The Resource for Warehouse Logistics

Warehouse Supply Chain & Logistics
Terms and Glossary

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Table of Content

A

Accessorial Charges: A charge for additional services not included in base rate such as loading, unloading, pickup, and delivery. *Also see: Upcharges*

Accessorial Fee: *See: Accessorial Charges*

Accounts Payable (A/P): This is a financial term referring to the amount of transactions that have been accrued but not paid to a vendor; 2) or it refers to a specific accounting function.

Accounts receivable (A/R): On a company's balance sheet, accounts receivable is the amount that customers owe to that company. Sometimes called trade receivables, these monies are classified as current assets assuming that they are due within one year.

Accreditation: The process in which certification of competency, authority, or credibility is presented. An example of accreditation is the accreditation of testing laboratories and certification specialists that are permitted to issue official certificates of compliance with established standards.

Acknowledgment: Acknowledgements are sent to let the sending system know you received the transaction whether it is an order, an inventory sync file, any adjustment, or any type if electronic transaction.

Acquisition Costs: The net price plus other costs needed to purchase an item and move it to the point of use.

Active Inventory: These are materials held in a facility that are intended to be consumed in manufacturing/assembly or sold in a specified period.

Advance Material Request: This is a request for materials that is created in advance of formal need due to long lead times for components, etc.

Advanced Shipping Notice (ASN): ASN is detailed shipment information transmitted to a customer or consignee in advance of delivery, designating the contents (individual products and quantities of each) and nature of the shipment. In EDI data standards this is referred to as an "856 transaction." It may also include carrier and shipment specifics, including time of shipment and expected time of arrival. This may also be known as an assumed receipt.

Air Cargo: This is freight that is moved by air transportation.

Air Cargo Containers: These containers take many shapes, but all are designed to conform to the inside of an aircraft. Air cargo containers fall into three categories: air cargo pallets; lower deck containers; box type containers.

Allocated Item: An allocated item is identified in an inventory control and/or order management system that allows for quantities available in inventory to be associated with a customer or production order so that the quantity cannot otherwise be used.

Alternate Dispute Resolution (ADR): ADR is one of any of a number of methods (such as mediation, arbitration, mock trials, etc.) used to resolve disputes outside of litigation.

Artificial Intelligence (AI): AI is the theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision making, and translation between languages.

Assemble-to-Order: This is a strategy employed in production and light manufacturing environments where complete subassemblies and components are assembled into a finished product just prior to customer shipment. Synonym: Finish to Order. Also *See: Make to Order, Make to Stock*

Audit: An audit is the inspection and examination of a process or quality system to ensure compliance to requirements. An audit can apply to an entire organization or may be specific to a function, process, or production step.

Audit Trail: An audit trail is the manual or computerized tracing of transactions affecting the contents or origin of a record.

Automated Storage and Retrieval System (AS/RS): An AS/RS consists of a variety of computer-controlled systems for automatically placing and retrieving loads from defined storage locations either using mechanisms or robotics.

Available Inventory: Also called net inventory, this is the quantity of stock that is available to use after considering allocations, reservations, backorders, and quantities set aside to compensate for quality problems. Also known as net inventory. Synonyms: Available-to-Promise.

Average Inventory: The average inventory level over a period of time. Implicit in this definition is a "sampling period" that is the amount of time between inventory measurements. For example, daily inventory levels during a two-week period of time, hourly inventory levels during one day, etc. The average inventory for the same total period of time can fluctuate widely depending on the sampling period.

B

Back-Charged: 1) A payment is credited from a warehouse to its customer when the warehouse does not perform based on contract terms, and 2) an amount charged to a customer for material, equipment, services, or other charges that were paid by the warehouse and furnished by the contractor.

Backhaul: The portion of a transport trip, typically associated with trucking that is incurred when returning a vehicle to its point of origin. Ideally the carrier will find some sort of freight to carry back; however, if the trip is empty it is called deadhead. *Also See: Deadhead*

Backlog Customer: Customer orders received but not yet shipped; also includes backorders and future orders.

Backorder: 1) The act of retaining a quantity to ship against an order when other order lines have already been shipped. Backorders are usually caused by stock shortages. 2) The quantity remaining to be shipped if an initial shipment(s) has been processed. Note: In some cases backorders are not allowed, this results in a lost sale when sufficient quantities are not available to completely ship an order or order line.

Barcode: A symbol consisting of a series of printed bars representing values. A system of optical character reading, scanning, and tracking of units by reading a series of printed bars for translation into a numeric or alphanumeric identification code. A popular example is the UPC code used on retail packaging.

Batch Number: A sequence number associated with a specific batch or production run of products and used for tracking purposes. *Synonym: Lot Number*

Batch Picking: An order-picking method where orders are grouped into small batches. An order picker will pick all orders within the batch in one pass. Batch picking is usually associated with pickers using multi-tiered picking carts moving up and down aisles picking batches of usually four to 12 orders. However, batch picking is also very common when working with automated material handling equipment such as carousels. *Also See: Discrete Order Picking, Order Picking, Zone Picking*

Batch Release: Orders are released to be fulfilled or picked at specific times during the course of a day. Accumulation of the orders before release results in a batch. *See: Batch Picking.*

Batch Processing: A computer term that refers to the processing of computer information after it has been accumulated in one group, or batch. This is the opposite of "real-time" processing where transactions are processed in their entirety as they occur.

Benchmarking: The process of comparing performance against the practices of other leading companies for the purpose of improving performance. Companies also benchmark internally by tracking and comparing current performance with past performance. Benchmarking seeks to improve any given business process by exploiting "best Practices" rather than merely measuring the best performance. Best practices are the cause of best performance. Studying best practices provides the greatest opportunity for gaining a strategic, operational, and financial advantage.

Best Practice: A specific process or group of processes that have been recognized as the best method for conducting an action. Best Practices may vary by industry or geography depending on the environment being used. Best practices methodology may be applied with respect to resources, activities, cost object, or processes.

Bill of Activities: A listing of activities required by a product, service, process output or other cost object. Bill of activity attributes could include volume and or cost of each activity in the listing.

Bill of Lading (BOL): A transportation document that is the contract of carriage containing the terms and conditions between the shipper and carrier.

