparation and consideration of bids. Bid factors include; cost, source(s), bidder qualifications, value opportunity, forecast projections, time requirements, etc.

**Bids Problems to Consider -** Time constraints, variations of minimum requirements, bid or proposal errors, confidentiality, bias, conflicts of interest, etc.

**Bill of Lading -** A receipt document issued by a carrier to shipper that acknowledges that goods being shipped have been received as cargo and terms of delivery to a specified consignee and place of delivery.

**Bill of Materials (BOM) -** A list of raw materials, part, components, assemblies, sub-assemblies, etc. with quantities required and descriptions of each that are required to fill a need.

# **Blanket Order -** A purchase order or contract issued by a buyer to a seller that allows purchase-on-demand and/or delivery schedules with multiple release dates. Prices and terms are predetermined and draws or purchases can be made against the agreement until a fixed end date is reached, or other ending stipulations in the agreement are met.

# **Booking Request -** An inquiry submitted by a shipper to a transportation carrier to determine available modes of transportation and rates on specific dates. *Example:* A manufacturer/exporter contacts a maritime shipper to determine specifics such as terms of transportation, price, available space, departure, and sailing times for a container of cargo.

#### Breach - A failure to perform a predetermined act, duty, responsibility, obligation, or requirement as set forth in an agreement or contract. *Example:* The supplier breached the contract, therefore they are in default.

**Break Even Analysis -** An analytical tool used to determine at what volume point and price that product, system, or activity is more economical than another. It establishes a zero point where volume of production equals price of purchase or sale. Used in make versus buy decisions.

# **Bribery -** The act of offering or giving a reward, such as gifts, cash, influence, or other compensation, in return for favors, award of business, or consideration. Bribery is

**Budgetary Control -** A budgetary and accounting technique of cost control (costing) to create, control, and monitor budgetary compliance and performance.

**Bundling -** A procurement leverage principal that consolidates differing goods and services into a single package for the purpose of reducing suppliers and decreasing costs. *Example:* A supplier that produces multiple parts used by an organization is approached with the possibility of consolidating all of those items and awarding to a single supplier based on a negotiated determination of requirements and cost advantages.

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**C.P.M. -** An acronym that stands for Certified Purchasing Manager, a designation and certification bestowed upon individuals who met certain requirements and criteria through testing by the Institute of Supply Management (ISM). The C.P.M. designation has been replaced by the new designation of Certified Professional in Supply Management (C.P.S.M.).

**C.P.S.M. -** An acronym that stands for Certified Professional in Supply Management, a designation and certification bestowed upon individuals who meet certain criteria through testing by the Institute of Supply Management (ISM). C.P.S.M. certification is the new, expanded version of the old C.P.M. certification that is still valid but no longer attainable.

**Cabotage laws -** Are international laws and standards based on the U.S Jones Act that govern the shipping and transportation of goods, cargo, and passengers between two points within the same country. *Example:* Freight originating in a country must be transported by a carrier from that country.

**CAD -** Is an acronym that stands for Computer Aided Design. CAD drawings can be dimensional or virtual and may be supplied as part of minimum requirements or bills of materials in RFQs and RFPs.

**CAM -** Is an acronym that stands for Computer Aided Manufacturing. An interactive computer program or system that can be used in various phases of the manufacturing process that provides manipulation data for human decision making.

# **Capacity Increase Strategies and Methods -** Several strategies and methods can be employed to increase capacity of production, processes, or activities and may include some or all of the following; scheduled overtime, personnel sharing, sub-contracting, outsourcing, automation, re-engineering, facility and capacity expansion, and revised work/production schedules. All are options to consider when circumstances dictate capacity increases. These options may be included in a risk mitigation and management plan.

**Capacity Requirements Planning (CRP) -** A strategic supply management and procurement technique used to determine specific future demands and requirements to support operations. CRP determines quantities of materials required, dates materials are required, time to process orders, lead time of material, delivery time (transportation), time to receive and process materials, plant maintenance and preventive maintenance schedules, production plans or schedules, and all things related to determining capacity requirements. CRP systems can be stand alone software programs or incorporated in other software programs such as MRP and ERP.

# **Capacity Reserves Buying -** A situation wherein a buyer exclusively reserves a portion of a sellers manufacturing capacity.

**Capacity Utilization Rate -** Measures the percentage rate of industrial output currently in use. A change in the capacity utilization rate, up or down, indicates an increase or decrease in the direction of economic activity. *Example:* If the capacity utilization rate moved to 90%, the industrial output is almost at full capacity.

**Capital Budget -** A strategic planning process used to determine an organization's spending plan for long-term investments (spending) for major infrastructure requirements and projects such as new products, new machinery, plant expansion, R & D, etc, and balanced against allowable revenue and resources.

**Carrying Costs -** Costs incurred for carrying inventory and includes such things as storage costs, insurance, financing, taxes, etc. *Example:* A pharmaceutical distributor buys a variety of products which it sells to buyers. Some products must be bought in volume lots to take advantage of price concessions and held for longer periods before sale and shipment. The carrying cost for each product will vary depending on the length of time it is held in inventory.

**Cartel -** A formal organization formed between competing companies of similar or like products to limit competition by controlling the production, distribution, and price of a product or service.

**Cash Flow Budget -** A budget that is developed that provides an overview of inflows (receipts) and outflows (disbursements/expenditures) of cash for a specified period of time.

**Categorical Analysis Method or Model -** Is a quantitative statistical approach to data analysis and can be performed through various mathematical approaches and calculations such as Chi-square hypothesis testing, histogram plots, or others.

**Central Tendency -** Refers to the middle values of data such as mean (average), median (midpoint), and mode (like data that appears most frequently) and is used in a variety of analysis and forecasting.

**Centralized Purchasing -** Is a procurement system that concentrates the purchasing, supply, storing, and distribution responsibilities for multiple departments, divisions, or company-wide requirements into one department and location.

**CFR (also called CNF) –** An Incoterm acronym that stands for Cost and Freight (to destination port of entry). This term is used for maritime or ocean going freight and cargo only and designates that the seller or exporter is responsible for and pays the costs and freight to bring the goods and cargo to the destination port of entry. Title and risk is transferred to the buyer or importer when the goods or cargo have been off-loaded (said to have crossed the ship's rail). Insurance for the goods and cargo is not included and is the sole responsibility of the buyer or importer.

# **Characteristics for Determining the Class of a Product for Transport -** Product dimensions, weight, stack ability, handling, storage ability, hazardous, and liability.

# **Charter Party -** A contract lease document between and ship owner and a shipper/exporterwherein a ship or vessel is chartered (hired) for the purpose of transporting goods and cargo.

**CIF -**  An Incoterm acronym that stands for Cost, Insurance, and Freight (to destination port of entry). This term is used for maritime or ocean going freight and cargo only. The conditions of this term are the same as those for CFR with the exception that the seller or exporter must additionally secure and pay for insurance on behalf of the buyer or importer. A variation of this term is CIF - Free Out, which means that the vessel has off-loaded, undocked and piloted out of the harbor.

**CIP -** An Incoterm acronym that stands for Carriage and Insurance Paid (to destination port or point of entry). This term is used for containerized goods and cargo and is the transportation multi-modal equivalent of CIF. In this arrangement the seller or exporter pays for carriage (transportation) and insurance to a designated destination port or point of entry. Title and risks are passed when the goods or cargo are handed-off to the first carrier required and used for final delivery.

**CISG -** An acronym that stands for Contracts for the International Sale of Goods between countries adopted by the United Nations Convention. Establishes standards for the sale of goods between countries.

**Clayton Act -** The Clayton Antitrust Act of 1914 was passed by the U.S. Congress as a supplement to the Sherman Antitrust Act of 1890. It states that it is unlawful for any individual or company engaged in commerce to discriminate in price or services, engage in monopolistic practices, or otherwise obstruct or impede free markets.

**Click Wrap Agreement -** Also known as a click through agreement, is common in electronic and Internet transactions. The customer, or user, is asked to view the terms and conditions of a transaction or agreement and then prompted to "click" a box if they agree to and accept the terms and conditions. By clicking "yes" the customer or user becomes bound by those terms and conditions.

**Closed Loop Process -** Is an operational strategic planning, execution, and support system that integrates process models and process monitoring to improve efficiencies, quality, and costs.

**Closed Shop -** An agreement between a union and a company wherein an employer agrees that it will only hire union employees and that all employees shall remain members of the union at all times as long as they are employed by the company.

**Closed Stores -** An inventory management and control system where inventory is contained and must be signed for by someone authorized to do so before it can be dispensed.

**Coincident Economic Indicators** - Used to determine business cycles. Coincident economic indicators move at the same rate and time as the economy does. Gross Domestic Product (GDP) is a coincident economic indicator.

**Coincident Economic Indicators (CEI) -** An economic indicator is a comprised of statistics about the economy that enables analysis of economic stability and performance. The Index of Coincident is compiled by the U.S. Department of Commerce to measure the *overall* state of economic activity.

**Collaboration -** A process wherein two or more parties (individuals, companies, etc.) work together (collaborate) to attain shared goals.

**Collusion -** Is the fraudulent cooperation between two or more parties to limit competition and gain higher profits by misleading and deceiving others.

**Comity -** Mutual courtesy and respect shown between one state and another or between one nation and another for the laws and judicial decisions of each and to promote uniformity and limit litigation.

**Commercial Invoice -** A declaration of value document prepared for customs by an exporter for goods shipped across international borders.

**Common Carrier -** A shipper whose business is transporting people, goods, cargo, or messages, is under license, and regulated by some sort of agency and has published rates between for service between various points.

# **Comparative Advantage -** Is the ability of a country or business entity to produce a good or service at a lower opportunity cost and sell at a lower margin price than other countries, companies, or competitors.

**Competition In Contracting Act (CICA) -** First established in 1984 to encourage competition for bidding and award of all types of government contracts, to increase the number of bidders and level of competition in order to increase savings.

**Competitive Advantage -** The advantage that a company has over its rivals and competitors in a similar industry. Attaining competitive advantage is a strategic philosophy employed by Best In Class companies as another way of sustaining success by strengthening their position and generating greater value.

**Component -** Individual parts that are required to "assemble" a sub-assembly or finished good.

**Compound Duties -** Are imposed by countries on manufactured goods at the time of importation and be comprised of specific and ad valorem duties. Some manufactured goods might contain raw materials that also may be subject to import duties. In this situation, compound duties may also be referred to as compensatory duties and are levied by a country as a form of protection for its own raw material industry.

**Concession -** Is the act of yielding or conceding a position by one part to the other during negotiations.

**Consent To Assign -** Has broad definition to various business acts but specific to supply management and procurement it refers to the ability, or non-ability, granted by one party to another in a contract or agreement, to have the ability and freedom assign receivables, work, responsibility, etc to a third party. Some agreements seek to limit assign ability by including a clause that states "with prior approval and consent".

**Consignment Inventory -** An inventory system where a product is held in the possession of a customer but still owned by the seller until it is used or consumed. Ownership and title are not transferred until the point of consumption. This inventory concept is sometimes used as part of Just-In-Time (JIT) where products are shipped to a manufacturer but not paid for until used (*see* backflush accounting).

**Contract Administration -** The act of delegating responsibility to manage various portions or facts of a contract to assure adherence to, and performance of the terms, conditions, and commitments of the contract. Also, to see that all obligations are fulfilled and that the buyer is receiving full value.

**Contract Bonds -** Also called a performance bond. Contract bonds are guarantees of contract fulfillment and performance. If a party posts a contract bond and does not fulfill or complete the conditions set forth in the contract, the bond is paid to cover extra costs of securing another source to complete or fulfill the contract. Contract bonds are most often used in service contracts to ensure their performance or completion.

**Contract Carriers -** Are transportation companies that do not serve the general public, such as common carriers, but serve specific individual shippers under a contract of carriage.

**Contract Elements -** Elements upon which contracts are based should include the following: (1) mutual consent, (2) good faith, (3) offer and acceptance, (4) delivery and performance, (5) mutual compensation and/or consideration, (6) adherence to published laws.

**Contract Types -** There are several types of contracts that procurement departments can negotiate and enter into with suppliers. *See:* Individual types for specific definitions. The different types are: (1) fixed price, (2) multi-year, (3) cost reimbursement, (4) renewable, (5) incentive, (6) time, materials, and labor, and (7) variable cost.

# **Contractor Operated Inventory System -** Also known as Vendor Managed Inventory (VMI). A system where an independent contractor or supplier oversees, manages, and operates a company's inventory storage facility under the terms and conditions of a contract. The contractor supplies their own personnel, pays wages and provides compensation, provides required supplies, and directs all work.

**Contractor Purchasing Systems Reviews (CPSR) -** An evaluation method used by the U.S. Government to review and determine the effectiveness and efficiency of government contractors and suppliers and their compliance with governmental policies and guidelines.

# **Copyright -** A set of exclusive rights and privileges granted by law to an inventor, creator, or author of an original work. In order to receive copyright protection, a work must be registered with the U.S. Copyright Office or applicable agency of other countries and governments.

# **Correlation/Regression Analysis -** Many forecasts are based on correlation and regression analysis. Both analysis are related to the degree that they both deal with relationships among and between variables. A correlation coefficient measures the linear association of two variables and a regression analysis uses observations to mathematically determine the best fit of data in determining estimates or making predictions (forecasts) about future behavior of variables.

**Cost Analysis -** Is the gathering of data and information for the purpose of manipulation and evaluation for the comparison of value and/or to make projections. Quotes and prices received from bids and proposals can be analyzed to show price differences and determine lowest cost or best value. In a forecasting or projection scenario, various costs can be used to determine different outcomes in developing a plan of action or "what if" scenarios. *Example:* We performed a cost analysis to determine our break-even point and then performed a cost benefit analysis to establish our profit margin.

#### Cost Based Pricing - A procurement method wherein a base cost is established to be paid to a supplier of a product or service. Other costs are added (variable costs), as they might appear, as a fixed sum or percentage of total cost that includes income or profit. *Example:* An IT firm was hired to design a new software program and system. A base price and the contractor's profit were negotiated but many unknown variables exist so a cost plus agreement was established wherein additional incurred and approved costs would be added to the total cost of the project.

# **Cost Plus a Fixed Fee -** A variation of Cost Plus Pricing where a set fee is negotiated and charged regardless of what total cost ultimately turn out to be.

# **Cost Plus Incentive -** Another variation of Cost Based Pricing where total cost is established, including the contractors or sellers profit, and an incentive is offered (usually in the form of a percentage) if the contractor or seller completes the job or project below the pre-established cost or target budget. If costs exceed budget, the contractor or seller does not receive any incentive but is still paid for the total costs.

**Cost Ratio Method -** A procurement evaluation and analytical tool that compares quality, service, and delivery costs for a specific order as a method of supplier evaluation. It consists of the ratio of actual costs incurred to the total estimated contract costs for a specified reporting period.

**Cost Sharing -** A condition or clause in procurement agreements and contracts whereby both buyer and seller each share both costs and benefits.

#### Cost Without Fee - Applies in some contracts and agreements with non-profit, not for profit, colleges and universities, and research groups. In this situation, costs for overhead, salaries and wages, supplies, etc. are agreed to be paid but no compensation for profit is paid.

**Countertrade -** Sometimes used in international trade in which commodities and goods are exchanged for other commodities and goods in lieu of cash, hard currency, or credit. Advantages of countertrade are that it opens markets, expands trade options, facilitates sales, counteracts inflation, increases competition of suppliers, and improves potential profit. Disadvantages are that it increases time of purchase as it requires development, may incur additional taxes and duties, and require more oversight and monitoring than normal.

**Cp -** An acronym and symbol that stands for Inherent Process Capability. Cp is a statistical tool used to determine normal distribution of a population range of data and has a variety of applications from supply management and procurement to production processes. Cp is used in Total Quality Management (TQM), Six Sigma, and other quality and process improvement philosophies. *See* Appendix D - List of Useful Formulas for details of how Cp is used.