Bill of Lading, Through: A bill of lading that covers goods from point of origin to final destination, when interchange or transfer from one carrier to another is necessary to complete the journey.

Bill of Material (BOM): A structured list of all the materials or parts and quantities needed to produce a particular finished product, assembly, subassembly, or manufactured part, whether purchased or not.

Blanket Purchase Order: A blanket order is defined as an order the customer makes with its supplier that contains multiple delivery dates scheduled over a period of time, sometimes at predetermined prices. It is normally used when there is a recurring need for expendable goods. Hence, items are purchased under a single purchase order (P .O) rather than processing a separate P.O. each time supplies are needed. Synonym: Blanket Order, Standing Order.

Blanket Purchasing Agreement (BPA): A **U.S.** Government Service Administration buying schedule for buyers and sellers that denotes not only that prices have already been determined to be fair and reasonable but goes a step further by determining the terms under which goods and services will be provided and possibly establishing a single source to deliver them over a period of time.

Blanket Release: An authorization, similar to a purchase request, which is used to confirm a customer's agreement to produce or deliver products identified in an earlier blanket P .O. agreement or contract.

Blanket Rate: A rate that does not increase according to the distance the commodity is shipped.

Blockchain: It is a shared ledger for recording the history of transactions that cannot be altered.

Book Inventory: An accounting term used to refer to the value or quantity of inventory shown in the company's accounting 'books" such as an inventory control database or the general ledger. Book inventory is compared to physical inventory during audit processes for validation and to determine any variances.

Bottleneck: A constraint, obstacle or planned control that limits throughput or the utilization of capacity.

Bracketed Recall: A method of performing product recalls where a range of known lot numbers is expanded on the front and back end in order to capture any risk.

Break-Bulk: The separation of a single consolidated bulk load into smaller individual shipments for delivery to the ultimate consignees. This is preceded by a consolidation of orders at the time of shipment, where many individual orders that are destined for a specific geographic area are grouped into one shipment in order to reduce cost.

Broker: An intermediary between the shipper and the carrier. The broker arranges transportation for shippers and represents carriers.

Bulk Storage: Housing or storing like materials and packages in larger quantities, generally using the original pallets, packaging, shipping containers or boxes.

Bulk Packing: The process or act of placing multiple cartons, boxes or items into a larger single container to aid in the movement of product and to prevent damage or pilferage to the smaller cartons or boxes.

Bullwhip Effect: Also known as "Whiplash Effect" refers to the impact of changing customer demand and buyer ordering patterns on inventory and its impact on the supply chain. Graphing of the up and down demand magnification upstream in the supply chain is reminiscent of a cracking whip. The concept has its roots in J Forrester's Industrial Dynamics (1961) and thus it is also known as the Forrester Effect.

Bundle: A group of products that are shipped together as an unassembled unit; can also refer to like products packaged under a single item number/SKU.

Bundling: The process or act of handling or connecting two items together; an occurrence where two or more products are combined into one transaction for a single price.

Burn Rate: The rate of consumption of cash in a business. Burn rate is used to determine cash requirements on an on-going basis.

A burn-rate of $50,000 would mean the company spends $50,000 a month above any incoming cash flow to sustain its business. Entrepreneurial companies will calculate their burn-rate in order to understand how much time they have before they need to raise more money, or show a positive cash flow.

Business Activity Monitoring (BAM): A term that refers to capturing operational data in real-time or close to it, making it possible for an enterprise to react more quickly to events. This is typically done through software and includes features to provide alerts/notifications when specific events occur.

Business Application: Any computer program, set of programs, or package of programs created to solve a particular business problem or function.

Business Continuity Plan (BCP): A defined operational plan that is designed to be implemented in the event of disruption of normal operations. Disruptions may be the result of natural disasters, civil or labor unrest, etc.

Business Intelligence (BI): The set of skills, technologies, applications and practices used to help a business acquire a better understanding of its commercial context to make better business decisions; Often refers to the pool of data itself.

Business Logistics: The systematic and coordinated set of activities required to provide the physical movement and storage of goods (raw materials, parts, finished goods) from vendor/supply services through company facilities to the customer (market) and the associated activities – packaging, order processing, etc. – in an efficient manner necessary to enable the organization to contribute to the explicit goals of the company.

Business Plan: A formal statement of a set of business goals, the reasons why they are believed attainable, and the plan for reaching those goals. It may also contain background information about the organization or team attempting to reach those goals.

Business Performance Measurement (BPM): A technique that uses a system of goals and metrics to monitor performance. Analysis of these measurements can help businesses in periodically setting business goals, and then providing feedback to managers on progress towards those goals. A specific measure can be compared to itself over time, compared with a preset target or evaluated along with other measures.

Business Process Outsourcing (BPO): The practice of outsourcing non-core internal functions to third parties. Functions may include logistics, accounts payable, accounts receivable, payroll and human resources. Other areas can include Information Technology in part or in full, Research and Development or components in a production environment.

Business Process Reengineering (BPR): The fundamental rethinking and often times, radical redesign of business processes to achieve dramatic organizational improvements.

Business Reviews (BRs): A periodic assessment of the commercial context of a business - its mission statement, goals, and strategic plan. Reviews are typically held each quarter and are attended by senior managers of functional areas from both supplier and customer organizations; Sometimes referred to by the frequency of the meeting i.e. “Quarterly Review”

Business-to-Business (B2B): Business-to-business (**B2B**) refers to a business model where commerce occurs between two businesses rather than to commerce between a business and an individual consumer. This differs from a business-to-consumer (B2C) model.

Business-to-Consumer (B2C): Business to consumer (**B2C**) refers to the business model where transactions are conducted directly between a company and consumers who are the end-users of its products or services.

Business Unit: A section of an organization managed as a separate business with its own profit and loss financial reporting. Often centered on a business process, unique product or location.

Buyer Behavior: The mannerisms inherent in how a business or individual acts during the purchasing process.

C

Cabotage: A federal law that requires coastal and inter-coastal traffic to be carried in U.S.-built and –registered ships.

Cage: (1) A secure enclosed area for storing highly valuable items; (2) a pallet-sized platform with sides that can be secured to the tines of a forklift and in which a person may ride to inventory items stored at height above the warehouse floor.

CAGE Code: The Commercial and Government Entity code is a five-character (number and letters) code used to identify contractors doing business with the U.S. Government.

Caged: Referring to the practice of placing high-value or sensitive products in a fenced off area within a warehouse.

Calendar Days: Refers to a 7 day week; Differs from Working/Business Days that refers to a 5 day week Monday through Friday minus Holidays

Calculation*:* To convert from working days to calendar days – if work week:
= 4 days, multiply by 1.75
= 5 days, multiply by 1.4
= 6 days, multiply by 1.17

Call Center: A call center is a centralized location used for the purpose of receiving and transmitting a large volume of requests by telephone. Calls, live chat, email, etc., can all be conducted through a Call Center. Topics may be financial, technical, sales or support in nature.

Call Volume: The number of telephone calls made or received during a specific period of time.

Call-Off Orders: A strategy to delay delivery of items that are not needed immediately. Instead, you "call off" the items from the purchase order you want as you need them. *See: Blanket Purchase Order*

Cantilever Rack: Racking system that support columns at the rear and arms that attach to the support columns to hold shelving or stock. Cantilever racks allow for storage of very long items.

Capable to Promise (CTP): A technique similar to Available-to-Promise, it uses the availability of individual components to determine if an end item can be configured and assembled by a customer-given request date and provides the ability of adjusting plans due to inaccurate delivery date promises. Capable to Promise looks at materials and labor/machine requirements.

Capability Maturity Model (CMM): A framework that describes the key elements of an effective software process. It's an evolutionary improvement path from an immature process to a mature, disciplined process. The CMM covers practices for planning, engineering and managing software development and maintenance. When followed, these key practices improve the ability of organizations to meet goals for cost, schedule, functionality and product quality.

Capacity: The physical facilities, personnel, and process available to meet the product or service needs of customers. Capacity generally refers to the maximum output or producing ability of a machine, a person, a process, a factory, a product, or a service. *See: Capacity Management*

Capacity Management: The concept that capacity should be understood, defined, and measured for each level in the organization to include market segments, products, processes, activities, and resources. In each of these applications, capacity is defined in a hierarchy of idle, non-productive, and productive views.

Capacity Planning: Evaluation of available capacity and customer need assuring that needed resources (e.g., manufacturing capacity, distribution center capacity, transportation vehicles, etc.) will be available at the right time and place to meet logistics of the supply chain.

Capacity Requirements Planning (CRP): Software used to ensure sufficient labor, equipment, and supplies are in place to meet production demand.

Capital Expenditure: Purchase of a tangible or hard asset that will be used in the business over multiple years.

CapEx: A contraction used to describe the monetary requirements (CAPital EXpenditure) of an initial investment in new machines, software, or equipment.

Capital: The resources or money available for investing in assets that produce output.

Car Supply Charge: A railroad charge for a shipper's exclusive use of special equipment.

Carbon Footprint: A measure of the total carbon emissions for a given person, organization, building, operation, etc., and the impact those carbon emissions have on the environment by relating the amount of greenhouse gases produced to such activities as burning fossil fuels for electricity, heating, transportation, etc.

Carbon Trade: The process of buying and selling credits to emit carbon. Companies and organizations are assigned emission permits that limit the amount of carbon they are allowed to emit as a byproduct of the production process. If a company or organization emits less carbon, then it can sell its emissions permits. If emissions are more than the permitted amount, the company may seek to purchase additional amounts from other companies or organizations that produce less carbon.

Cargo: The subject of a shipment; the materials being carried.

Carload Lot: A shipment of not less than five tons of one commodity

Carmack Amendment: An Interstate Commerce Act amendment that delineates the liability of common carriers and the bill-of-lading provision.

Carousel: Carousels are a technology used to store items for eventual picking or retrieval in a series of motorized bins. There are two primary types of carousels (horizontal and vertical) and one related technology, all of which operate under some form of computer control. Categorized as an AS/RS (Automated Storage and Retrieval System).

Carrier: A firm that transports goods or people via land, sea, or air.

Cartel: A group of organizations that would normally be considered competitive, but that instead have an agreement to cooperate in an area of endeavor in an effort to improve the position of the group.

Cartonization: The process of packing goods into a shipping carton; also called over packing or strapping cases together.

Cascade Tendering: Loads are electronically submitted to the carrier who submitted the lowest rate on that shipping lane (origin ZIP code to destination ZIP code).

Case Code: The code used to represent a case quantity of a single item. The case code UPC is different from the UPC item code in that it adds the case identifier to the UPC. This is sometimes referred to as the “Shipping Container Symbol” or ITF-14 code.

Cash-to-Cash Cycle Time: The time it takes for cash to flow back into a company after it has been spent for raw materials. Note that this is a measure of when the financial transaction occurs, not when stock movement happens. There are occasions where C2C is negative, indicating that payment is received from sales of the product before the supplier is paid. *Synonym: Cash Conversion Cycle*

Calculation*:* Total Inventory Days of Supply + Days of Sales Outstanding - Average Payment Period for Material in days

Carrying Costs: Costs of holding inventory; is derived from carrying the inventory on the books.

Cash Conversion Cycle: Typically the length of time from the purchase of raw materials to the collection of payment from customers. In retail settings it may refer to the length of time from sales to payment receipt. *Also See: Cash-to-Cash Cycle Time*

Catalog Item (CI): The item as it is stored in a catalog or data pool. In the Global Data Synchronization Network the catalog item is uniquely identified by GTIN + GLN + Target Market.

Catalog Channel: A call center or order-processing facility that receives orders directly from the customer based on defined catalog offerings and ships directly to the customer.

Categorical Plan: A method of categorizing purchased materials and suppliers based on product type, using departments or functional areas. Plans are used to evaluate suppliers in groups. *See: Weighted-Point Plan*

Category Management: The management of product categories as strategic business units. The practice empowers a category manager with full responsibility for the assortment decisions, inventory levels, shelf-space allocation, promotions and buying. With this authority and responsibility, the category manager is able to judge more accurately the consumer buying patterns, product sales and market trends of that category.