**CPI -** An acronym that stands for Consumer Price Index. A CPI monitors and publishes data monthly on changes in prices paid for a market basket of goods and services used by analysts as an inflationary indicator.

**CpK -** An acronym and symbol that stands for Process Capability. CpK is a statistical tool used when specifications are one sided and Cp cannot be used. CpK is used to determines process capability and performance to prevent shipping or receiving marginal quality products and has a variety of other applications. CpK is a tool used in Total Quality Management (TQM), Six Sigma, and other quality and process improvement philosophies. *See* Appendix D - List of Useful Formulas for details of how CpK is used.

# **CPM -** An acronym that stands for Critical Path Method. CPM is a project management tool that has an application to any project that has, or requires, independent activities. It is a form of mathematical analysis to calculate the paths of planned activities until the end of a project. Although once common, CPM has somewhat been replace with more advanced computer software programs, such Microsoft Project, and other that are easier to use and makes the calculations on behalf of the user.

**CPT -** An Incoterm acronym that stands for Carriage Paid To (a destination port or point of entry). This term is used when the seller or exporter pays for transportation and carriage to a designated port or point of entry and can be applied to containerized, multi-model, and general goods and cargo. In this arrangement the seller or exporter pays for carriage (transportation) only and title and risk are passed to the buyer or importer when the goods or cargo are handed-off to the first carrier required and used for final delivery.

**Criteria for Identifying Hazardous Waste -** The criteria used to identify what constitutes hazardous waste, as determined by the EPA, is; toxicity, corrosiveness, reactivity, and ignitability.

**Cross Docking -** A supply management logistical process and technique consisting of receiving and unloading goods and materials from one conveyance and transferring or reloading into other conveyances for transport on to different or similar destinations. *Example:* An organization has a centralized purchasing and storage system and places orders for all of the requirements of the organization's different plants, facilities, and operations. When orders are received, they are unloaded, rerouted and then reloaded into different carriers for transportation to their final destination.

# **Cross Functional Sourcing Teams -** Are an important ingredient of strategic supply management and procurement philosophies and used extensively by best in class organizations. The cross functional team concept pulls key player resources and stakeholders into the supply management and procurement environment to develop specific and strategic sourcing strategies, plans, and goals.

**CRP -** An acronym that stands for Capacity Requirements Planning that is included in a Material Requirements Planning (MRP) software system. CRP allows a business to plan anticipate requirements (project, forecast) ahead of actual needs in order fulfill demands. It also allows a business to determine capacity availability and requirements by establishing, measuring, monitoring, and adjusting requirement limits (levels). There are several CRP system software programs available such as MRP, MRP II, and ERP,

#### Customer Value Ratio - Has several applications, such as marketing, but from a supply management and procurement standpoint it is an abstract determination and value assessment of criteria deemed relevant to internal and external customers. It has specific application to supplier performance evaluation and analysis. The concept is to determine the ratio of supplier value to the organization by assigning perceived values (usually numerical) to value specific criteria such as price, quality, service, technology, and cycle time (TAT). The formula to obtain a ratio can then be written as : Value = Quality + Service + Technology + Cycle Time / Price.

#### Customer Worth Concept - Is a marketing concept that defines the value a customer has to an organization. A customer's worth is also sometimes referred to as customer lifetime value (CLV) and is valuable in determining which customers are worth more effort in cultivating, maintaining, and retaining. It usually costs more to obtain a new customer than keep a current one but other factors are considered as well such as the monetary volume, the importance a customer presents and the nature of the relationship. It is important for procurement professionals to understand this concept as it may present an opportunity to use it to their advantage by reminding a supplier's representative in which they are engaged in negotiating of the value they have as a customer.

# **Cycle Counting -** Is a supply management and inventory management logistical tool used to verify on-hand inventory. Cycle counting can be performed either physically or automatically through electronic inventory management systems. Cycle counting can incorporate a number of methods such as: (1) ABC analysis, which segregates items into differentiated count frequencies, (2) usage, which counts items used most frequently be counted most often, (3) Pareto method, based on Pareto's Principal 80/20 rule and counts based on inventory value, (4) Criticality, which counts items that are critical and most important to operations, and (5) electronic automation, which uses inventory control computer software systems and a barcode/scanner system that automatically reads inventory data and transfers to a database for storage and report generation.

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**DAF -** An Incoterm acronym that stands for Delivered At Frontier (or delivery place). This term refers to a classification used when goods and cargo are transported by road or rail. The seller pays for transportation to a named place of delivery at the border or frontier as it is commonly called. The buyer or exporter is responsible for customs clearance and pays for any and all transportation from the frontier to buyer's final destination. Title and risk is transferred from the seller to the buyer at the frontier.

**Data Based Management Systems (DBMS) -** A computer software system that controls a database of information and consists of four models; (1) network, (2) hierarchical, (3) object oriented, and (4) relational. DBMS allows interface between programs and users.

**DCMA -** An acronym that stands for Defense Contract Administrative Services, an agency of the U.S. federal government that has the responsibility of management of all contract services on behalf of the Department of Defense and other authorized federal agencies.

**DDP -** An Incoterm acronym that stands for Delivered Duty Paid (at destination port of entry). This term stipulates that the seller pays for all transportation costs and bears all risk until the goods have been delivered to their destination and all applicable duties have been paid. DDP is also sometimes used interchangeably with the term "Free Domicile". This term is the most comprehensive term of sale for the buyer. Some importing countries may access additional taxes for imported goods such as (but not limited to) Value Added Taxes (VAT) and excise taxes. Although usually prepaid by the buyer or importer they are considered a recoupable cost as they are usually recovered against sales to customers within an importing country within the internal local market. An exception to this would be parts and components used to make a finished product which is then sold at another price. In this scenario the cost of the taxes would be considered as another cost within the total purchase cost and part of the transportation and importation costs.

**DDU -** An Incoterm acronym that stands for Delivered Duty Unpaid (at destination port of entry). This term stipulates that the seller delivers the goods to the buyer to the named place of destination in the contract of sale. The goods are not cleared by the country's customs for import or unloading from any type of transport (ship, aircraft, railcar, or truck) at the place of destination. The buyer bears the responsibility to pay for all costs for the unloading and is responsible for all risks associated therewith. The buyer or importer is also responsible for any subsequent delivery requirements beyond the place of destination landing. If the buyer or importer desires that the seller should bear these responsibilities, costs, and the risks associated with import clearance that includes payment of duties, etc. and the unloading and subsequent delivery beyond the place of destination landing, then they would need to be negotiated and agreed to in advance and prior to shipment being initiated.

**Decentralized Purchasing -** Is a procurement system that allows departments and divisions of a company to each perform their own purchasing, supply, storage, and distribution responsibilities for their particular location only.

**Decision Tree Analysis -** A decision support analytical tool that records and graphs different possible decisions and potential consequences and event outcomes. Decision tree analysis derives its name from the fact that it resembles a vertical tree with branches flowing from its base. There is a multitude of ways in which this tool can be used and is invaluable when performing "what if" scenarios and risk identification and analysis. It can also be used as an influence or impact diagram to show relationships and issues affecting different activities, processes, and events. A true decision tree diagram consists three types of nodes; (1) decision nodes (displayed as squares), (2) chance nodes (displayed as circles), and (3) end nodes (displayed as triangles). Used in a sensitivity analysis, numerical values can be assigned to calculate a risk coefficient.

**DES -** An Incoterm acronym that stands for Delivered Ex Ship (at destination port of entry). This term stipulates that, when goods are delivered ex ship, risk is not passed from the seller or exporter to the buyer or importer until the ship has arrived at the destination port and all goods are made available for unloading to the buyer. An example where this term is used is at a port that is small or extremely busy. Even though the vessel has arrived at the destination port it must queue up and anchor until its designated turn to dock and off-load. The seller or exporter pays the same freight and insurance costs as would be expected in a CIF arrangement. The seller or exporter agrees to bear all costs associated DES and bear risk and retain title until the arrival of the vessel at the port dock. All costs for unloading the goods and cargo, along with any duties and taxes, are the responsibility of, and paid for by the buyer or importer. This arrangement is frequently used in shipping some bulk commodities, such as coal, cement, dry chemicals, or grains where the seller or exporter either owns or has chartered for the vessel.

**Decoupling -** An inventory management technique that uses inventory to separate one internal process from another. Common inventory required of two or more process combines total requirement needs to act as a buffer between processes and protect each process from variable factors that might affect output.

**Defect Prevention System -** A process or system designed to detect defects, determine anticipated impact, and develop a plan to minimize them. Developing a defect prevention system enables strategies to be developed to avoid or reduce them in the future. This used to be a sometimes cumbersome endeavor but there are many software programs available that makes this process easier.

**Defective -** Any item that has been inspected and rejected that is waiting to be reworked, returned to the supplier, or scrapped.

**Delphi Method -** A forecasting technique used when there is no actual data to draw from. It is an opinion based forecasting method that uses questionnaires sent to a number of experts to obtain their opinion and logic.

**Demand Analysis -** Ananalysis that measures the effect and impact of prices and income on consumption. A Single-good demand model can be used to determine the willingness of individuals to pay for household for goods and services such as electricity, water, etc.

**Demand-Based Inventory System (DBIS) -** A PULL inventory system wherein deliveries of goods are based on need and scheduled accordingly. Demand based inventory systems are designed to reduce on-hand inventories and are particularly applicable in JIT procurement. There are several software systems available that incorporate DBIS such as MRP systems.

**Demurrage -** A monetary charge or penalty levied against a shipper for exceeding the allowable free time for loading and unloading. Demurrage is applicable to all forms of transportation modes such as truck, aircraft, railroad car, barge, or ocean going vessel.

**DEQ -** An Incoterm acronym that stands for Delivered Ex Quay (at destination port of entry). This term is very similar to DES with the exception that risk is not passed until all goods and cargo have been off-loaded from the vessel at the port of destination.

**Direct Costs -** Direct costs can be traced directly to specific goods and services. In an accounting frame work it has broader implications but from a procurement standpoint it would be those costs directly attributable to the cost of producing something. *Example:* Direct costs attributable to the manufacture of Widgets are; raw materials, other materials and supplies, as well as labor and benefits. Direct costs are important considerations in supply chain management.

**Direct/Auto Release Arrangement -** Associated with, and incorporated in, blanket purchase orders. Some blanket orders have on demand or notification required release clauses, but others have predetermined automatic future release date built into the order.

# **Discounts -** There are several types of discounts that have application to supply management and procurement. These are: (1) price, (2) quantity, (3) trade, (4) seasonal, (5) cash, and (6) financial. From a supplier point of view, there are many reasons to offer discounts such as obtain new or additional business through sales promotions, offer incentives to purchase now (or more) instead of in the future, and move excess inventory or out of date items. From a purchaser's point of view, discounts may offer short term savings advantages for normal inventory replenishment or forward buying strategies. Price discounts are reductions in retail prices for the purpose of promoting a product or service. Quantity discounts are usually standing reductions based on quantities bought (price breaks) such as 2% for 1 - 50 items, 5% for 51 - 100, 7% for 101 - 200, or some variation thereof. Trade discounts may be selective and only offered to customers within a distribution channel for specific items. Seasonal discounts are just that, they are only offered for purchases applicable to a specific season. Cash discounts are an accounting incentive to encourage a buyer to pay before a payment due date, such as a 2% discount off invoice total if paid within 10 days of purchase where the normal terms are 30 days (2% Net 10/30). There are financial discounts for the use of money. This discount may have application to both buyer and seller. Financial discounting is used by businesses to defer or delay payment for a specified period of time in consideration for a charge or fee. The charge or fee is the difference between the original amount owed and what will be owed at the end of the term and is referred to as a discount or charge rate. This can be an interest percentage or a flat rate. *Examples:* A buyer may be experiencing short term cash flow problems and a supplier that depends on their business might agree to carry their debt for a defined period of time for a specific charge.

**Disparagement -** This term usually refers to the making of false statements about quality, workmanship, or performance of an individual or entity and may be grounds for a defamation law suit. It also refers to clauses in U.S. trademark law that allows possible cancellation of a registered trademark if it falsely suggests a connection with a business, institution, or product when none exists.

**Distribution Packaging -** Packaging design for the purposes of distribution is an important function that should be taken seriously. Some organizations require that purchasing maintain the responsibility of packaging design and specifications, others may require I.E. or marketing to be responsible. Whenever package design is required, there are several factors that must be considered. The packaging must be functional, offer protection from handling and the elements, be strong enough to contain its contents, have proper identification requirements (this includes appropriate certification/registration marks), and be of appropriate dimensions to enable stacking, palletizing, etc. to facilitate shipping.

**Distribution Requirements Planning (DRP) -** An inventory and distribution system and method that sets inventory and distribution controls and parameters. DRP oversees and regulates minimum and maximum inventory levels, safety stocks, shelf-life, release schedules for production, time sensitive delivery requirements, and distribution (shipping) schedules through efficient and effective management techniques.

**Diversion or Re-Consignment -** When a destination address is changed while a shipment is still in transit.

**Dock Receipt -** Used in international shipments for ocean going freight or cargo. It is a document used by international shipping companies (freight forwarders) and ocean freight carriers as proof of delivery to a port terminal.

# **Dollar Averaging -** Used to determine the "average" cost or price paid for a commodity, group of goods, or a service over a specified period of time. This technique is useful for certain evaluations and analysis when dealing with a large set of numbers that vary.

#### DOT - An acronym that stands for the U.S. Department of transportation. The DOT has the responsibility of overseeing all aspects of interstate transportation including highways, waterways, ports, railroads, and aviation facilities.

# **Draft -** This term has several definitions depending on application. In writing, it refers to a document that is not complete or finalized. In financial terms, it refers to a payment by or to a bank. As a maritime consideration, it refers to the draft (or draught) of a ship's or barge's hull. The draft is the distance, measured vertically, from the waterline to the bottom of the hull (also called the keel). This term is important in maritime shipping as it determines the depth of water a ship or barge can safely navigate in a port, river, or canal. The draft also determines the amount of weight or cargo a ship or barge has on board by calculating the amount of water displacement using Archimedes' Principal.

# **Dumping -** A term used in international trade situations to describe the act of a country promoting unfair advantage by subsidizing an industry within their country allowing them to produce goods and services at costs below the normal average of costs. *Example:* Deutsche Post was the German state owned mail authority that subsidized DHL, an international logistics company, until it was privatized in 1995 when it became Deutsche Post DHL. Even after privatization, the German state owned KfW bank retains over 30% ownership allowing at least partial subsidization. This allowed DHL to offer lower than industry standard rates and expansion into unprofitable markets much to the detriment of other international logistic and shipping companies like UPS, FedEx, and others.

**Duties -** A duty, or duties and also called tariffs, are forms of tax but are not a tax per say. Duties and tariffs are only levied on certain commodities and goods that are purchased from international suppliers and imported into a country. The importing country determines what specific items will have duties levied on them and at what rate. There are three types of duties; (1) specific, (2) ad valorem, and (3) compound. Specific duties and tariffs refers to a specific, or set, amount of money that does not vary. Ad Valorem duties and tariffs are set as a percentage of value of a commodity or goods. Ad Valorem duties are also called value added tariffs. Compound duties and tariffs are a combination of one or more duties and tariffs with what is affected and price being set by the importing country.

***E***

**Early Purchasing Involvement (EPI) -** An internal strategy that involves inclusion of procurement to participate in the planning and decision making processes by other departments within an organization in order to take advantage of the resources, skills, knowledge, tools, and techniques used by procurement to help identify potential problems and offer viable alternatives.

**Early Supplier Involvement (ESI) -** A procurement strategy that invites qualified suppliers to engage and be involved in the development of requirements and supply of goods and services. Especially useful in new product development.

**EBITDA -** An acronym that stands for Earnings Before Interest, Tax Depreciation, & Amortization. EBITDA is a financial indicator that portrays a company's degree of economic performance. In essence, EBITDA shows the amount of revenue a company can report after deducting expenses, but with interest, tax, depreciation, and amortization excluded. The mathematical formula for calculating EBITDA is: EBITDA = Revenue - Expenses (excluding interest, taxes, depreciation, and amortization). EBITDA is not included in GAAP principals as it allows a high degree of flexibility in what exactly is included in the calculation from one reporting period to another.