Cause and Effect Diagram: In quality management, a structured process used to organize ideas into logical groupings. Used in brainstorming and problem solving exercises. Also known as Ishikawa or fishbone diagram.

Cell: An area of manufacturing or assembly that consists of a series of work units devoted to the manufacture of a specific product. Cellular manufacture is an alternative to the traditional production line.

Cellular Manufacturing: A manufacturing approach in which equipment and workstations are arranged to facilitate small-lot, continuous-flow production. In a manufacturing "cell," all operations necessary to produce a component or subassembly are performed in close proximity, thus allowing for quick feedback between operators when quality problems and other issues arise. Workers in a manufacturing cell typically are cross-trained and able to perform multiple tasks as needed.

Center-of-Gravity Approach: A supply chain planning methodology for locating distribution centers at approximately the location representing the minimum transportation costs between the plants, the distribution centers, and the markets.

Centralized Authority: Management authority to make decisions is restricted to few managers.

Centralized Dispatching: An organizational strategy and structure where workflow is controlled from a single location or group. Dispatching can consist of production orders as well as inbound/outbound shipments of goods or coordination of services.

Centralized Inventory Control: An organizational strategy and structure where all inventoried items are controlled from a single location or group.

Certificate of Analysis (COA): A document, often required by an importer or governmental authorities, attesting to the quality or purity of commodities based on predetermined conditions or criteria. May contain composition information as well.

Certificate of Compliance: A document, often required by an importer or governmental authorities, attesting to the quality or purity of commodities. The origin of the certification may be a chemist or any other authorized body such as an inspection firm retained by the exporter or importer.

Certificate of Origin: An international business document that certifies the country of origin of the shipment.

Certificate of Public Convenience and Necessity: The grant of operating authority that is given to common carriers. A carrier must prove that a public need exists and that the carrier is fit, willing, and able to provide the needed service. The certificate may specify the commodities to be hauled, the area to be served, and the routes to be used.

Certified Supplier: A supplier who has demonstrated the ability to consistently meet established quality, cost, delivery, financial, and count objectives, and has therefore been awarded the "certified" designation. Suppliers in this group may be able to bypass incoming quality inspection.

Certificated Carrier: A for-hire air carrier that is subject to economic regulation and requires an operating certification to provide service.

Chain of Customers: The downstream supply chain in situations where multiple echelons exist such as manufacturer to distributor to retailer to end user.

Chain Reaction: A chain of events described by W. Edwards Deming: improve quality, decrease costs, improve productivity, increase market with better quality and lower price, stay in business, provide jobs and provide more jobs.

Challenge and Response: A method of user authentication. The user enters an ID and password and, in return, is issued a challenge by the system. The system compares the user's response to the challenge to a computed response. If the responses match, the user is allowed access to the system. The system issues a different challenge each time. In effect, it requires a new password for each logon.

Champion: A business leader or senior manager who ensures that resources are available for training and projects, and who is involved in project tollgate reviews; also an executive who supports and addresses Six Sigma organizational issues.

Change Agent: An individual from within or outside an organization who facilitates change within the organization. May or may not be the initiator of the change effort.

Change Management: The process of managing and monitoring all changes to products and processes. Change management is typically instituted to avoid risks associated with ad-hoc change, and to ensure a consistent process.

Change Order: A document or digital record that authorizes and provides notification of a modification to a product or order.

Changeover: Process of making necessary adjustments to change or switchover the type of products produced on a manufacturing line. Can refer to the length of time required to complete the adjustment. *Relates to the subject of Downtime*

Channel: 1) A method whereby a business dispenses its product via channels such as retail or distribution channel, call center, or web-based electronic storefront, and 2) A push technology that allows users to subscribe to a website to browse offline, automatically display updated pages on their desktops, and download or receive notifications when website pages are modified. Channels are available only in browsers that support channel definitions—such as Microsoft Internet Explorer version 4.0 and above.

Channel Conflict: This occurs when various sales channels within a company's supply chain compete with each other for the same business. An example is where a retail channel is in competition with a web based channel set up by the company.

Channel Partners: Members of a supply chain (i.e. suppliers, manufacturers, distributors, retailers, etc.) who work in conjunction with one another to manufacture, distribute, and sell a specific product.

Channels of Distribution: The downstream flow of products through various outlets or ' channels' that may consist of distributors, retail stores, on-line fulfillment, etc. *Also See: Distribution Channel*

Chargeback Provisions: Terms within a contract that govern how a company can charge a supplier for failure to perform agreed upon required activities.

Charging Area: A warehouse area where a company maintains battery chargers and extra batteries to support a fleet of electrically powered materials handling equipment. The company must maintain this area in accordance with government safety regulations.

Chock: A wedge, usually made of hard rubber or steel that is firmly placed under the wheel of a trailer, truck, or boxcar to stop it from rolling.

Churning: The practice of customers switching to another supplier based on special discount offers. Sometimes this term is applied to supplier management where a practice of choosing the low price vendor is emphasized over maintaining strategic relationships.

City Driver: A motor carrier driver who drives a local route as opposed to a long-distance, intercity route.

Civil Aeronautics Board: A federal regulatory agency that implemented economic regulatory controls over air carriers.

Claim: A charge made against a carrier for loss, damage, delay, or overcharge.

Class I carrier: A classification of regulated carriers based upon annual operating revenues – motor carriers of property: > or = $5 million; railroads: > or =$50 million; motor carriers of passengers: > or =$3 million.

Class II carrier: A classification of regulated carriers based upon annual operating revenues – motor carriers of property: $1-$5 million; railroads: $10-$50 million; motor carriers of passengers: < or = $3 million.

Class III carrier: A classification of regulated carriers based upon annual operating revenues – motor carriers of property: < or = $1 million; railroads: < or = $10 million.

Classification: An alphabetical listing of commodities, the class or rating into which the commodity is placed, and the minimum weight necessary for the rate discount; used in the class rate structure.

Classification Yard: A railroad terminal area where rail cars are grouped together to form train units.

Class Rate: A rate constructed from a classification and a uniform distance system. A class rate is available for any product between any two points.

Clearinghouse: A conventional or limited purpose entity generally restricted to providing specialized services, such as clearing funds or settling accounts.

Click-and-Mortar: With reference to a traditional brick-and-mortar company that has expanded its presence online. Many brick-and-mortar stores are now trying to establish an online presence but often have a difficult time doing so for many reasons. Click-and-mortar is "the successful combination of online and real world experience."

Closed-Loop Corrective Action (CLCA): A sophisticated engineering system designed to document, verify and diagnose failures, recommend and initiate corrective action, provide follow-up and maintain comprehensive statistical records.

Closed-Loop MRP: A production and operations environment that manages materials and production processes through a full closed loop cycle beginning with planning, proceeding through the execution process, and providing any resulting feedback and corrective actions back to the planning function to validate and improve future processes.

Cloud Computing: The practice whereby data and services reside in massively scalable offsite data centers that are accessed remotely from any connected devices over the internet. Similar to the "on demand" concept of SaaS or ASP computing services with the exception of the broad nature of the network of computers.

Cluster Picking: Cluster picking is a methodology of picking into multiple order containers at one time. The containers could be totes containing order batches, discrete order shippers, or discrete order totes.

Coastal Carriers: Water carriers that provide service along coasts serving ports on the Atlantic or Pacific oceans or on the Gulf of Mexico

Co-Destiny: A concept that begins with the idea of long term buyer-supplier relationships and assumes that organizations are uniquely and in most cases inextricably tied to their suppliers and customers.

Co-Packer: A contract co-packer produces goods and/or services for other companies, usually under the other company's label or name. Co-Packers are more frequently seen in CPG and Foods.

Co-Managed Inventory (CMI): A form of continuous replenishment in which the manufacturer is responsible for replenishment of standard merchandise, while the retailer manages the replenishment of promotional merchandise.

Code: A numeric, or alphanumeric, representation of text for exchanging commonly used information. For example: commodity codes, carrier codes.

Codifying: The process of standardizing a new standard or process.

Collaboration: Joint work and communication among people and systems – including business partners, suppliers, and customers – to achieve a common business goal.

Collaborative Planning, Forecasting and Replenishment (CPFR®): A concept that aims to enhance supply chain integration by supporting and assisting joint practices. CPFR seeks cooperative management of inventory through joint visibility and replenishment of products throughout the supply chain. Information shared between suppliers and retailers aids in planning and satisfying customer demands through a supportive system of shared information. This allows for continuous updating of inventory and upcoming requirements, essentially making the end-to-end supply chain process more efficient. Efficiency is also created through the decrease expenditures for merchandising, inventory, logistics, and transportation across all trading partners.

Collect Freight: Freight payable to the carrier at the port of discharge or ultimate destination. The consignee does not pay the freight charge if the cargo does not arrive at the destination.

Commercial Invoice: A document created by the seller. It is an official document that is used to indicate, among other things, the name and address of the buyer and seller, the product(s) being shipped, and their value for customs, insurance, or other purposes.

Commercial Off-the-Shelf (COTS): A computer software industry term that describes software offered for sale by commercial developers. This includes products from vendors such as SAP, Oracle, Microsoft, etc., as well as from smaller vendors.

Commercial Zone: The area surrounding a city or town to which rates quoted for the city or town also apply; the area is defined by the ICC.

Committed Capability: The level of operational capability that is currently either part of a planned schedule or is in actual use.

Commodities Clause: A clause that prohibits railroads from hauling commodities that they produced, mined, owned, or had an interest in.

Commodity: An item that is traded in commerce. The term usually implies an undifferentiated product competing primarily on price and availability.

Commodity Buying: The practice of grouping like purchased items into common groups that are then managed by a single buyer/agent. This practice assumes that an individual who is more focused on a range of products or services can perform that function better than someone who is novice.

Commodity Code: A code describing a commodity or a group of commodities pertaining to goods classification. This code can be carrier tariff or regulating in nature.

Commodity Rate: A rate for a specific commodity and its origin-destination.

Common Carrier: Any carrier engaged in the interstate transportation of persons/property on a regular schedule at published rates, whose services are for hire to the general public.

Common Carrier Duties: Common carriers are required to serve, deliver, charge reasonable rates, and not discriminate.

Common Cost: A cost that cannot be directly assignable to particular segments of the business but that is incurred for the business as a whole.

Commuter: An exempt for-hire air carrier that publishes a time schedule on specific routes; a special type of air taxi.

Communication Protocol: The method by which two computers coordinate their communications. BISYNC and MNP are two examples.

Company Culture: A concept that describes the psychology, attitudes, experiences, beliefs and values (personal and cultural values) of an organization. The values and customs shared by people and groups in an organization that govern how they interact with each other and with outside organizations.

Comparative Advantage: A principle based on the assumption that an area will specialize in the production of goods for which it has the greatest advantage or least comparative disadvantage.

Competitive Advantage: Value created by a company for its customers that clearly distinguishes it from the competition, and provides its customers a reason to remain loyal.

Competitive Benchmarking: The practice of comparing and rating a company's products or services against those of competitors.

Competitive Bid: A price/service offering by a supplier that must compete with offerings from other suppliers.

Competitive Differentiator: The ability to communicate what makes the company, product or service unique and to stand out from other companies, products or services within the marketplace.

Complete and On-Time Delivery (COTD): A measure of customer service. All items on any given order must be delivered on time for the order to be considered as complete and on time.

Complete Manufacture to Ship Time: Average time from when a unit is declared shippable by manufacturing until the unit actually ships to a customer.

Compliance: Meaning that products, services, processes and/or documents comply with requirements.

Compliance Checking: The function of electronic data interchanges (EDI) processing software that ensures that all transmissions contain the mandatory information demanded by the EDI standard. Compares information sent by an EDI user against EDI standards and reports any exceptions. Does not ensure that documents are complete and fully accurate, but does reject transmissions that are missing data elements or that have syntax errors.

Compliance Monitoring: A check done by the value added network (VAN)/third-party network or the translation software, to ensure the data being exchanged is in the correct format for the standard being used; Can be used to describe the audit process in any business system.