**Economic Indexing -** Economic indexing is a strategic statistical tool used to monitor and measure a variety of indexes, also called indices, for different categories such as productivity, prices, unemployment, industry performance, etc., to determine the health of an economy. This done by tracking data from year to year to show increases and decreases in economic data. Economic indexing is often used to determine a price increase or decrease in a contract by triggering escalators and de-escalators contained in a contract. In business, the most commonly used index for these purposes is the Producers Price Index (PPI).

**Economic Indicators -** An economic indicator is an economic statistic that is used to gauge and forecast the health and direction of an economy. Economic indicators are classified as either leading or lagging and are important to economists and businesses because they rely on the data and information they provide to develop forecasts and base strategic decisions and plans. The U.S. Economics and Statistics Administration (ESA)accumulates and tracks economic data for a variety of economic categories and reports the results regularly. Economic indicators can be obtained or viewed from several informational sources, but all that are tracked can be viewed at www.gpoaccess.gov. A partial list of some of the more important economic indicators are: (1) money supply, (2) interest rates, (3) inflation, (4) employment, (5) monthly retail sales, (6) manufacturer's orders, inventory, and shipments, (7) construction spending, (8) new residential construction, (9) new home sales, (10) personal income spending, (11) wholesale trade, (12) Gross Domestic Product (GDP), (13) balance of trade, (14) monetary exchange rates.

**Economic Indicators -** Portray the economic health of nations by offering insights into various aspects of economic activities. Economic indicators may be published by governments on a daily, monthly, quarterly, or yearly basis and are used by economists and financial analyst to gauge economic activity and forecast future directions. Economic indicators are classified as leading, lagging, or coincident.

**Economic Order Quantity (EOQ) -** EOQ is the optimum inventory achieved that minimizes total inventory carrying, or holding, costs. EOQ is calculated over yearly time periods for items whose demand is constant. The quantity of each order does not matter but a cost is charged for each order that is placed. Storage costs for each unit held in storage is also charged. The point of EOQ is to determine the number of units of a product that should be ordered in order to minimize the total cost of the product including purchase price, transportation, and storage costs. In other words, a quantity of product whose annual cost of ordering equals the annual cost of holding the inventory.

**Economies of Scale -** Is a microeconomics term used to describe comparisons and relationships in ways of doing business and the costs incurred there from. It is used to explain real world relationships for purposes of making decisions and developing strategies. *Example:* Economies of scale is one of the factors and criteria in performing a value chain and/or opportunity analysis. In this situation it would be a comparison of the costs of currently performing a task or process compared to the cost of performing the same task or process if it were re-engineered or redesigned. It can also be a comparison of the cost of performing a task or process compared to the cost incurred by a competitor of doing the same task or process.

**Eighty-Twenty Rule (80/20 Rule) -** Also known as Pareto's Principle or Rule, was developed by Joseph Juran based on an observation by Italian economist Vilfredo Pareto in 1906 that 80% of all land owned in Italy was owned by 20% of the people. This rule, or principal has a wide application including, and specific to, supply management and procurement. *Example:* 80% of total procurement costs constitute 20% of items purchased, and 20% of total procurement costs constitute 80% of items purchased.

**Elastic Demand -** Also known as Price Elasticity of Demand (PED) and is an economic model that portrays the elasticity (response) demanded of goods and services for quantities when there is a change in price and is expressed as a percentage. Price elasticity is the ratio of the percent change in one variable compared to that of another variable. It has implications and importance to both marketing and procurement by measuring the degree of response in buying decisions to changes in prices. The PED is almost always negative when prices increase. The formula used to determine PED is: e = percentage change in quantity / percentage change in price. *Example:* The price of Widgets on the spot market increased from $5.00 each to $5.50 each (a 10% increase). Adequate safety stocks exist so a decrease in spot purchases of 20% is recommended. *Caution:* This may be a good short term solution and save some money but a bad one from a strategic, long-term perspective. An evaluation of the Widget market is warranted to determine the root cause of the price increase. Several factors should be considered such as raw material supply, Widget demand, and so on. Price Elasticity evaluation should be included as part of supply chain management and strategic supply management and procurement philosophies.

**Electronic Data Interchange (EDI) -** EDI is the automatic computer generated transmission and receipt of data electronically from one computer system to another. EDI uses ANSI X-12 computer language protocols to transmit and interpret data via electronic service platforms. EDI is an important strategic supply management and procurement tool that dramatically reduces the cost of purchase order generation, invoice generation, PO confirmation, shipping notices and invoice payment over manual systems.

**Electronic Funds Transfer (EFT) -** Allows the transfer of funds electronically between entities. A purchasing and accounting cost saving measure that allows invoices to be submitted and payments made electronically. Usually part of EDI.

**Empowerment -** The act and philosophy of a business authorizing employees and groups of individuals (teams), to take responsibility without supervision for their actions and to make decisions that will contribute to the good of the company.

**Enterprise Resource Planning (ERP) -** ERP is an extension of MRP type systems and is an integrated software information management system that pulls data from internal and external data bases across an entire organization (enterprise)to generate the flow of information in order to accomplish a variety of business management functions more effectively and efficiently.

**Environmental Protection Agency (EPA) -** The EPA is an agency of the U.S. government that has the responsibility of protecting the environment and human health by enacting and enforcing regulations based on laws passed by the U.S. Congress. EPA regulations have implications for businesses engaged in manufacturing and other functions and services as compliance comes at a cost. They also have implications for supply management and procurement in the fact that many times it is the responsibility of procurement to obtain the goods and services required to comply with EPA regulations. *Example:* Procurement has the responsibility to secure approved vendors for the purposes of disposal of hazardous materials (HazMat).

**Equal Employment Opportunity Act (EEOA) -** Enacted in 1972 and was established to enforce provisions of Title VII of the Civil Rights Act of 1964 which forbids workplace discrimination based on race, sex, age, religion, national origin, or handicap.

**Escalation and De-Escalation Clauses -** Are price increases and decreases to the base prices of a contract for raw materials, and goods made of materials, that are subject to volatile or uncertain markets or to compensate for general increases and decreases over time. Escalation and de-escalation provisions and clauses authorize an adjustment in price when an increase or decrease of certain costs happen. Escalation and de-escalations are based on some mutually acceptable index by both parties to an agreement. For long-term contracts over three years in duration it is standard to include a price escalation/de-escalation clause, usually based on the Producers Price Index (PPI). Other indexes applicable to certain situations may also be used. *Example:* Widgets are made of petroleum based raw materials. The petroleum market is very uncertain and volatile with rapid and dramatic changes occurring in the price of oil. For this reason, and to make the agreement fair and equitable to the participants, semi-annual adjustments to the base price will be made based on the averaged, price per barrel of crude oil sold on the futures markets.

**EURO -** The common currency adopted and used by all countries belonging to the European Union (EU) for the purposes of trade and compensation. The only exception is Great Briton (England) who elected to retain the British Pound as their currency.

**Evergreen Clause -** Also known as an Automatic Renewal Provision, is a clause in a contract that allows renewal of a provision of the contract automatically, usually on a yearly basis or as otherwise noted. This provision is valid unless one party gives notice of termination to the other party at a specific point in time. If this clause is contained in a contract, it is also wise to include another clause that permits both parties the opportunity to terminate at any time during the term of the contract.

**Exempt Carriers -** A carrier that is for hire but is not subject to federal regulation normally covering common for hire carriers. Certain commodities, such as seafood and agricultural commodities, are exempt from Interstate Commerce Commission (ICC) regulations and transportation equipment hauling such commodities qualify as exempt carriers.

**Express Warranties -** Are guarantees and assurances made by one party to another that certain conditions will be met in an agreement. Express warranties allow a party to seek legal remedies if it is determined that the guarantees and assurances were not true or did not come to pass.

**Extranet -** A secure Website established exclusively between buyers and sellers to facilitate business and commerce by enabling the sharing of data and information.

**EXW -** An Incoterm acronym that stands for Ex Works (at a designated place). This term refers to an agreement whereby the seller or exporter makes goods or cargo available to the buyer or importer at the seller or exporter's premises, such as a warehouse, mill, or factory. The buyer or importer is responsible for all applicable costs and charges required to deliver the goods or cargo to its end destination. This arrangement places all of the responsibility and risk on the buyer or importer. There is minimum obligation on the seller or exporter except to make the goods or cargo available to the buyer or importer at a designated time and place. This term is often used for making an initial quotation for the sale of goods before any other costs are known, have not been determined, and/or added. In this arrangement the buyer or importer is responsible for and pays all transportation, handling, and insurance costs and bears all risks for transporting and delivering goods or cargo to its final destination.

***F***

**Fact-Based Forecasting (FBS) -** FBS is simply that, forecasting using historical information based on actual facts and is quantitative in nature (because it is based on facts). Data that has been reported, and a matter of record, is tracked and studied. Several methods of performing quantitative forecasts can be used such as; time series, casual, and focus. For a complete explanation and examples of *all* types of forecasting methods, see the Chapter on Forecasting for Future Success in this book.

**Factors Affecting Forecast Outcomes -** Even the best analyzed and thought out forecasts can be affected by unexpected events that can change projected outcomes. That is why it is wise to do a risk analysis and develop risk mitigation and management plans prior to making decisions based on forecasts. Various events can affect a forecast such as, labor unrest (strikes or slow-downs), economic factors, changes in supply lead times, political unrest, or natural disasters.

**Failure Analysis -** Also called a root cause analysis. An analytical process that collects, tracks, and analyzes data of a particular nature to determine the reason(s) or cause of the failure of something. Reasons for performing a failure analysis are: reject levels, supply shortages, bottlenecks, design flaws, equipment breakdowns, and others situations that affect the normal operation of a process or procedure. In some instances, testing equipment and specialized data collection methods (SPC), may be employed in the capture of data.

**Fair Price -** Also referred to as fair value. Fair price refers to the market price of goods and services after taking into account supply and demand factors, associated costs of acquisition (production, transportation, and/or distribution costs), risk, ROI, etc.

**Fair Trade -** Is a market based approach term used in international commerce. Fair trade promotes the concept of paying fair and equitable prices for products, goods, and services between international trading partners with specific application to developing countries.

**FAS -** An Incoterm Acronym that stands for Free Alongside Ship (at designated port of loading). This term designates that the seller or exporter is responsible for placing the goods or cargo alongside the vessel at a designated port. The seller or exporter is also responsible for clear the goods or cargo through customs. This is another maritime and ocean going transportation arrangement used for movement of bulk or heavy-lift cargo only and does not apply to containerized or multi-modal sea transportation. An example might heavy equipment and machinery that is not containerized.

**Federal Acquisition Regulation (FAR) -** FARs are regulations imposed by U.S. federal regulatory agencies governing the acquisition of supplies, goods, and serviceswith appropriated governmental funds.

**Federal Aeronautical Administration (FAA) -** A federal agency within the Department of Transportation responsible for issuing and enforcing standards and regulations pertaining to manufacture, certification, operation, and maintenance of aircraft.

**Federal Energy Regulatory Commission (FERC) -** FERC is a U.S. regulatory agency that oversees and enforces laws governing the creation, sales, and transportation of energy and energy related products such as electricity, petroleum (oil), natural gas, and hydro power.

**Federal Maritime Commission (FMC) -** The FMC is responsible for enforcement of regulations of ocean going transportation in respect to international commerce. An independent U.S. federal agency that oversees provisions of the Merchant Marine Act of 1920, the Shipping Act of 1984, and the Foreign Shipping Practices Act of 1988.

**Federal Trade Commission Act -** A set of laws and regulations enacted by the U.S. government that prevents conditions of unfair practices regarding commerce. It empowers and approves investigations that relate to the practices of businesses engaged in commerce for alleged unscrupulous and unlawful acts as well as offers a means for redress and relief in cases of deceptive and unlawful practices that prove harmful and detrimental.

**Fiduciary Duty -** Refers to the responsibility of trust and confidence bestowed by an entity or individual (referred to as the principal) on another (another individual or agent of a company).

**FIFO, First In First Out -** An inventory management system whereby the oldest purchased goods have priority and are issued first. This is an important consideration when dealing with shelf-life or perishable goods. *Also see:* LIFO.

**Financial Lease -** A financial lending arrangement, usually for capital equipment, whereby a legal owner of property (referred to as the lessor), and an entity that wants to use (not own) property (referred to as the lessee). The lessee agree to pay the lessor for the use of the property for a specified period of time (referred to as the lease period) in which the lessee will have full right and use of the property under the terms of the lease agreed to buy the participating parties. There are several types of leases: (1) Full Payout - The lessee agrees to pay the full value (purchase price) of the property over the term of the lease and includes interest charged, insurance, maintenance, and administrative costs. (2) Partial Payout - The lessee receives a residual credit for the value of the property and agree to pays any difference existing between the original purchase price and the resale value at the end of the lease, plus interest charged. *Example:* An automobile lease. (3) Lease/Purchase - The lessee is offered the option to purchase the property leased when the lease term expires. The purchase price is determined at the beginning of the lease and based on the estimated residual value of the property at the end of the lease. (4) Master Lease - Usually used for terms of short duration with conditions of lease negotiated and predetermined. A master lease might cover one piece of equipment or extend to a number of equipment types. *Example:* A highway contractor wins an award to build a short stretch of road that is estimated to last X number of months. All of his existing equipment is committed to other on-going jobs so he negotiates a master lease for six pieces of equipment (dozer, grader, paver, etc.) for the period required to do the award. (5) Wet Lease - A Wet Lease includes not only financing for the lease but also includes maintenance and fuel as well. Wet leases are common in the airline industry where aircraft are leased and the lessor has the responsibility of providing any required maintenance and also fuel. (6) Dry Lease - A Dry Lease is similar to a straight lease wherein it only provides financing of the lease. Maintenance and upkeep, insurance, fuel, etc. are all provided for by the lessee. (7) Leveraged Lease - Many leases are provided by manufacturers but in situations where a third party buys the equipment and leases it is referred to as a leveraged lease. Certain equipment offers tax advantages for investment and investors buy the equipment, take the tax deduction, and leases the equipment. *Example:* Barges and towboats are types of equipment that are leveraged leased. (8) Sale and Leaseback - In this lease arrangement the owner of equipment would sell the equipment to another party and then lease it back from them. This form of lease arrangement allows a company to raise capital and apply proceeds from the sale of the equipment to specific needs while still having access and use of the equipment. (9) Finished Goods - A term used to describe any item that has completed the manufacturing process but has not yet been sold. Finished goods are items that must be held in inventory until sold and shipped.

#### Five M’s of Industry - Money, management, machines, materials, and manpower.

**Fixed Location Inventory System -** Predetermined inventory storage locations are assigned to materials and supplies for purposes of storage, stocking, and picking. As part of an overall warehouse management system, there might be a combination of fixed, variable, and floating inventory storage locations to best accommodate receiving and picking efficiency requirements.

**Fixed Price Contracts -** Fixed price contracts are those with prices set for the term and duration of the contract, usually short-term, and require little or no administration. Fixed price contracts may be one-time agreements or renewable. When renewable, a clause is usually added that allows price to be renegotiated.

**Fixed Price Contracts with Escalation or De-escalation Clauses -** Contracts that allows both upward and downward price change due to changes in material or labor. Tied to recognized indexes when economy is uncertain and the contract is long. Price cannot be changed for length of order. An advantage to the buyer.

**Fixed Time Order Systems -** This procurement and inventory model is used when demand requirements are evenly spaced and based on specific order/reorder time intervals. This method is used extensively in retail and wholesale environments but is also used in some manufacturing and service oriented operations as well. Pre-determined quantities of particular items are ordered on a specific time schedule such as weekly, monthly, quarterly, or any period for which procurement determines allows enough time for order placement, shipment, and receipt of the goods.

**Flexible Procurement Budget -** A budget that is approved and contains a range of limits and a cap to compensate for unknowns such as variables in costs of goods and services. Flex budgets allow for quick responses to change and give the procurement department the flexibility needed to respond to events and circumstances.

**Floating Location System** - Most inventory management systems have designated and assigned locations for specific goods. However, in some situations, locations may not be designated or assigned, but inventory placed and stored in the first available location. This type of inventory system is said to a floating location inventory system.

**Fluctuating Inventories -** Inventories that may increase or decrease as need is determined or that are increased as a result of an opportunity. *Example:* An inventory of an item(s) may be deferred from purchasing to a later date because of a delay in the start date of a job. An inventory may also be increased over standard inventory levels due to an anticipated supply shortage (safety stock), a sales promotion incentive, etc.

**FOB Destination -** A transportation term used domestically in the U.S. Free On Board is an acronym that stands for Free On Board. Destination means that seller retains title of the goods during transit and title does not pass to the buyer until the goods are received and accepted at buyer's dock.Freight charges for F.O.B. Destination can be one of three types: (1) prepaid, (2) collect, or (3) collect and allowed. *See:* Appendix B - Transportation Terms of this book for individual definitions.

**FOB Origin -** A transportation term used domestically in the U.S. Free On Board is an acronym that stands for Free On Board. In this arrangement title transfers from seller to buyer when goods are loaded at sellers location and leaves their dock. Buyer owns the goods during transit. Freight charges for F.O.B. Origin can be one of three types: (1) allowed, (2) collect, or (3) prepaid and charged back. *See:* Appendix B - Transportation Terms of this book for individual definitions.

**Food and Drug Administration (FDA) -** Also known as the USFDA. The FDA is an agency of the U.S. Department of Health and Human Services that is responsible developing and enforcing regulations governing food, tobacco, pharmaceutical drugs, medical devices, veterinary products, cosmetics, and other related items. Procurement departments involved in purchasing goods that fall under FDA jurisdiction should have full knowledge of all laws and regulations governing those goods and make FDA requirements part of their minimum specification requirements.

**Force Majeure -** A clause contained in most contracts that defines and covers excusable delays. Force Majeure (French for greater force) excuses a party to a contract from performing agreed to obligations without liability if events occur that are beyond the party's control and prevents it from performing those duties. This clause usually applies to all parties to an agreement who are at risk.

**Forecast Error -** When events effect outcomes of a forecast the result is called a forecast error. This happens when there is a difference between actual demand and demand forecasted and is usually stated as a percentage or an absolute value.

**Forecasting Methods -** Many types of methodologies can be employed in forecasting. These include: short and long-term forecasting, macro and micro forecasting, time series, correlation/regression analysis, central tendency, Delphi method, and others. Analysis and data can be portrayed as tables, charts, or graphs. *See:* Chapter 13 of this book for detailed information.

**Forecasting Techniques (Extrinsic and Intrinsic) -** Forecasts can be developed by using either extrinsic or intrinsic techniques. A forecast using extrinsic techniques relies on external data such as historical commodity traded prices, an economic indicator, or group of indices upon which forecasts and decisions are based. A forecast using intrinsic techniques relies on data generated internally and stored in databases of an organization such as historical prices paid, quantities purchased, production requirements forecasts, etc.

**Forward Buying -** A strategicprocurement buying decision in which goods are purchased in advance of actual need or in excess of minimum and maximum inventory level requirements. Reasons for forward buying are: anticipated shortages of supply, anticipated price increases, anticipated increases in the inflation rate, or to take advantages of one time sales promotions and incentives featuring lower than normal pricing.

**Forward Procurement Scheduling -** A strategic supply management and procurement technique used to determine specific future demands and requirements to support operations. Forward scheduling takes into account the following functions and activities: Quantities of materials required, dates materials required, time to process orders, lead time of material, delivery time (transportation), time to receive and process. Forward scheduling is an integral partof a Capacity Requirements Planning (CRP) system and is found in MRP type software programs.

**Free Trade -** Free trade is a term used in international commerce and refers to an arrangement or agreement between countries engaged in trading with each other. In a free trade environment, supply and demand are allowed to set prices for goods and services sold without application of duties, tariffs, quotas, embargos, or subsidies.

**Freight Forwarder -** Also referred to as a forwarding agent. A freight forwarder is hired or retained by a company that has the expertise to arrange for and oversee shipments. Their duties may range from scheduling, negotiating rates, services, and overseeing: LTL or full cargo shipments by rail, truck, ship, or barge, preparing proper and required paperwork for international shipments, working with customs departments of countries to clear and/or resolve disputes, and other duties that might be required and necessary.

**Freight Rate Determination -** Rates for freight and cargo delivered from a point of origin to final destination are determined by a combination of different factors. The rate, or price charged, depends on the type of freight or cargo, weight, volume (displacement), distance to be transported, and the mode of transportation (train, truck, ship, or aircraft). Transportation may also involve a combination of transportation modes. Rates can be calculated in various ways such as flat rate (one total price from origin to destination), combination rate (sum of differentiated charges for loading/unloading, different modes of transportation (truck to port-ocean freight charge-unloading to truck at destination port, transportation to destination, etc.), and cost per mile.

**Full and Open Competition** - A bidding situation that allows any supplier who is qualified to participate in a bid or proposal solicitation.

**Functional Rotation Training -** The process of an employee receiving training in various, or all, jobs and functions within a department. Also referred to as cross-functional training, this technique has positive ramifications for allowing employees of one job function to perform another in an employee's absence and to obtain a fuller understanding of the overall needs and requirements of the department.

**Functional Specification -** Describes the purpose or reason for a requirement of something and how it is to be performed. Functional specifications describe in detail, sometimes in a step-by-step format, of how to do specific tasks or activities. They also describe the purposes and reasoning for performing tasks or activities.

**GAAP -** An acronym that stands for Generally Accepted Accounting Principals'. GAAP is a universally accepted set of standards consisting of accounting principals' and procedures. GAAP is widely used by companies to create internal financial statements that include balance sheets, income statements, as well as other financial reports.

**Gantt Chart -** A strategic tool used in the management of projects or any activity that has task and time limitation requirements. It displays time durations of individual tasks, categories of activities or requirements, allocation of time and days, project start and end dates, task completion dates, etc. Gantt Charts graphically portray task durations as a progression time line and have usefulness tracking and scheduling progress.

**Hand-to-Mouth Buying -** A conservative procurement practice where only minimum essential purchases are made more frequently in smaller quantities to fulfill basic needs. Purchases are made for short terms only, usually from one to no more than three weeks. Hand-to-mouth procurement may be practiced when conditions exist where markets and prices are falling dramatically, cash flows and receivables are slow, or for perishable goods such as food stuffs.

**HaxMat Disposal Methods -** Hazardous waste is the responsibility of the entity that generated or last owned it and must be disposed of properly in accordance with guidelines set forth by the EPA. It is the responsibility of procurement to contract for supplies or services required to dispose of HazMat in an acceptable manner. Acceptable methods of ultimate disposal are incinerating, recycling, and/or depositing in a licensed landfill.

**Hazard Communication Standard -** Also referred to as HazCom, is information that is presented to employees about workplace conditions in industries they work in and hazardous materials and chemicals they might come in contact with in the performance of their duties. HazComs were established in the Occupational Safety and Health Act of 1970 and is administered by the Occupational Safety and Health Administration (OSHA), a department of the U.S. Department of Labor. HazComs may come in the form of chemical labeling, Material Safety Data Sheets (MSDS) hazard inspection, citations and abatement orders, and training.

**Hazardous Material (HazMat) -** Any material designated by OSHA that is determined to pose a risk to the health and/or safety of an individual .

**Hazardous Substance -** Any substance found in the workplace that is deemed toxic or hazardous and might be capable of causing harm.

**Hazardous Waste -** Any by-product or left-over material that poses a threat to the public health and safety as defined by the Environmental Protection Agency (EPA). Hazardous waste are any material that is known to contain or that has tested positive for toxic or hazardous chemicals and falls in the categories of toxicity, reactivity. corrosiveness, or ignitability as must. Any material defined by the Hazardous Waste Manifest Requirements.

**HazMat Manifest -** HazMat manifests and Bills of Lading forms must be prepared and accompany all HazMat. They must identify the company who generated it, the transporter of the material, and the treatment or disposal facility it is bound for. They also contain information about the type of waste being transported and its weight or quantity as well as instructions for its handling.

**Hedge Inventory -** Also called safety stocks. An artificial or temporary increase of inventory of an item as speculation or anticipation of material supply shortages, price increases, or other events that might disrupt a company's normal operations or strategic goals.

**Hedging -** A strategic supply management and procurement tool used in certain situations where commodity price and/or supply volatility poses a risk to consistent requirement stability. Hedging is not for everyone or every situation. Hedging involves the sale or purchase of commodity futures to reduce or offset risk. Hypothetically, hedging is used in a way that price fluctuations are zeroed out by one another, the price of a commodity at time of actual purchase and the price paid at the future's contract due date. *Example:* Petroleum experiences extreme fluctuations in price, therefore some users that buy large quantities of commodities produced from petroleum hedge their purchase by buying offsetting petroleum futures.

**Hold Harmless and Indemnification Clauses -** A provision or clause contained in some agreements and contracts that relieves one party of liability and places it on the other party. *Example:* A seller negotiates a hold harmless and indemnification clause in an agreement that states the buyer will hold the seller harmless for any defects in workmanship that might cause a loss to the buyer. If a loss actually occurs as a result of a defect and caused injury to an individual who then seeks litigation, the buyer, as indemnifier, might be responsible the seller' defense costs and possible the entire amount of a settlement or judgment. For this reason, hold harmless clauses should not be taken lightly or misused.

***I***

**ICC -** An acronym that stands for Interstate Commerce Commission, a U.S. regulatory agency that overseesrailroads, common motor carriers (trucks), and domestic water transportation and interstate traffic.

**Implicit Price Deflator -** Measures thelevels of change in the GDP for prices and inflation of new finished goods and services produced domestically.

**Implied Warranty -** An implied warranty results from the understanding of the buyer based on representations of the seller, even if not explicitly expressed, either orally or in writing. Implied warranty can extend to merchantability, quality of workmanship, and fitness of purpose.

**Import Declaration -** A set of documents that must be completed (filled out) and submitted to the customs agency of a country before entry is allowed. Typically, an import declaration will include content of the good or cargo, composition, value of the shipment, weight, country of manufacture, exporting company, and importing company among other things.

**Import License -** A document controlled and issued by the government of a country allowing and authorizing goods to be received into their country. Import licenses should be obtained in advance of shipment. Information contained in the license includes specifics regarding the volume, or quota, of imports allowable.

**Improved Productivity -** Can be achieved in all or any of three ways; improved efficiency, improved effectiveness, and improved proficiency.

**Inbound Inspection -** Is a normal function of a Warehouse Management System (WMS). There are several types of inspection processes and procedures that include random audits of paperwork (packing slips and invoices), detailed audits of paperwork (every shipment received is audited), random sampling and testing (SPC methods applied to random samples), and all inclusive sampling and testing (every lot shipment received is sampled and tested using SPC methods).

**Incoterms -** is an abbreviation for International Commercial Terms. They are international standards established by participating countries to simplify the terms of sale for international commercial trade and sales transactions and are published by the [International Chamber of Commerce](http://en.wikipedia.org/wiki/International_Chamber_of_Commerce) (ICC) based on the [U.N. Convention on Contracts for the International Sale of Goods](http://en.wikipedia.org/wiki/U.N._Convention_on_Contracts_for_the_International_Sale_of_Goods). *See:* Appendix B for more detailed information and individual classifications.

**Indemnification and Hold Harmless Clauses -** A provision or clause contained in some agreements and contracts that relieves one party of liability and places it on the other party. *Example:* A seller negotiates a hold harmless and indemnification clause in an agreement that states the buyer will hold the seller harmless for any defects in workmanship that might cause a loss to the buyer. If a loss actually occurs as a result of a defect and caused injury to an individual who then seeks litigation, the buyer, as indemnifier, might be responsible the seller' defense costs and possible the entire amount of a settlement or judgment. For this reason, indemnification clauses should not be taken lightly or misused.

**Indirect Cost -** Any cost incurred that is not directly attributable to the cost of goods and services. Indirect costs can be fixed or variable and include items such as personnel, administration, utilities, security, taxes, etc. and usually considered part of overhead.

**Indirect Costs -** Indirect costs are those expenses, or costs, of doing business in general and are not the result of, or charged against, a specific purchase order, contract, job, or project. Instead, they are expenses incurred by a department, division, or organization as a whole. Indirect costs can be fixed or variable. However, many indirect costs (general costs) can be broken down and charged to specific projects or processes if it for a specific purpose or for analysis. *Example:* Normally, costs for buildings, maintenance, telephone, and utilities are considered indirect costs as many departments operate within this cost structure and are considered as an aggregate for accounting purposes. The procurement department of an organization wanted to determine the cost of creating purchase orders manually to compare to costs for EDI electronic and automatic PO generation for possible value opportunity. I.E. was asked to assign a direct cost for these items for inclusion in a cost benefit analysis.

**Industrial Production Index (IPI) -**  An economic indicator that is calculated and released monthly by the Federal Reserve Board (FED) that measures the amount of output for the manufacturing, mining, gas and electric industries.

**Industrial Production Index (IPI) -** The IPI is one of many economic indices that is used to develop forecasts. It is revised and released monthly by the Federal Reserve Board (FED) and measures the economic output of mining, manufacturing, gas, and electric industries expressed as a percentage of real output compared to a base year (2002) and a level of 100. It portrays how well those industries measured are doing or not doing and helps develop an overall picture of the economy.

**Inflation -** When there is a period of prolonged price increases for goods and services, inflation increases. Inflation is measured as an annual percentage rate increase and creates a loss in purchasing power. As the inflation rate increases, a dollar will only be able to buy a smaller percentage of goods and services. *Example:* Widgets are bought on the spot market and cost $2.00 each. The inflation rate increases to 4% and the same Widget now costs $2.08 each.

**Input / Output Inventory Control -** An inventory management technique used in Capacity Requirements Planning (CRP) systems to control and monitor planned and actual inputs and outputs.

**Input / Output Inventory Report -** A data generation report method used to evaluate, analyze, and compare what actually happened to what was supposed to happen (what was planned). Useful in making adjustment decisions and revisions to the plan.

**Inspection -** Used as a quality control function to monitor supplier performance, adherence to product specification requirements, and control defective parts, poor workmanship, and technical problems. A quality and cost control procedure.

**Intranet -** An internal or in-house Web site used by companies to communicate information between departments and to employees.

**Intellectual Property (IP) -** IP is protected by the government through copyrights, trademarks, industrial design rights, trade secrets, and patents. IP is defined by two categories: Copyright for artistic and literary works, and industrial property for inventions and designs.

**Interest Rate -** The amount of money, expressed as a percentage, charged for the use of other money for a period of time. The lender of the money charges a percentage of interest to a borrower over and above the amount of money borrowed. Interest rates are normally computed on an annual basis and are referred to as an annual percentage rate (APR). Interest rates may also apply to the use of an asset in a lease arrangement and is calculated on the desired rate of return based on the current cost of the equipment leased and the cost of the use of that amount for the specified period. A borrower who is considered a low risk of default is usually charged a lower interest rate than a borrower that is considered a higher risk of default.

**Intermodal Transportation -** A term used to identify cargo and freight that requires different modes of transportation to deliver to its intended destination. Intermodal transportation may involve the combined use of one or more modes of transportation such as truck, rail, ship, or aircraft. It has applications to bulk, container, palletized, or crated cargo and freight.

**International Electro-technical Commission for Standards (IEC) -** The IEC is a non-governmental international organization that develops and publishes consensus standards for use internationally for electronic and electrical technologies. It also develops standards for certification of equipment, components, parts and systems.

**International Organization for Standardization (ISO) -** ISO was created in 1947 as an international body for the purposes of developing, setting, and publishing standards for the quality and consistency of processes and management oversight of manufacturing and service industries. ISO documents and standards are segregated into categories of specific responsibilities and processes and are identified by differentiating number designations.