Compliance Program: method by which two or more EDI trading partners periodically report conformity to agreed-upon standards of control and audit. Management produces statements of compliance, which summarize any exceptions and corrective action planned or taken in accordance with operating rules. Auditors produce an independent and objective statement of opinion on management statements.

Component: Material that will contribute to a finished product but is not the finished product itself. Examples would include tires for an automobile, power supply for a personal computer, or a zipper for a ski parka. Note that what is a component to the manufacturer may be considered the finished product of their supplier; sometimes called a sub-assembly unit

Computer-Aided Design (CAD): Computer-based systems for product design that may incorporate analytical and "what if" capabilities to optimize product designs. Many CAD systems capture geometric and other product characteristics for engineering-data-management systems, production and cost analysis, and performance analysis.

Computer Aided Engineering (CAE): The use of computers to model design options to stimulate operational performance.

Computer-Aided Manufacturing (CAM): Computerized systems in which manufacturing instructions are downloaded to automated equipment or to operator workstations.

Computer-Aided Process Planning (CAPP): Software-based systems that aid manufacturing engineers in creating a process plan to manufacture a product who's geometric, electronic, and other characteristics have been captured in a CAD database. CAPP systems address such manufacturing criteria as target costs, target lead times, anticipated production volumes, availability of raw materials, etc.

Computer-Based Training (CBT): Training that is delivered via computer workstation and includes all training and testing materials.

Computer-Integrated Manufacturing (CIM): A variety of approaches in which computer systems communicate or interoperate over a local-area network. Typically, CIM systems link management functions with engineering, manufacturing, and support operations. In the factory, CIM systems may control the sequencing of production operations, control operation of automated equipment and conveyor systems, transmit manufacturing instructions, capture data at various stages of the manufacturing or assembly process, facilitate tracking and analysis of test results and operating parameters, or a combination of these.

Computerized Maintenance Management Systems (CMMS): Software-based systems that analyze operating conditions of production equipment – vibration, oil analysis, heat, etc. – and equipment-failure data, and apply that data to the scheduling of maintenance and repair inventory orders and routine maintenance functions. A CMMS prevents unscheduled machine downtime and optimizes a plant's ability to process product at optimum volumes and quality levels.

Computerized Process Simulation: Use of computer simulation to facilitate sequencing of production operations, analysis of production flows, and layout of manufacturing facilities.

Concept of Operations (CONOPS): There are various uses and users for CONOPS. The primary purpose of the CONOPS is to provide a vision for an initiative or desired capability. In general, the CONOPS provides guidance to those users requiring direction and/or information on developing their own documents, schedules, milestones, and plans.

Concurrent Engineering: A cross-functional, team-based approach in which the product and the manufacturing process are designed and configured within the same time frame, rather than sequentially. Ease and cost of manufacturability, as well as customer needs, quality issues, and product-life- cycle costs are taken into account earlier in the development cycle. Fully configured concurrent engineering teams include representation from marketing, design engineering, manufacturing engineering, and purchasing, as well as supplier – and even customer – companies.

Configuration: The selection and grouping of components and assemblies into a finished product.

Configuration Excellence: Focuses on establishing and maintaining consistency of a product or service's performance. It also looks at the functional and physical attributes of a product with its requirements, design, and operational information throughout the product's life.

Configure/Package-to-Order: A process where the trigger to begin manufacture, final assembly or packaging of a product is an actual customer order or release, rather than a market forecast. In order to be considered a Configure-to-Order environment, less than 20 percent of the value-added takes place after the receipt of the order or release, and virtually all necessary design and process documentation is available at time of order receipt.

Confirmation: With regards to EDI, a formal notice (by message or code) from an electronic mailbox system or EDI server indicating that a message sent to a trading partner has reached its intended mailbox or been retrieved by the addressee.

Confirming Order: A document similar to, or same as a purchase order, that is provided to a supplier as confirmation of a previous verbal purchase request.

Conformance: A term used in quality management that measures and/or documents the state of adherence to specification of a product or service. Synonym: Compliance.

Consensus: A state in which all the members of a group support an action or decision, even if some of them don't fully agree with it.

Consignee: The party to whom goods are shipped and delivered. The receiver of a freight shipment.

Consignment: The act of consigning – placing a person or thing in the possession of another, but retaining ownership until the goods are sold. This may apply to shipping or sale in a store (i.e., a consignment shop).*Also See: Consignment Inventory*

Consignment Inventory: 1) Goods or product that are paid for when they are sold by the reseller, not at the time they are shipped to the reseller. 2) Goods or products that are owned by the vendor until they are sold to the consumer.

Consignor: The party who originates a shipment of goods (shipper). The sender of a freight shipment, usually the seller.

Consolidation: Combining two or more shipments in order to realize lower transportation rates. Inbound consolidation from vendors is called make- bulk consolidation; outbound consolidation to customers is called break-bulk consolidation.

Consolidator: An enterprise that provides services to group shipments, orders, and/or goods to facilitate movement.

Consortium: An association of two or more individuals, companies, organizations or governments (or any combination of these entities) with the objective of participating in a common activity or pooling their resources for achieving a common goal.

Constraint: A bottleneck, obstacle or planned control that limits throughput or the utilization of capacity.

Consul: A government official residing in a foreign country, charged with representing the interests of his/her country and its nationals.

Consular Declaration: A formal statement made to the consul of a country describing merchandise to be shipped to that consul's country. Approval must be obtained prior to shipment.

Consular Documents: Special forms signed by the consul of a country to which cargo is destined.

Consular Invoice: A document, required by some foreign countries, describing a shipment of goods and showing information such as the consignor, consignee, and value of the shipment. Certified by a consular official of the foreign country, it is used by the country's custom.

Consultative Sales: A method of selling that emphasizes customer needs and meeting those needs with solutions combining products and/or services depending on customer profile.

Consumer: Someone who purchases goods and/or services for personal use.

Consumer Packaged Goods (CPG): Consumable goods such as food and beverages, footwear and apparel, tobacco, and cleaning products. In general, CPGs are things that get used up and have to be replaced frequently, in contrast to items that people usually keep for a long time, such as cars and furniture.

Consuming the Forecast: The practice of allowing forecast requirements to be reduced by actual orders received. This allows a planning system to avoid duplication of demand when actual customer orders for a period are received.