#### International Purchasing Pitfalls - Obstacles of international trade to be aware of and avoid are economic and political issues, poor quality and workmanship, extended delivery lead times, lack of acceptable standards, tariffs and duties, cultural and language difference, conflicting laws, higher transportation costs, differing laws and channels of regress.

**Interstate Commerce Act of 1987 -** Is a law enacted by the U.S. Congress that regulates railroads, common motor carriers (trucks), and domestic water transportation and interstate traffic. The act is administered by the Interstate Commerce Commission (ICC) that it also created.

**Inventory Acquisition Costs -** Any cost or expense incurred on behalf of obtaining supplies and services required by an organization or operation. Inventory acquisition cost include overhead, wages and benefits, normal operating expenses, cost of goods, services, and supplies**.**

**Inventory Carrying Costs (ICC) Formula -** In order to calculate the annual cost of carrying inventory you must first determine other factors such as inventory carrying rate (ICR) and average inventory value. Inventory rate is determined by totaling costs for storage, handling, administration, loss, damage, and obsolescence. This total is then dividing by the average inventory value (AIV) to produce a percentage. Then costs percentages for taxes, insurance and capital are totaled. The formula for annual carrying costs is: ICC = ICR + AIV. See: Appendix D of this book for a detailed example. Inventory should only be carried when the benefit of holding exceeds the cost of holding.

**Inventory Consolidation -** Is a WMS system logic that determines if similar or like items stocked in multiple locations can be combined into the same area. It also determines if there is available space in a storage location that is not entirely being used and might have available capacity.

**Inventory Control Objectives -** Are goals established by an organization to maximize and optimize their warehouse inventory management procedures and processes to assure inventory is available ready and available when and where needed at a minimum of expense.

**Inventory Control Systems -** Any process or system initiated to manage inventory effectively and efficiently at the lowest cost and expense possible that fulfills the needs and requirements of an organization or operation. Inventory control systems may vary according to need and application. Various types of systems are fixed order point, MRP, JIT, Kanban, cyclical, or others deemed appropriate. Systems may also employ aides and equipment such as barcodes, scanners, and RFID.

**Inventory Fewest Locations -** Is a WMS system that uses utilization of space logic to determine the fewest number of stocking locations required. In a stocking scenario it is based on determining the fewest number of stocking locations required to contain the entire inventory requirement and in a pick scenario it is based on individual pick quantity requirements.

**Inventory Fixed Location -** Is a WMS system ofpredetermining and designating "fixed" or permanent locations for stocked inventories. Fixed locations can be incorporated in other inventory location systems or used as the only location system. *Example:* Fixed inventory locations are used to stock and store bulky, heavy, or rarely used (low usage) items, and in case-pick or piece-pick situations.

**Inventory Flow -** The consistent and continuous movement of inventory through the supply chain. Non-value activities are held to a minimum.

**Inventory Location Sequence -** Software logic incorporated in a WMS system that assigns a sequence number to each inventory stock location. This process streamlines the stocking and picking process and maximizes efficiency by determining the sequence in which items should be stocked or picked and in which locations. *Example:* The inventory location sequence logic determines the order in which received items will be stocked and where based on availability of need and time efficiencies. It also determines the order of pick in the same way, availability of need and time efficiencies.

**Inventory Maximize Cube -** Is a WMS system logic that calculates the size of an item to determine a suitable storage location. This logic uses dimensions of items to calculate the cubic inches of the item which in turn determines a storage location that has the capacity contain it or where it will fit.

**Inventory Nearest Location -** Is a WMS system logic that determines stocking location according to proximity to the last previous stocking and picking location and is based on the shortest route and not the nearest location. This system logic can sometimes prove counter- productive if it does not take into consideration extenuating circumstances. *Example:* A warehouse layout employs stocking locations that consists of a series of aisles, racks, and bins. Aisles are evenly spaced with racks and bins vertically contained within each aisle. A nearest location inventory logic might choose a stocking location that seems to be the nearest to the receiving area (say, 20 feet if computed as a straight line) when in fact it is 10 feet to the location aisle and 30 feet up. An actual nearer available location might be 15 feet to the aisle location and only five feet up.

**Inventory Pick-to-clear -** Is a WMS system logic that directs picking to locations with the smallest quantities of on hand inventory first and is used as a space utilization method.

**Inventory Pull -** An inventory management system where inventory stock and inventory replenishment are driven by customer demand (internal and external). Production or operations scheduling requirements and demand is the beginning (trigger) of the pull inventory process.

**Inventory Push -** An inventory management system used when demand uncertainty is low and production or operations decisions are based on long range requirements and forecasts.

**Inventory** **Quantity or Unit-of-measure -** Is a WMS system that allows picking of equivalent inventory from different locations based on the quantity picked, unit of measure, or weight. *Examples:* An organization has several operations departments such as metal shop, maintenance, and assembly. Each have specific inventory requirements. The metal shop performs repairs to the organization's equipment and require same spec metal sheets with dimensions of two feet by 2 feet and full sheets four feet by eight feet. Maintenance occasionally requires bolts and nuts the same size as those used in assembly but in much smaller quantities. Therefore procurement buys nuts and bolts of the required size in pre-packed quantities of 20 each for maintenance and boxes containing 2,000 each for the assembly operation.

**Inventory Random Location -** Is a WMS system of randomly selecting inventory stocking location based on convenience factors such as time and accessibility.

**Inventory Record File -** An inventory record file is a master data base that includes all inventory items required and carried by an organization or operation. Each record includes part number, serial number (if applicable), description, dimensions, minimum order quantity, lot size, and any other information pertinent and particular to the item. Inventory record files are individually designed by the user and more advanced design files may also include a digital photo of the item, manufacturer name(s), use or designation of the item, and qualified suppliers or distributors. Inventory record files (especially those with digital photos) are useful to a number of individuals including buyers (to get a better understanding of what they are buying), engineers (to aide in design requirements), warehouse managers (to determine the amount of storage space required to stock the item and where to locate it), and operations managers.

**Inventory Reserve Locations -** Is a WMS system logic that predetermines specific stocking and pick locations for inventory that has special or specific requirements. *Example:* Cross-docking, inbound items received that are immediately required at satellite locations are recorded into the system upon receipt and immediately moved to the outbound staging area or waiting outbound transportation.

#### Inventory Turn / Turnover - Refers and relates to the number of times an item is moved (purchased, received and stocked, used or sold and shipped) through the purchasing cycle. The higher the inventory turnover rate the more efficient inventory management and utilization is, The lower the turnover rate the more inefficient inventory management and utilization is and may indicate an adjustment should be made in stocking levels and purchasing requirements. Average inventory turnover can be calculated by using the formula: Average Inventory = Beginning Inventory + Ending Inventory / 2.

**Inventory Zone Logic -** Is a WMS system of dividing stocking and storage locations into zones, or areas, to improve the flow of warehouse operations. Specific stocking locations are then designated within each zone. *Example:* All HazMat materials and supplies are kept in a contained environment zone, all shelf-life items are kept in a monitored zone, all high value items are kept in a tightly controlled security zone, all temperature sensitive items are kept in a temperature controlled zone, all items that are applicable for robotic stocking and picking are kept in an automated zone, and so on.

**Irrelevant Costs -** A positive or negative cost that does not relate or pertain to a particular situation requiring a decision. *Example:* Fixed overhead costs or other costs not directly considerable in a decision.

**ISO 9000 -** Is a group of standards and guidelines that deals with basic quality assurance and management systems and processes. ISO 9000 is a description outline document and is not certifiable but all other ISO designations are certifiable by independent, third party auditors. ISO designations that have the most pertinence to supply management and procurement are ISO 9001, ISO 9002, ISO 9003, and ISO 14000.

#### Item Cost - The sum of the cost and expense of acquiring an item that includes the price of the item, transportation, purchase order generation, receiving and stocking. Item cost can be extended to include total cost of ownership (TCO) by adding additional costs and expenses associated with the life of the item until it is used or expended.

***J***

**Job Rotation Training -** A training philosophy that encourages or requires cross training in other jobs in order to learn additional skills and job requirements. Advantages to job rotation training are development of additional skill sets and expertise among employees, develop a better understanding and appreciation of other jobs, improve morale, and create an available job pool to fill in for vacations and extended absences.

**Joint Venture -** Is a contractual business agreement where a number of parties (two or more) agree to pool or combine their individual talents, expertise, resources, and assets for the purpose of accomplishing a specific goal. Each of the parties agree to share responsibilities, expenses, losses, and profits.

**Just in Time (JIT) -** JIT is a strategic supply management and operations philosophy that contracts for and schedules the delivery of goods only in time to meet production or assembly needs and requirements. Inventories are kept at a minimum to decrease costs and increase efficiencies. Order size and quantity is determined by production needs. JIT has broad applications but is most often used in manufacturing environments where capable and reliable suppliers agree to guarantee and hold inventories.

***K***

**Kaisen -** Kaisen is a Japanese word meaning"a philosophy of continuous improvement". This strategic philosophical concept postulates that continuous small improvements will, over time, contribute to the overall quality of a process or product and that if practiced consistently and continuously, it will change the organizational culture and become the norm instead of an exception.

#### Kanban - Kanban is Japanese for card and is an inventory pull and order release system that authorizes release of inventory to the shop floor or production line and/or to also notify procurement to replenish inventory stocks.

***L***

**Labor and Materials Bonds -** A surety taken out at the cost of a contractor that guarantees payment to an organization for whom a contractor is doing work if the contractor defaults, fails to complete the work, and/or fails to pay for labor and materials. A hedge against liens.

**Lagging Economic Indicators -** Economic indicators that report result data after the fact (after it happens). Information on actual result data is usually reported three to twelve months later. The usefulness of lagging economic indicators is, it allows the previous business cycle to be evaluated and analyzed to estimate what the next business cycle might do (improve or decline).

#### Landed Cost/Price - A term used in international commerce transactions. The sum total of all costs associated with the delivery and landing of a product or cargo at the destination port or point of entry. Costs include (some applicable, some not) the purchase price paid for the product or cargo, crating/handling, transportation to and loading at the point of debarkation, all shipping and freight costs, brokerage, freight, forwarding and logistics fees, insurance, customs duties, tariffs, and taxes, unloading at port of destination or point of entry.

**Law of Diminishing Return -** Also sometimes referred to as the law of increasing costs. It is an assumption that, assuming fixed inputs remain constant, as variable inputs increase a point is reached where the rate of return will diminish and any increase in productivity will have little or no affect and become counter-productive.

**Lead Time -** A term that most commonly refers to the amount of elapsed time it takes from issuance of a purchase or release order to ship and deliver goods to the buyer or deliver a service.

**Lead Time Offset -** Is a function of materials planning, requirements where needed materials, parts, components, and supplies are required to be available at specified quantities on specific dates as exceptions to the overall lead time of the job. *Example:* Automobiles change every year, whether it be design only or in functionality as well. An automobile manufacturer plans to build 200,000 cars of a particular line in the current model year, that is the job (build 200,000 cars) and the job lead time (one year - 12 months). Each car has one engine that is assembled by a single supplier. Production of cars is scheduled throughout the job lead time and engines are required at a particular point in the assembly process. Scheduling deliveries of specific quantities of engines at different times throughout the assembly process is lead time offset.

**Leading Economic Indicators -** Leading economic indicators report result data ahead of actual economic results. They are predictions and forecasts indications of what a economy might do in the future, thereby indicating how much a forthcoming business cycle might improve or decline. *Example:* The stock market is one of many leading economic indicators. It provides current information on the current state of an economy and what direction (up, down, or sustained level) an economy is moving. If the stock market is steadily increasing, and taking into consideration many other factors as well, it might lend confidence for a decision to increase production or expand operations.

**Lean Operations/Manufacturing -** Lean is most often associated with manufacturing but can have applications in a wide variety of operations. Lean means to perform with a minimum amount of waste. In Lean, some identifiable wastes are: (1) processing time, (2) waiting time, (3) transportation time, (4) movement time, (5) maintenance of stock, (6) over production, and (7) non-conforming production or product. Lean is both a philosophy and a process and practicing Lean can also incorporate all, or portions of other philosophies such as Kaisen and JIT.

**Learning Curve -** Also referred to as an experience curve, is a model that, in the most simplistic terms, illustrates the rate of learning compared to the time it takes to learn. The theory behind learning curves is the idea that the time to perform a task will decrease as experience is gained. This theory can also relate to cost. It can be stated that the time it takes to perform a task will decrease as experience is gained in performing the task and the cost of performing a task will decrease as output (experience in performing the task) increases. There are two accepted learning curve models, Wright's Model (also referred to as a cumulative average model) and Crawford's Model. Learning curve models are useful in a variety of applications, one of which is preparing cost estimates such as the time and cost of converting to a basic procurement philosophy to a strategic supply management and procurement philosophy. *See:* Appendix D for a detailed explanation and examples of each model.

**Lease or Buy Decisions -** A lease is a term specific agreement to rent an asset such as equipment, buildings, land, etc., instead of buying it. Lease or buy decisions are based on lease versus buy analysis that evaluates both the advantages and disadvantages of buying and leasing to determine which is the most cost effective and/ or advantages for the situation.

#### Letter of Credit (LOC) - A document that provides a source of payment for a transaction by meeting the terms of the LOC and redeeming it. LOC's are commonly used in international trade and commerce by buyers in one country and sellers in another country as a way of guaranteeing payment. They are usually irrevocable, meaning it cannot be revoked if the terms are met.

**Letter of Intent (LOI) -** A document that outlines an agreement between parties prior to finalization of a formal agreement. LOIs can be binding or non-binding, meaning the statements put forth in the document may commit a party or parties to obligations outlined in the LOI if binding or require further negotiations if non-binding. Some reasons for using LOIs, and that may have provisions included in the LOI, are non-disclosure or proprietary agreements, covenants, agreement to negotiate in good faith, extend deadlines, or other such needs as might be advantages to the parties.

**Letter of Understanding (LOU) -** A document that summarizes the understandings and agreements to that point, during or at the end of negotiations of a formal agreement. It reviews the understandings of terms and conditions of a formal agreement that will be forthcoming, scope of work, prices, quantities, scheduling requirements, payment terms, milestones, transportation requirements, outline remaining responsibilities, and any and all other terms, clauses, or provisions that are expected to be contained in the formal agreement or contract. LOUs are a great way to limit misunderstandings between parties, extend or redirect negotiations, and is very useful to legal representatives in preparing a formal document.

**Letters of Intent (LOI) -** A document agreed to between two or more parties before an actual agreement is finalized and signed that outlines and details the understanding of the responsibilities of the parties.

# **Leveraged or Cooperative Buying -** A procurement system that involves several companies or entities pooling their collective requirements to negotiate and obtain quantity discounts for common items. Each company or entity issues their own purchase orders and makes compensation separately.

#### Liabilities - Liabilities are things that have or will cause future obligations. There are several types of liabilities such as tax, legal, financial (accounts payables), public, current, long-term, or accrued. In essence, liabilities are things that must be paid at some point; either in money, time, or effort.

#### Libel - Libel occurs, or can be claimed, when defamatory statements are made about a person, company, organization, or group. Libel from defamation is said to exist if statements are made in printed form of any kind, including newspapers, magazines, email, etc. Libel is grounds for litigation if it can be proven.

**Life Cycle Cost Analysis -** Also known as a Life Cycle Assessment (LCA), is an analytical technique to determine and assess impact (positive or negative) at different stages of processes, from the cradle to the grave. Used in supply chain management to determine the costs of raw materials from extraction through processing, manufacturing, distribution, use, repair, and disposal.

**Life Cycle Costing -** An accounting method that associates all costs connected to an item, asset, product, or service for the duration of its useful life or term, from initial inception to final disposal or disposition.