Consumption Entry: An official Customs form used for declaration of reported goods, also showing the total duty due on such transaction.

Contactless: Refers to the practice of using RFID, Smart Card or other forms of Near Field Communications technology to gather data electronically without the need to actually make contact physically with the item.

Container: 1) A typically 10 to 40 foot long corrugated metal "box", which is primarily used for ocean freight shipments. For travel to and from ports, containers are loaded onto truck chassis or on railroad flatcars. 2) The packaging, such as a carton, case, box, bucket, drum, bin, bottle, bundle, or bag, that an item is packed and shipped in.

Container Security Initiative (CSI): U.S. Customs program to prevent global containerized cargo from being exploited by terrorists; Designed to enhance security of a sea cargo container.

Containerization: A system of intermodal freight transport using standard intermodal containers that are standardized by the International Organization for Standardization (ISO). These can be loaded and sealed intact onto container ships, railroad cars, planes, and trucks.

Contingency Planning: Preparing to deal with risks such as environmental emergencies (e.g., floods) and non-emergency but still disruptive situations (e.g., strikes) before they occur. Often a component of a Disaster Recovery plan.

Continuous Flow Distribution (CFD): The streamlined pull of products in response to customer requirements while minimizing the total costs of distribution.

Continuous Flow Manufacturing: A production system organized and sequenced according to the steps involved in the manufacturing process where the product moves seamlessly and continuously through the entire manufacturing process.

Continuous-Flow, Fixed-Path Equipment: Materials handling devices that include conveyors and drag lines.

Continuous Improvement (CI): A structured measurement driven process that continually reviews and improves processes and performance.

Continuous Move: A practice used by some large shippers to ensure lower shipping rates and guaranteed capacity. The shipper works with a few core carriers to group a series of one-way hauls between suppliers, manufacturing plants, distribution centers and sometimes customers into a round trip. The carriers benefit from fewer empty miles, less idle time, better asset utilization and more regular routes.

Continuous Order Release: A process for releasing orders as soon as an order is available versus releasing all orders in batches at specific times.

Continuous Process Improvement (CPI): Continuous Process Improvement is a strategic approach for developing a culture of continuous improvement in the areas of reliability, process cycle times, costs in terms of less total resource consumption, quality, and productivity. *Also See: Kaizen*

Continuous Replenishment: Continuous Replenishment is the practice of partnering between distribution channel members that changes the traditional replenishment process from distributor-generated purchase orders, based on economic order quantities, to the replenishment of products based on actual and forecasted product demand.

Continuous Replenishment Planning (CRP): A program that triggers the manufacturing and movement of product through the supply chain when the identical product is purchased by an end user.

Contract: A legally binding agreement between two or more parties to provide specific products or services.

Contract Administration: The activities associated with managing contract compliance.

Contract Carrier: Carrier engaged in interstate transportation of persons/property by motor vehicle on a for-hire basis, but under continuing contract with one or a limited number of customers to meet specific needs.

Contract Manufacturing: A relationship where a third party manufactures all or part of finished goods items under another company's label.

Contract Provisions: Stipulations typically located at the end of the contract document, specifying how the parties to the contract should govern their relationship and administer the contract.

Contractor: A non- employee that agrees to deliver goods or services at a specified price and time.

Contractor Logistics Support (CLS): A term in performance based logistics that refers to support in which maintenance operations for a particular military system are performed exclusively by contract support personnel.

- **CLS (Cost Plus):** used for transitional support while cost and resource baselines are being tracked and defined.
- **CLS (Fixed Price):** Used when cost and resource baselines are well-documented, cost and pricing risk are minimal, and both DoD and contractor can define price, incentives and performance outcomes with a high degree of confidence.

Contractor Performance Assessment Report: A tool used to rate the performance of vendor used in the decision making process regarding future business decisions.

Contribution: The difference between sales revenue and variable costs. Contribution is not the same as profit since it only considers the variable costs; it is the amount applied to fixed costs with the difference being profits.

Contribution Margin: The fraction of sales that contributes to the offset of fixed costs. Alternatively, unit contribution margin is the amount each unit sale adds to profit: it's the slope of the Profit line.

Controllable Returns: These are errors or problems caused by the company or a member of the company's supply chain and often can be resolved by the company. Examples of errors or problems are picking and packing errors, improper forecasting, poor product handling, poor quality control and lack of communication with customers.

Controlled Access: Referring to an area within a warehouse or yard that is fenced and gated. These areas are typically used to store high-value items and may be monitored by security cameras.

Conveyor: A materials handling device that moves freight from one area to another in a warehouse. Roller conveyors make use of gravity, whereas belt conveyors use motors.

Cooperative Associations: Groups of firms or individuals having common interests: agricultural cooperative associations may haul up to 25 percent of their total interstate tonnage in non-farm, non-member goods in movements incidental and necessary to their primary business.

Co-opetition: A combination of cooperation and competition that offers rivals the counterintuitive possibility to benefit from each other's seemingly competitive activities. An example can be found in the group-buying setting where its use refers to the activity of multiple, normally competitive buying group members leveraging each other' s buying power to gain reduced pricing.

Coordinated Transportation: Two or more carriers of different modes transporting a shipment.

Co-product: The term co-product is used to describe multiple items that are produced simultaneously during a production run. Co-products are often used to increase yields in cutting operations such as die cutting or sawing when it is found that scrap can be reduced by combining multiple-sized products in a single production run. Co-products are also used to reduce the frequency of machine setups required in these same types of operations. Co-products, also known as byproducts, are also common in process manufacturing such as in chemical plants. Although the concept of co-products is fairly simple, the programming logic required providing for planning and processing of co-products is very complicated.

Core Competency: A specific factor that a business sees as being central to the way it, or its employees, works. It fulfills three key criteria:

1. It provides consumer benefits
2. It is not easy for competitors to imitate
3. It can be leveraged widely to many products and markets.

A core competency can take various forms, including technical/subject matter know-how, a reliable process and/or close relationships with customers and suppliers. It may also include product development or culture, such as employee dedication.

Core Process: Sometimes called "core business" this is the capability that is considered central to a company's competitive strategy.