**LIFO - Last-in-first-out -** Is a WMS inventory pick system that means the last inventory item to be stocked is the first to be picked. This system is only used in certain situations where time of delivery is a factor or in other unique, time sensitive situations. *Example:* Omelet Enterprises (OE) is a wholesale distributor for eggs. Their customer base is large, diverse, and geographically spread out. OE receives shipments of eggs from numerous farms and after receiving, washing, grading, and packaging eggs, they are refrigerated to avoid spoilage before shipment. Since eggs have a short expiration period, maximizing time on the grocer's shelf is important. They use a LIFO inventory pick system to compensate for transportation time for their customers the greatest distances away from their distribution center.

**Limitation of Liability (LOL) -** A clause that might be included in a contract that is a disclaimer of full liability and can be extended to, and include, a variety of situations and scenarios. *Examples:* The amount of loss (monetary) that can be claimed, warranty period and conditions for claims, and definition of who is and who is not responsible for liability.

**Limited Competition -** Is a condition where there are few suppliers competing for a specific piece of business. This can work to the advantage or disadvantage of procurement. Fewer suppliers may mean hungrier suppliers anxious for business or it could mean a situation where suppliers are intimately familiar with each other's products, prices, and tactics that leads to fewer and less deep discounts.

**Line Item Budget -** Used to group cost centers, departments, divisions, selected groups of products, etc. together in order to compare financial information from past budget and accounting periods with current and/or future budget and accounting periods.

**Liquidated Damages -** Compensation whose identification, amount, and conditions are predetermined, agreed to by all parties, and included in an agreement or contract.

**Litigation -** Happens when disputes arise that cannot be resolved with negotiation, mediation, or arbitration. Litigation happens when one aggrieved party initiates a lawsuit against another party or parties before a formal court of law.

**Load -** The amount of work required, scheduled, or performed in a job, operation, or department.

**Logistics -** A term that refers to the management of the flow of goods and services through a system. It begins at the point of origin and continues to the point of consumption and includes activities such as purchasing, transportation, inventory management, warehousing, packaging, and distribution. Logistics is a main ingredient of supply chain management.

**Lot-Size Inventory -** Refers to the quantity of an item for purposes of purchasing for price advantage or cost reduction. Can be applied to purchases, transportation, and/or inventory scheduling and storage allotment.

#### Low-Level Code - Is the program language sequence code used in MRP software systems. The code starts with the number zero and is assigned by the software for the material that is planned first and increases by one incremental number for each subsequent material planned. *Example:* 0-the first material planned, 1 - the second, 2-the third, and so on.

#### Make or Buy Analysis - Situations sometimes arise when a consideration of whether to make goods and perform services in-house or purchase from outside sources becomes necessary. In these situations a Make or Buy Analysis is performed to determine which course of action best satisfies the needs of the organization. The objective of a make or buy analysis is to determine which decision maximizes utilization of capabilities, resources, and strengths thereby offering the greatest value. Making items or performing services in-house does make total sense in many situations, but in other situations a decision to make or perform is driven by necessity or *"value opportunity"*. The analysis lists and compares the costs, advantages, and disadvantages of each course of action. *See:* Chapter 19 for a detailed explanation and examples of Make versus buy decisions.

**Make To Order -** A type of purchase order or agreement where items are made to a buyer's specifications and for their exclusive use. In some situations, a buyer may also furnish or supply special tooling which it owns to the supplier.

#### Make To Stock (MTS) - Also sometimes referred to as Build to Stock (BTS), is a operational production plan where items are made or built in advance of an actual sales order. MTS and BTS are usually based on normal sales forecasts and projections developed by marketing but sometimes are based on special sales promotions or incentive campaigns.

**Management By Objectives (MBO) -** A management planning process where management and employees participate together to set goals, define responsibilities, make decisions, and define courses of action.

**Manifest -** A document used in transportation that lists all materials (bills of lading) included in the shipment and is used in all modes of transportation of goods and cargo such truck, ship, and aircraft. For international shipments, a manifest also includes origin, destination, value, consignor, and consignee.

#### Manufacturing Lead Time - The cumulative amount of time it requires to fully produce an item and have it available for shipment. A new, first time produced item would include design, preparation, set-up, run, quality inspection, packaging, inventory storage (stocking), picking, palletizing/crating, loading, shipment. Items produced in regularity would exclude the initial steps of design, prep, and set-up. All other steps would still be necessary. Lead times are an important factor in supply management and procurement decisions as planning and scheduling requirements to fulfill needs.

**Manufacturing Resource Planning (MRP II) -** A computerized system software scheduling program that is a more advanced version than MRP programs. A more effective method of planning *all* resources of a company.

**Market Analysis -** An analytical tool used to understand the dynamics involved in markets and what underlying factors and conditions influence and effect markets. A market analysis seeks to identify market strengths and weaknesses as well as threats and opportunities. Markers or factors to evaluate in market analysis is growth rate, size, distribution channels, trends, cost structure, profitability, to determine reasons for success or failure. Information and data required to do a market analysis can be obtained from financial sources, government agencies, trade associations, customer surveys, and external environmental scans.

**Market Demand Curve -** Simply put, a market demand curve is a graphical representation showing the relationship between prices and/or quantities of individual commodities to estimate individual consumer demand which is then summed to determine overall market demand. *See:* Appendix D for a detailedexplanation and example.

**Master Production Schedule** (**MPS) -** Identifies and quantifies how much (quantity) of a product is required and when it will be required. It also identifies what and how much is needed to achieve the goals of the plan such a run time, staffing, input materials and supplies, equipment and processes required, inventory storage space, and additional resources required. The MPS of suppliers will determine the amount of lead time that exists before a procurement department can place an order and receive a product.

**Material Price Variance (MPV) -** Occurs when the actual materials cost of a product differs from what was planned and budgeted for the product. One primary way of avoiding MPVs is to bid and contract for strategic material requirements and lock in prices rather than rely on spot buy purchases where prices may fluctuate due to demand or material cost increases. *Example:* The manufacture of Widgets requires a petroleum based material that is bought from a variety of suppliers for the best price to fulfill inventory requirement periods. The production budget, and subsequent marketing strategy, was set on the premise that average raw material costs would be $2.00 per pound. However, a spike in petroleum costs due to shortages and other market conditions caused Widget materials to increase to $4.00 per pound. This is a material price variance of $2.00 per pound and will have adverse effects on the Widget manufacturer forcing either an increase in sales price, a loss of net income, or both.

**Material Quantity Variance (MQV) -** MVQ is primarily concerned with the actual amount of materials used versus the amount of materials allowed in a production environment but is most often expressed as dollars spent. MVQ is used as a strategic supply management and procurement tool to determine the optimum volume of an item that should be held in inventory and reorder point. MVQ can be calculated by using the formula: MVQ = (actual quantity used - quantity allowed) x price per unit.

**Material Safety Data Sheet (MSDS) -** A document required by law to accompany materials and products, and/or be readily available and accessible, whose properties may cause a risk to human health. The purpose of MSDS documents is to provide emergency responders and workers with information about a product regarding potential hazards and risks, protection, handling, disposal, and treatment.

**Materials Budget -** A budget that calculates the dollar amounts needed to satisfy materials requirements for an accounting year. All raw materials, parts, components, assemblies, supplies, and services are determined to fulfill production and/or operations for an established period of time. Both actual needs and inventory needs are determined that include established inventory minimums and safety stock levels. Then price values are assigned to all items and totaled. Price values may be based on fixed contract prices, forecasted prices, averaged prices, or a combination of all. Budget preparation may be aided with the use of computer management software such as MRP programs. Materials budgets are the "marching orders" and directives for procurement to purchase, within budget, those items required by an organization. Strategic supply management and procurement departments actively seek to bring additional value to the organization by using the tools at their disposal to purchase items more effectively to come in under budget.

#### Materials Handling - Is the management of movement and storage of inventory within a warehouse or distribution center environment. Inventory is defined as all raw materials, parts, supplies, and finished goods required to support operations and distribution. Materials handling also refers to the use of mechanical devices (conveyor equipment, robot pickers, etc), equipment ( forklifts, vertical pickers, etc.), and software systems programs (WMS, MRP, etc.).

#### Materials Management - Is a function of supply management and logistical support and involves planning for the entire materials flow cycle, from beginning to end. Materials management of a manufacturing environment is more complex than other environments but the basics of the management process are included in all environments where materials are required, purchased, stored, and shipped. Individual management functions included in an overall materials management plan are identification, standardization, requirement determination, scheduling, procurement, quality control (inspection and testing), packaging, inventory storage, distribution, and disposal of waste.

**Materials Requirements Planning (MRP) -** A computerized system software scheduling program that plans production, inventory, and procurement order requirements designed to improve process efficiencies, reduce cash flow, and increase profitability of a company. MRP II and ERP are advanced extenuations of MRP.

# **Memorandum of Understanding (MOU) -** Similar to a Letter of Intent (LOI) but may not be as formal or detailed. MOUs outline the mutual and bilateral agreement between parties and, in some situations, be construed as a contract even though not labeled as such and have the same force of law.

**Milestone Payments -** Payments agreed to in a contract when benchmark or strategic requirement points are reached and completed. Payments are a percentage of total as agreed to by the participating parties.

**Monopoly -** A term that denotes an economic condition where a single entity has control of a product or service and can influence or control prices, supply, and other conditions of the market to their benefit.

**MRO -** A type of procurement classification and acronym that stands for maintenance, repair, and operating supplies. MRO is the procurement requirement of service industries but also may be a part of manufacturing as well.

**MRO -** An acronym that stands for Maintenance, Repair, and Operating Supplies and relates to a specific type of procurement requirements. Procurement departments in organizations that are service only in nature are referred to only as MRO although manufacturing companies that buy to support production will also have a portion of their requirements that are classified as MRO as well.

**MRP Exception Report -** A report generated that describes actions needed to be taken. The reports cover a range of situations such as changes in production runs and requirements, quantity requirements, delivery schedules (lead times), etc.

**MRP, MRP II, and ERP - Buying Strategies -** Buying strategies determine the frequency and timing of purchases. Strategies that should be evaluated and considered are; minimum requirements, volume purchases, product life cycle, shelf life, value opportunity, Just-In-Time (JIT), Vendor Managed Inventories (VMI), Total Cost of Ownership (TCO), SWOT analysis, Risk analysis, Supply Chain maximization, reliability assessment, supplier performance assessment, inventory management analysis, industry and commodity forecasts.

**MTBR -** An acronym that stands for Mean Time Between Removal (or Repair) and refers to the time period experienced between required maintenance or unexpected failure. MTBF is useful in tracking reliability of items and determining preventive maintenance schedules.

***N***

#### North American Free Trade Agreement (NAFTA) - A trade agreement signed by the U.S., Canada, and Mexico to promote trade between the countries by eliminating barriers and reducing the number of restrictions.

#### National Institute of Standards and Technology (NIST) - Formerly known as the National Bureau of Standards (NBS) until 1988, NIST is an agency of the U.S Department of Standards that promotes science, technology, standards, and measurements for application in industry.

**Negotiation Planning -** An important strategic process that chooses negotiating team members and assigns roles, evaluates information, identifies facts and issues, and develops objectives such as negotiating strengths, tactics, and strategies. *See:* Chapter 16 of this book for a detailed account of negotiation planning.

**Non-Disclosure Agreement (NDA) -** Also known as aconfidentiality agreement, is a document and legal contract between parties and entities that information disclosed and shared between the parties may not be disclosed or shared with any other party without expressed written consent.

#### Normal Distribution - The most commonly used distribution method for portraying statistical normality information that tend to fall around a Mean value. Also referred to as a Bell Curve due to the fact that when distribution points are graphed it resembles a bell shaped curve.

**Notice to Proceed (NTP) -** A part of contractadministration where work to be performed is time or phase scheduled. Notice is given to commence work initially or on the next segment or phase of a project.

***O***

**Obsolete -** Raw materials, components, or finished goods that are no longer required due to expired shelf life, technical obsolescence, design change, etc.

**Occupational Safety and Health Administration (OSHA) -** The Occupational Safety and Health Administration (OSHA), is an agency within the U.S. Department of Labor. OSHA is responsible for issuing HazComs and forms of chemical labeling, Material Safety Data Sheets (MSDS) hazard inspection, citations and abatement orders, and training.

**Ocean Bill of Lading -** Also referred to as marine or maritime bill of lading. A document required to transport goods and cargo across international waters and details specifics of the goods and cargo being transported such as weight, quantity, nature and type, as well as destination. It allows a buyer to receive goods and cargo only if non-negotiable and requires payment to seller if negotiable.

**Oligopoly -** A market condition that exists when there are few sellers for a particular product or service. Fewer sellers may have an influence on price and/or supply and other market conditions. Similarities can be drawn with monopolies in some respects as a market might be controlled by a small group firms that control a large majority of a market. *Example:* Petroleum may be considered an oligopoly as some oil Cartels control large quantities of oil production and set quotas and prices.

**One-Offs -** This procurement term refers to an item that is purchased only a single time or occasion. It is a purchase that is usually not repeated. It often involves an item that is custom designed and built to a buyer's specifications or needs. *Example:* An organization is expanding a production line and needs a series of conveyor belts and roller transfer points. They contracted with a local machine shop to build the required equipment according to their specifications which are non-standard and specific to their needs.

**Open Order -** A purchase order that has been issued or a release that has not yet been filled or received.

**Open Stores -** An inventory environment where individuals do not have to be authorized to withdraw inventory.

**Opinion Based Forecast -** Sometime used when an organization does not formerly practice gathering, tracking, and evaluating information and historical data or choose to self develop forecasts but instead rely on the forecast and opinions of considered experts.

#### Opportunity Costs - Opportunity costs are not counted as actual costs from an accounting standpoint but are used in analysis for strategy planning and decision making. Opportunity costs refer to the next highest alternative of something of value. In other words the *cost* of not choosing the next best alternative, the opportunity cost is the value of the next best alternative. *Example:* Available monies were budgeted to improve facilities rather than place in a high yield interest bearing account. The opportunity cost is the amount of interest not earned by using assets to improve facilities instead.

#### Order Point - The inventory level point which triggers a replacement or replenishment of stock purchase order or release. The order point of an item is set by inventory planners based on criticality to operations, usage volume, reorder lead time, etc. Most inventory levels are based on minimum and maximum quantity levels, from zero to whatever level is deemed appropriate. When an inventory level reaches a minimum, or below minimum point, reorder is triggered.

**Order Processing -** Any and all activities required to process an order that is either received or issued. Activities that may be included in order processing are research, bidding, purchase order generation (manual or electronic), transportation selection, expediting, and receiving.

**Outsourcing -** Refers to the act of contracting with a third party to perform a business function or service that normally might be performed in-house. Such third parties might reside within the same country as the contracting company or outside that country's borders. Outsourcing is used to reduce costs, and/or responsibilities of the contracting company and might also be used as a matter of convenience or to save time.

**Overhead -** Refers to any operating expense of a business that is on-going. Overhead costs can be fixed (principal and interest payments on loans, rent, etc.) or variable (utilities, fuel, etc). Overhead costs and expenses can be listed separately or combined in a general category.

***P***

**Packaging** **Vulnerabilities -** Packaging design should take into consideration the following factors: physical (strength, damage from vibration/handling), environmental (humidity, weather), and miscellaneous factors (infestation, contamination, spoilage).

# **Packing Slip -** A document of form that lists all items, quantities, and descriptions shipped and contained in a package, carton, or container. It also includes the destination company name and address and other information the shipper deems appropriate such as purchase order number. A packing slip travels with a shipment and is used by the recipient to confirm the contents of the shipment. It is also used to confirm completion and fulfillment of orders and is matched against invoices before payment is made to verify accuracy.

#### Partnering - In business, partnering is the act of two or more parties entering into an arrangement and commitment for a specific goal or purpose. Partnering is a strategic relationship formed to create more value for the parties by reducing costs, increasing flexibility, diluting liabilities, and increasing competitive advantage.

# **Patent -** Grants exclusive rights of ownership to an inventor by a government for a limited and specified period of time after which exclusitivity expires. Inventions granted a patent can only be produced by the holder of the patent or their licensees. Protection afforded by the granting of a patent usually only extend to the country in which the patent was granted. However, the World Trade Organization (WTO) does grant protection within member states under the Agreement on Trade Related Aspects of Property Rights.

**Patent Infringement -** Patent infringement happens when an invention that has been previously patented is made and used or offered for sale by any unauthorized person or entity without express written consent of the patent holder. Such infringement is unlawful and is subject to prosecution and other litigation. Patents are usually applied for and approved within the country the inventor resides or where it is intended to be produced. Patents held in one country are not usually protected in other countries and are therefore hard to enforce. A patent that has been duplicated in another country may be replicated in that country unless laws of the subject country prohibit it.

**Pegging Report -** A report that shows the record of relationships between demand and supply. Pegging reports are a strategic tool used in material requirements planning to develop plans and goals based on demand requirements of item types, quantities required, and time required (delivery schedule).

**Performance Bond -** Also called a bid bond, is a guarantee that if something is awarded to a bidder such as a job, order, or contract, the bidder will accept the award. If the bidder refuses to accept, then the bond is paid to cover extra costs of securing another source.

**Performance Bonds -** A surety guarantee required of a supplier or contractor that they will faithfully and fully complete their obligations. A performance bond is issued by an insurance company or bank for a fee and guarantees payment to the named insured if the bond holder forfeits on their agreement. Proceeds from the bond are used to make the insured is made whole.

**Permissible Exposure Limits** (**PEL) -** PELs are enforceable regulatory limits established and set by OSHA in an effort to protect workers health and safety from effects of exposure to hazardous substances encountered in industry.

# **Phillips Curve -** An economic analytical tool used to show the relationship between unemployment and inflation in an economy.

**Pipeline -** In supply management and procurement, pipeline refers to the movement of items through the order and inventory process. once an order is placed it is said to be in "the pipeline" until it is received and stocked or distributed.

**Planned Order -** A type of order generated in a closed loop MRP logic system to synchronize orders when requirements change or are revised.

# **Planned Order Report -** Used in supply chain management to show recommended order requirements for specific time periods. May be generated automatically by a materials requirements planning software or prepared manually by operations and/or procurement.

**Planning Time Fence -** A strategic supply management and best practices concept that protects a master plan from automatic changes occurring in MRP, MRP II, and ERP operating systems. There are two types of planning time fences, emergency and firm.

#### Point-of-Use Inventory - An inventory stocking location that is located where the inventory will be used. *Example:* An assembly line that requires parts on a continuous or regular basis would have bins of inventory strategically located along the assembly line.

**Pool Buying and Cooperative Purchasing -** An mutually agreed to arrangement between separate buyers of a particular item to consolidate their requirements and needs into a single order to take advantage of price discounts in order to generate cost savings. Administration is shared among buyers.

**Price Analysis -** An evaluation and comparison of prices submitted in bids as a determination of which product or service to buy. Price analysis may be limited only to current bids and quotations or be extended to include historical information, internal cost estimates, and/or external industry benchmarks. Standard units of measures are used.

**Price Inelasticity -** The reverse of price elasticity. When price has no effect on demand and does not create an increase or decrease in demand when prices change, price is said to be inelastic.

#### Private Carrier - A term that refers to a business transports only their own products and not those of other companies.

# **Proactive -** The act of anticipating problems, future requirements, or changes and moving to react preemptively before something happens rather than being passive and waiting until it actually happens.

**Process Benchmarking -** A strategic business activity that compares a company's internal processes to those of an external, recognized company leader for purposes of setting similar goals to achieve process improvement. Benchmarks may not include processes but specific job functions as well.

**Process Capability Testing -** A form of testing used in Six Sigma concepts to determine process performance through the use of statistical measurements. Different forms of process capability testing include Cp, Cpk, Pp, and Ppk.

**Process Mapping -** A graphic identification of each step in an activity or process and their association or relationship to other activities and processes. Also referred to as a workflow diagram or simply flow chart and is a strategic tool used to better understand activities and processes.

**Process Specification -** Describes the specification requirements and steps required in an activity or process necessary to perform the activity or process effectively and successfully.

**Producer Price Index (PPI) -** An economic indicator that measures the average change in the selling prices received by domestic manufacturers for their production output over time.

**Product Description -** Describes in detail the qualities, qualifications, purpose, dimensions, weight, form, price, and any and all information pertinent to the product that allows a buyer to make an informed decision.

**Production Leveling Strategies -** A strategic concept used in Lean manufacturing to reduce waste by balancing (leveling) production over a static or fixed period of time. Used in pull inventory systems, JIT, and continuous flow systems.

**Production Planning -** The strategic function of establishing goals and procedures for obtaining those goals for manufacturing output as part of an overall business plan. Ingredients of production planning also include satisfaction of requirements and goals of finance, marketing, procurement, and distribution.

**Program Planning Budgeting Systems (PPBS) -** An approach to budget planning and development where expenditures are primarily focused on objectives and the nature of work performed as well as purchased items or services in an effort to control finances.

**Pull Inventory System -** An inventory supply system based on customer demand. When a customer uses or requests existing inventory, it triggers a response that "pulls" the required inventory through the supply chain and includes activities in procurement, logistics, and distribution functions. Pull inventory systems are prevalent in Kanban and JIT systems.

**Purchasing Cycle -** Steps in the purchasing cycle consist of: (1) recognizing a need, (2) quantifying specifications, (3) determine sources options, (4) establish price, terms, and conditions of sale, (5) prepare purchase order, (6) issue purchase order, (7) expedite purchase order, (8) receive and inspect goods, (9) approve and pay invoice, (10) maintain recoeds and history.

***Q***

**Oligopoly -** A condition that exists in a market where there are a limited number of sellers and the market may be controlled by them. Oligopoly is similar to a monopoly in that one, or all, sellers in a market may control the market by setting prices and controlling supply.

**Qualification Testing for Prototypes -** Occasionally the necessity arises where an item is required and capabilities do not exist to make in-house. The requirement might be an R & D model, a prototype for a new product, or an out-of-production or obsolete part that is still required. In such situations, testing is required to determine conformity to specifications and functionality. This is referred to as testing for form, fit, and function and is usually performed or overseen by representatives from the engineering department.

**Qualified Products List (QPL) -** A list of materials and supplies that have been researched, evaluated, tested, and pre-approved for purchase by procurement.

**Qualified Supplier List (QSL) -** A list of suppliers that have been evaluated and pre-approved by the supplier management department within procurement to purchase materials and supplies from.

**Quality Function Deployment (QFD) -** A process methodology used by planners to convert user requirements into quality functions. Sets quality development targets for products and services.

**Quantity Discounts -** Reductions in price offered by a seller for increases in quantities purchased. Quantity discounts may be standard discounts offered or a result of a sales promotion or incentive campaign and can occur anywhere in the distribution channel. A buyer should consider the impact of additional costs incurred by buying quantities over specific requirements such as transportation and storage costs as well as shelf- life issues.

***P***

**Perpetual Inventory Systems -** An inventory management system that is adjusted after each transaction is completed. Minimum and maximum inventory levels are pre-established. Each time an inventory reaches or falls below a minimum level, a requisition is generated to replenish. Once the item is purchased and received, the inventory level is adjusted to reflect the transaction. This system is usually performed automatically by electronic adjustment.

**Pool Buying -** Also referred to as pool purchasing and cooperative purchasing. Occurs when two or more buyers consolidate their buy requirements to gain an advantage in price by increasing over-all quantities purchased. Each buyer is responsible for their individual requirements and payments.

**Price Analysis -** An analytical tool used to compare prices, on a straight-line basis, received in bids and quotes from suppliers and as a comparison to catalog or retail prices.

**Producer Price Index (PPI) -** The PPI is an economic indicator released monthly by the U.S. Bureau of Labor Statistics of the Department of Commerce. It is a weighted index of wholesale prices for manufactured goods. Often used as a basis for escalator and de-escalator clauses in contracts.

**Product Life Cycle -** Products go through a series of stages before their usefulness and demand ceases to be a factor; introduction, growth, maturity, and decline.

**Purchase Price Variance (PPV) -** The difference between the retail, or standard, cost of a product or service and the actual price paid.

***R***

**Random Access Inventory Storage -** An inventory storage system that places items in the next open or available storage space. Usually used for non-critical stock items or items not required to be in close proximity to assembly or production lines. Generally used in Automated Storage and Retrieval Systems (ASRS).

**Raw Materials -** Are input requirements required to produce finished or semi-finished goods of a manufacturer or supplier. Knowing all about raw materials, from creation to processing and distribution, is important in effective and efficient management of the supply. It is the first link in the supply chain and its status has an effect on all subsequent links in the supply chain from a price and supply standpoint.

**Reciprocation -** The act of giving something in return for receiving something. Reciprocation can be a good thing or a bad thing. Used in negotiations to facilitate trade-offs, giving in on some point in order to gain on another, reciprocation can be a good negotiating tactic. Receiving a bribe, payoff, or gratuity of value can be a bad thing. In this instances reciprocation would be unethical as well as unlawful.

**Reciprocity -** Has many meanings and connotations in different circumstances and situations. Reciprocal agreements are common between states and nations, and legal. Reciprocity in its simplest definition means something in exchange for something. *Examples:* (1) Two countries may mutually agree to reduce or forgo tariffs in order to increase trade between their countries. - legal and acceptable. (2) A country may require a company wishing to import goods to purchase a particular amount of goods produced by that country in return. - legal and acceptable. (3) A company buying goods from another company may require the selling company to buy goods or services from them as a pre-requisite of doing business. - unlawful in the U.S. and unacceptable.

**Reengineering -** Is the redesign of processes and workflows to enhance efficiency and increase value. Reengineering is a strategic tool used by open minded and progressive thinking individuals and organizations who understand that change, as an improvement, decreases waste and inefficiencies and increases profitability and competitive advantage. Reengineering is usually the result of process analysis, opportunity analysis, and value chain analysis.

**Regression Analysis -** A strategic analytical tool used to determine the relationship between dependent and independent variables. Often used in forecasting and displayed as a scatter-plot diagram.

**Reimbursable Cost Contracts -** Also known as Cost-Reimbursement Contracts. These contracts provide for payment of approved incurred costs as prescribed for in a contract. Any agreed to fixed fee does not reduce or increase as any result of changes in work.

**Rejected Material -** When goods are received, inspected, and rejected for non-conformance to requirements and specifications, there are three options for disposition: (1) return the entire lot or shipment and apply for credit, (2) rework rejected goods and apply for credit or price adjustment, (3) Inspect the entire lot or shipment, keep those items meeting requirements and return those not meeting requirements and apply for credit.

**Relevant Costs -** May be pertinent or important only in a particular decision making situation and not in others. They are considered decision-specific. *Example:* Costs involved in a Make or Buy decision, costs that result in the sale of a division or product line of an organization, etc.

#### Remedy - A form of relief or recompense granted, usually by a court of law, to an aggrieved party for damages suffered by a breach of a contract or agreement.

**Request for Information (RFI) -** A solicitation generated by procurement prior to a formal bid offering to obtain information about a suppliers capabilities, product specifications, new technology available, etc. to determine which suppliers would be considered qualified to bid on future requirements of an organization.

**Request For Proposal (RFP) -** A solicitation generated by procurement to obtain formal offers from qualified suppliers of price and proposed methods of execution of requirements usually covering a term period and resulting in the award of a contract. An RFP should outline all requirements of the solicitation including specifications, scope of work, time constraints and requirements, etc. A good RFP will also ask the bidder to supply alternatives and value adding initiatives not addressed in the RFP for consideration.

**Request For Quotation (RFQ) -** A solicitation generated by procurement to obtain offers and price quotes from qualified suppliers for specific products or services, usually one-time buys or repetitive, non-contracted buys.

**Requisition -** A request generated to notify procurement of supply requirements needed to facilitate operations which in turn initiates a purchase. Requisitions can be generated manually, or automatically through electronic means. Requisitions can be written as a bill of goods by engineering or triggered automatically when an inventory level reaches or drops below its minimum requirement.

**Repudiation -** Occurs when a buyer or seller advises the other that they will, or cannot, perform or honor a contract or any provision thereof. Repudiation is considered a breach of an agreement.

**Rescission -** In simplest terms, rescission is the "unmaking" of something to return to its original form. Clauses and provisions in contracts, and even contracts themselves, can be rescinded by mutual consent of the parties to a contract. This would be the case if all parties agreed it was to their mutual benefit to rescind a clause, provision, or contract if it was not working or would become detrimental to the parties. Other courses of action to bring about rescission would be through the courts and legal action.

**Resource Conservation & Recovery Act (RCRA) -** Empowers the EPA in their authority to regulate, control, and enforce regulations regarding hazardous waste from creation to disposal and includes transportation, treatment, and storage.

**Reciprocity -** A mutual exchange of considerations, privileges, rights, or favors. Reciprocal agreements may not be acceptable or lawful in a private commercial situation but are lawful and acceptable in agreements between nations.

**Reverse Marketing -** A marketing concept where customers create interest in sellers causing them to seek them rather that a customer seeking sellers.

**Robinson Patman Act of 1936 -** Also referred to as the Price Discrimination Actand is an amendment to the Clayton Antitrust Act. The act is important because it prevents unfair price discrimination to reduce competition by requiring that sellers offer the same price and terms to all customers.

**Root Cause Analysis -** A strategic analytical tool that endeavors to identify the underlying cause of a problem. A Fishbone, cause and effect diagram and histograms are often used to facilitate identification of suspected causes by listing actions and reactions.

***S***

**SAE -** An acronym that stands for the Society of Automotive Engineers and is a professional organization consisting of engineering professionals in the automotive and aerospace industries. SAE sets and publishes standards for those industries.

**Sarbanes-Oxley Act of 2002 (SOX) -** A law enacted by the U.S. Congress that sets ethical accounting standards for all publically held companies, their owners, and representatives. Privately held companies do not fall under SOX.

#### Set-Aside - A term that refers to a portion of business reserved or "set-aside" for small, minority, and disadvantaged businesses by the U.S. government. Only applies to businesses that qualify and that bid for and compete for government business.

**Sherman Anti Trust Act of 1890 -** Was enacted by the U.S. Congress and regulates interstate commerce. It also authorizes the U.S. Government to prosecute trusts and monopoly's that are a threat to free trade so that they may be dissolved.

**Sight Draft -** A financial instrument that pays the amount of the draft upon presentation by a payee. Predominately used in international transactions as an expedient way of conducting business.

**Single Source -** Also referred to as sole source, is a term sometimes misused by buyers. Applies only when there is a single, sole supplier of a product or service. If two or more suppliers exist for a product or service then, there are options available to a buyer. Single and sole source suppliers require special negotiating strategies in order to gain maximum concessions and advantages.

**Small Business Act of 1953 -** Passed by the U. S. Congress to encourage small business growth and promote competition. The Act also established the Small Business Administration (SBA) as tool to assist small businesses in development, learning, training, and finances.

**Small Business Administration (SBA) -** An agency of the U.S. Government that offers and provides help and support to small businesses in the form of management, training, and technical assistance and through acting as guarantor for loans from private financial institutions and banks.

**Smoothing -** A statistical process in which data points are averaged with other data points in a series to "smooth" representations of the data.

**Statement of Work (SOW) -** A document that defines and outlines the requirements of the buyer and responsibilities of the seller in a particular project. May be issued as a seperate document or included in an RFP.

**Special Carriers -** Refers to any mode of transportation required for movement of cargo that requires special transportation and equipment requirements or that is out of the norm of regular transportation. *Examples:* The most recognized is carriers of hazardous materials but extends to any form of transportation requiring special needs such as small, shallow draft vessels required to deliver cargo to places where there is no actual port or where ports are too shallow to support heavy vessels.

**Specific Duties -** Duties and tariffs that are charged at a specific, set rate. Specific duties differ from ad valorem duties which charge a percentage of cost or sales price. *Example:* The duty on imported wine is $2.00 per bottle.

**Speculative Buying -** Is the term referred to as a type of purchasing based on pure speculation as a way of off-setting purchases that are actually required. Speculative buying is commonly referred to as "hedging" and is used in highly volatile markets to hopefully "protect" a purchase against fast rising prices. *Example:* Buying oil futures to off-set extreme fluctuations in an open market.

**Spot Buying -** Buying done for a one-time purchase, a purchase required for immediate delivery, or any non-contract purchase.

**Spot Buying -** Spot buying has several variations and definitions. Buying on the spot market can mean buying at market or retail price, buying one time, or only on an as needed basis. Spot buying can also have negotiated pricing established with a supplier and used for non-contract purchases.

**Statistical Quality Control (SQC) -** Is the use of statistical processes and techniques to measure the variations in processes and, through analysis, determine the quality of products and processes to determine if they are in or out of line with plans and procedures.

**Statement Of Work (SOW) -** A document that describes what work is expected and required in a project. Sometimes presented as a sequential requirement, SOWs are developed to explain processes and requirements. Also, included in RFPs to set forth the expectations and requirements of an organization that is soliciting bids.

**Statistical Process Control (SPC) -** Is the use of statistical processes and techniques to measure the variations in processes and, through analysis, determine if processes are in, or out of line with plans and procedures. SPC is closely associated and used in manufacturing and quality control inspection activities but has other business application as well.

# **Steps to Settle Contract Disputes -** There are several steps that can be taken to settle contract disputes prior to litigation such as renegotiation, arbitration, and mediation. Attempts should always be made to avoid litigation and legal proceedings whenever possible.

**Stock Keeping Unit (SKU**) - An SKU is a product or item identifier, usually consisting of alpha and/or numeric numbers. SKU numbers are used in warehouse management systems (WMS) to identify, segregate, and assign stocking locations for items. SKU's can be a unique identifier designed and used exclusively by the purchasing company, a supplier's part or product number, or a standard UPC code.

**Stockless Buying -** An arrangement between a buyer and a seller where inventories are held by the supplier and only shipped when needed by the buyer. The seller assumes all responsibility and costs of stocking. Risks to the buyer is something unforeseen happening that delays or interrupts shipment and/or supply. *Example:* JIT inventory supply.

**Strategic Business Unit (SBU) -** A department within an organization dedicated to strategic planning and decision making. There might be more than one SBU within an organization, each tasked with specific areas of responsibilities. *Examples:* An organization might have separate SBUs such as corporate level that is responsible for strategic plans for the over-all organization, a production and operations SBU responsible for planning and goals for operations, and a supply management and procurement SBU responsible for research, forecasting, training, and other strategic planning and goal setting functions.

# **Strategic Buyer -** A buyer within a strategic sourcing department of procurement or one that has been assigned the task of purchasing critical and/or specific goods and services important to an organizations operations.

**Strategic Partnering -** Also referred to as strategic alliance, is a mutual agreement between parties to combine assets and resources to perform a task or reach a goal or objective. Partnering and alliance can also be formed to combine or pool requirements for the purpose of reducing costs.

**Strategic Sourcing -** A strategic supply management and procurement process that goes beyond basic procurement practices of getting three bids and buying the cheapest price. It is a key component in supply chain management. Strategic sourcing attempts to understand all aspects of particular products, markets, and industries and its goal is to procure the best products with the most value for their organization. There are multiple techniques, tools, and philosophies that are available for use in strategic sourcing, the types and extent of which determine the degree of success.

**Strategic Supply Management -** Supply management is a business process and methodology that goes beyond traditional purchasing services. Supply management is extended to include not only purchasing required goods and services, but management of supply chains, management of all material inputs and outputs, inventory management and planning, tracking, usage and reliability analysis, forecasting, and supplier management. Strategic supply management goes even farther by casting all functions involved in supply management against longer range goals to not only achieve greater efficiencies in activities and reduce costs, but also to achieve and sustain competitive advantage over rivals.

**Supplier Evaluation Report (SER) -** A report generated automatically at specified periods or intervals and also on-demand. It is a report of suppliers performance, reliability, qualifications, and financial stability. As part of a supplier's periodic performance review, SERs include information posted to the suppliers scorecard that includes on-time deliveries, late deliveries, average lead time, reject levels, etc. When qualifying and considering suppliers for contract bids and proposals, SERs may be requested to aide buyers in determining which suppliers qualify for upcoming supply contracts.

**Supply Chain -** Individual points (or links) of importance that have an effect on the supply of goods and services to an organization. From a product's origin or birth (raw materials used to make the product) to final disposition or death, the supply chain encompasses all of the activities involved in over-seeing or managing goods and services.

**Supply-Based Optimization** - A term that refers to the efficient and effective management of supply chains. Knowing everything there is to know about the product or service being supplied, conditions of supply, raw materials that supplies are made from, suppliers capabilities and processes providing goods and services. Managing all of these things effectively to optimize value.

**SWOT Analysis -** An acronym that stands for Strengths, Weaknesses, Opportunities, and Threats. SWOT is a strategic analytical tool used in the strategic planning process. *See:* Chapter 12 of this book for detailed explanation and examples.

***T***

**Tactical Purchasing -** Buying in reaction to a current need as opposed to strategic purchasing which is buying for a planned goal. *Examples:* Tactical purchasing would be buying to replenish inventory levels or a specific item required such as a piece of new equipment needed in operations.

**Taft-Hartley Act of 1947 -** Also referred to as the Labor-Management Act, is a U.S law that monitors the activities of labor unions. The Act prohibits "closed shops", forbids strikes and boycotts for services relied upon by the federal government, allows the President of the U.S to appoint a board of inquiry to investigate labor disputes, and allows union shops to be established only if a majority of employees vote to become unionized.

**TAT -** An acronym that stands for Turn-Around-Time and refers to the amount of time required to purchase, receive, stock, and use (or re-ship). TAT can also refer to the time required to remove something, such as a part, component, instrument, or piece of equipment, package and ship to a repair shop (or repair internally), receive after repair, and restock or reinstall.

**Termination -** The official cancellation of a contract or purchase order for any and all work not completed or materials supplied, under the terms and conditions set forth and agreed to in an agreement.

**Terms and Conditions (T & C) -** Specifics agreed to by parties in an agreement. Terms and conditions set forth the responsibilities and obligations of each party with regard to the transaction.

**Through Ocean bill of lading -** A bill of lading is a document that sets forth the type of good and quantity as well as serves as a receipt of carriage (transportation) and are used within a country's borders or for international movement. A through bill of lading includes an inland bill of lading for domestic carriage *and* an international bill of lading if being exported. If a shipment required maritime movement across oceans, then a through ocean bill of lading would be used.

**Time & Material Contract -** A contract that specifies the purchase of supplies, parts, and services at flat rates; fixed hourly rates for labor and parts and supplies at cost.

**Time Draft -** A payment draft due and made at a specified or fixed date in the future

**Time Series Analysis -** A statistical form of analysis used in forecasting that has a series of data points measured in equal segments of time. Useful in determining historical and future trends.

**Time Value of Money -** The value that money has over a specified period of time in terms of what it cost to use it or what it might earn expressed as interest paid or interest earned.

#### Total Cost Analysis (TCA) - From a procurement perspective, TCO is the comparison of total costs incurred in purchasing something including price of a product or service, transportation, handling, etc. that is bid by suppliers for an organization's business. In simplest terms, TCO is the total cost to get it in the door and may include both fixed and variable costs. TCA differs from TCO (total cost of ownership) in that TCO takes into consideration other cost factors that add to the cost of a product over time, and until it is used up or disposed of, such as inventory carrying costs, pick/package/and ship, interest, etc.

**Total Quality Management (TQM) -** A philosophy and process used to allow an organization to attain and sustain competitive advantage by continuously improving (Kaizen) the quality of their activities, processes, and products to gain increased market share and customer satisfaction. TQM assumes that the quality of product and effectiveness of processes is the responsibility of everyone in the organization, not just directly responsible departments, as well as external parties such as suppliers. TQM is cross functional in approach and involves extensive and comprehensive training.

**Trade Acceptance -** Also referred to as a bill of exchange, is a promise of payment document called a draft. The promise to pay is made by the entity that will make the payment (promissory) to an entity who is to receive the payment (payee).

**Trade Discount -** A reduction in price (discount) allowed by a seller to a buyer off of retail price, usually expressed as a percentage. Trade discounts are used by sellers as incentives to induce buyers to purchase goods and services from them.

#### Trade Diversion - Is a term used in international economics that refers to conditional free trade agreements between nations that may cause, under certain conditions, a shift from more efficient exporters to less efficient exporters.

**Trademark -** A symbol, name, word, image, color, smell, or design used to designate exclusive ownership of something. Trademarks are used to differentiate products, services, entities, and individuals from others and may be officially registered or not. If registered, a trademark must be applied for in each country it will be used, there is no "international" trademark that applies to all countries globally. In the U.S., upon application and approval, trademarks are issued by the U.S. Patent and Trademark Office which is an agency of the Department of Commerce. Infringement, or the unauthorized use, of a trademark can be litigated and damages recovered if proven.

# **Trademark -** A trademark can be any symbol, name, word, or design developed and used by a business, individual, or legal entity to identify products, goods, and services owned and offered by them. In order to receive trademark protection it must be registered with the U.S. Copyright and Trademark Office or applicable agency of other countries and governments.

**Transshipping -** A commerce legal term that refers to the transfer of goods and cargo from one transportation conveyance to another. It also may refer to a delivery to an intermediate, or series of intermediate destinations before reaching final destination. *Example:* A manufacturer of products in a third world country buys parts from China that are containerized and shipped via ocean going vessel. The importing country is land-locked and does not have an open port to the sea so the containers are off-loaded at the nearest port, loaded onto railroad cars and transported to the country of the manufacturer. Direct rail-delivery is not possible because the manufacture does not have a rail line at their plant so the containers are off-loaded onto trailers at the rail yard and transported by truck to their final destination. This is an extreme example that had cargo moving across several borders and using a combination of transportation modes. Transshipping happens most often with containerized cargo moving by ocean going vessel to a port and being off-loaded onto trailers and delivered by truck but other situations may exist as well.

**Traveling Requisition -** A form or document sometimes used for repetitive purchasing, usually in a manufacturing or production environment. It is used to historically document purchases and travels back-and-forth between purchasing and the originating department.

**Trend Analysis -** A strategic analytical tool used to identify, track, and evaluate trends and changes in areas of importance such as price, demand, productivity, technology, and supply availability. Used in evaluation and decision making and very prominent in forecasting.

***U***

**Underwriters Laboratories (UL) -** An independent organization that develops and publishes standards and testing procedures for equipment, tools, appliances, assemblies, components, parts, and all types of products from a product safety viewpoint. A UL certified product is recognized by the UL label.

**Unilateral Contract -** An agreement where one party makes an offer and acceptance is displayed by another party through their, actions.

**Uniform Commercial Code (UCC) -** A U.S. statute that regulates commercial money transactions and defines the rights and obligations of buyers and sellers. The UCC addresses such things as the sale of goods, warranties, secured loans, business conduct, bank transactions, and other matters of commerce.

**Uniform Computer Information Transactions Act (UCITA) -** Laws that pertain to computer information only. Any information existing in electronic form that is obtained from, or processed by a computer. *Examples:* Computer software programs, automated transactions (EDI), and electronic signatures.

**Uniform Trade Secrets Act (UTSA) -** Defines the rights and remedies under common laws of trade secrets. Adopted and applied by the majority of states, but not all, in the U.S.

**Union Shop -** Is defined by the National Labor Relations Act (NLRA) as amended by the Taft-Hartly Act. It states that, if a union exists at an employer they must hire only labor union members or, if a non-union employee is hired they must become a member of the union within 30 days of hire.

**United Nations Standard Product and Services Code (UNSPSC) -** An internationally adopted and recognized coding system that classifies and identifies products and services.

**UPC Code -** An acronym that stands for "Universal Product Code". UPC codes are represented as vertical bars that represent a configuration of numbers that uniquely identifies a specific product or item. Barcodes can be scanned to automatically input the number into a data base such as a WMS software system.

***V***

**Value Added -** A commonly used term that refers to additional value that is realized at various stages of a process. Value may be defined as decreased costs, increased profit margins, increased efficiencies realized through process improvement and re-engineering.

**Value Added Tax (VAT) -** Is a tax added to the purchase price of a product or serviceby, and paid to, a government of a country. Countries usually do not impose VAT on goods exported for consumption abroad.

**Value Analysis -** Also called an opportunity analysis, is a analytical tool used to evaluate sets of data to determine their cost, worth, and value to an organization. Value analysis can be applied to the evaluation of products, services, processes, and activities.

**Variable Costs -** Defined as increases and decreases in material costs, labor, and overhead that fluctuate, or change, due to influences of external factors such as volume of the number of units of an item being produced.

**Variable Costs Contract -** A contract for the acquisition of goods or services where costs fluctuate due to uncontrollable circumstances and prices are constantly changing or where usage varies that causes differences in price. *Example:* The procurement department of a large restaurant chain has a contract with a major seafood supplier to supply a variety of seafood. A fixed price cannot be established due to the fact that daily catches vary and market dynamics dictate the price for each variety of seafood. Therefore, a percentage increase to cover handling costs and profit margin is calculated and added to the purchase price of the seafood.

**Vendor Managed Inventory (VMI)** - A strategic inventory management concept wherein a buyer grants the authority and responsibility to a supplier for the management of inventory for a particular item or items. The supplier becomes responsible for supplying, maintaining, and replenishing inventory levels. This can be performed by the vendor (supplier) on-site with suppliers personnel or remotely through electronically transmitted data.

**Verbal Contract -** Verbal contracts over $500 are lawful and valid under UCC rules if they can be verifiable and can be proved. Promissory Estoppel applies in this situation. When using oral or verbal contracts one of the parties should prepare a written document outlining the terms, conditions, and understanding of the agreement and forward to the other party as confirmation.

***W***

**Weighted Point Measurement -** A method of measurement that is quantitative in nature used in a variety of situations to measure and analyze by assigning levels of importance, called weights, for the purpose of evaluation and decision making. *Example:* A weighted decision matrix helps decision makers remove bias and favoritism from purchasing decisions.

**Walsh Healey Act -** Enacted by the U.S. government in 1936 is also known as the public contracts act. It offers protection to employees of companies that hold contracts with the U.S government. It covers such things as standard work day (8 hours) and work weeks (40 hours) as well as overtime and minimum wage requirements.

**Warehouse Management System (WMS) -** Is a computer software program system that facilitates movement and storage of materials and supplies within a warehouse. It can also be incorporated within another software program system such as ERP. Although sometimes considered a separate function by some, warehouse management is actually an integral part of logistics and supply management. The basic premise of WMS is to maximize efficiencies in identifying order information such as item, quantity, unit of measure, determine location where to stock, and location where to pick. A WMS system also automatically adjusts inventory levels as materials and supplies are received, stocked, picked, and shipped using a barcodes and scanners.

**Warranty -** Warranties are guarantees offered by manufacturers and sellers of products and services to buyers and consumers that guarantee certain rights as defined by the warranty and accepted by the buyer. Such rights may extend to repair, replacement, and in some instances liability. Warranties can be either expressed or implied.

**Waste -** Is defined as anything that is left over after production and includes scrap, spoilage, rejects, damaged goods, expired shelf-life, etc. Waste is also the term designated for inefficiencies in work processes in Total Quality Management (TQM).

**Waiver -** When a party to an agreement surrenders a privilege or right to something. A waiver may also be called a release, disclaimer, exculpatory or hold harmless clause.

#### Win-Win - A term referred to as a philosophy of both sides in a negotiation or agreement being treated fairly and expressing a willingness to work together for the mutual gain of each party.

***Z***

**Zero Based Budgeting -** A budgeting method where all expenses and costs must be justified for each new budget period regardless of budget requirements in the previous budget.

**Zero Inventory -** An inventory management concept where required inventory is not held by the buyer but held and supplied by a vendor. Most commonly associated with Just-In-Time (JIT) supply concepts.