Corrective Action: A change implemented to address a weakness identified in a management system, usually brought to the company' s attention by a customer complaint of nonconformities identified during an internal audit or adverse or unstable trends in product and process monitoring identified by the statistical process control (SPC).

Corrective Action Reporting System: The defined process in a Quality System used to document, track and report corrective actions.

Corrective Action Review (CAR): The process whereby individual Correction Actions are evaluated and audited.

Cost Accounting: A management accounting practice that establishes budget and actual cost of operations, processes, departments or product and the analysis of variances, profitability or use of funds. Managers use cost accounting to support decision-making to cut a company's costs and improve profitability.

Cost Allocation: An accounting practice that assigns indirect costs such as overhead to products or services using a known factor such as pieces produced or direct labor costs/hours.

Cost Center: In accounting, a sub-unit in an organization that is responsible for costs.

Cost Driver: In accounting, any situation or event that causes a change in the consumption of a resource, or influences quality or cycle time. An activity may have multiple cost drivers. Cost drivers do not necessarily need to be quantified; however, they strongly influence the selection and magnitude of resource drivers and activity drivers.

Cost Driver Analysis: In cost accounting, the examination, quantification, and explanation of the effects of cost drivers. The results are often used for continuous improvement programs to reduce throughput times, improve quality, and reduce cost.

Cost Element: In cost accounting, the lowest level component of a resource, activity, or cost object.

Cost, Insurance, Freight (CIF): A trade term requiring the seller to arrange for the carriage of goods by sea to a port of destination, and provide the buyer with the documents necessary to obtain the goods from the carrier.

Cost Management: The management and control of activities and drivers to calculate accurate product and service costs, improve business processes, eliminate waste, influence cost drivers, and plan operations. The resulting information will have utility in setting and evaluating an organization's strategies.

Cost of Capital: The cost to borrow or invest capital (i.e. interest expense).

Cost of Goods Sold (COGS): The amount of direct materials, direct labor, and allocated overhead associated with products sold during a given period of time and determined in accordance with Generally Accepted Accounting Principles (GAAP).

Cost of Lost Sales: The forgone profit associated with a stock-out.

Costs per Unit Moved: A measure to calculate the cost of moving one unit of product.

Calculation*:* (Total Costs to Move Units)/ (Total Number of Units Moved)

Cost Plus Incentive-Fee (CPIF): A type of PBL contract pricing that combines a cost basis with an incentive fee feature. The incentive feature allows a base fee to be adjusted based on the relationship of actual costs to target costs.

Cost Plus Award-Fee (CPAF): A type of PBL contract pricing that combines a cost basis with an award fee feature. The award feature allows a base fee to be adjusted based on success in meeting target performance goals.

Cost Recovery Rate (CRR): A financial operations tool used to measure how well an investment recoups the cost of that investment.

Cost-to-Serve: A chain of activities required to get a company's products or services into their customers' stores and onto their shelves. This includes order taking, picking and freighting the order, arranging promotions by sales reps, processing credits, and merchandising the product.

Cost Trade-off: The interrelationship among system variables indicates that a change in one variable has cost impact upon other variables. A cost reduction in one variable may be at the expense of increased cost for other variables, and vice versa.

Cost Variance: A term used in cost accounting to describe the difference between actual cost and what was budgeted or expected.

Courier Service: A fast, door-to-door service for high-valued goods and documents; firms usually limit service to shipments of 50 pounds or less.

Council of Supply Chain Management Professionals (CSCMP): The CSCMP is a not-for-profit professional business organization consisting of individuals throughout the world who have interests and/or responsibilities in logistics and supply chain management, and the related functions that make up these professions. Its purpose is to enhance the development of the logistics and supply chain management professions by providing these individuals with educational opportunities and relevant information through a variety of programs, services, and activities.

Count Back: A process in which order pickers selecting full cases from pallet rack locations perform an immediate cycle count at the completion of the pick for that location, using a Radio Frequency or voice terminal. The use of the count-back program is just one component of being able to prove perfect order picking and the highest degree of inventory accuracy.

Country of Origin (COO): The country of manufacture, production or growth from where a product comes.

CPFR®: *See: Collaborative Planning Forecasting and Replenishment*

Credit Level: The amount of purchasing credit a customer has available. Usually defined by the internal credit department and reduced by any existing unpaid bills or open orders.

Credit Memo (CM): A document issued to provide authorization for a customer account credit, typically due to product returns, billing errors or other adjustments.

Critical Differentiators: This is what makes an idea, product, service or business model unique.

Critical Success Factor (CSF): Necessary conditions for success that can be measured quantitatively for effectiveness, economy, and efficiency; those few areas where satisfactory performance is essential in order for a business to succeed; characteristics, conditions, or variables that have a direct influence on a customer's satisfaction with a specific business process; and the set of activities that must be done correctly if a vision is to be achieved.

Critical Value Analysis: A modified ABC analysis in which a subjective value of criticalness is assigned to each item in the inventory.

Cross Functional: A term used to describe a process or an activity that crosses the boundary between functions. A cross functional team consists of individuals from more than one organizational unit or function.

Cross Functional "Process" Metric*:* A number resulting from an equation, showing the output of a process that spans departments. These types of measures are also known as a process measures because they span across the breadth of a process, regardless of functional/departmental segregation within the process. Example: Perfect Order Index.

Cross Sell: The practice of attempting to sell additional products to a customer during a sales call. For example, when the customer service representative (CSR) presents a camera case and accessories to a customer that is ordering a camera.

Cross-Shipment: A term used widely in the electronics industry when shipment of a replacement part or device is made in advance of physical return of the defective part.

Cross-Subsidy: In cost accounting, the inequitable assignment of costs to cost objects that leads to over costing or under costing them relative to the amount of activities and resources actually consumed. This may result in poor management decisions that are inconsistent with the economic goals of the organization.

Cross Dock/Cross Docking (XDK): A distribution system in which merchandise received at the warehouse or distribution center is not put away, but instead is readied for shipment to retail stores. Cross docking requires close synchronization of all inbound and outbound shipment movements. By eliminating the put-away, storage and selection operations, it can significantly reduce distribution costs.

Critical Success Factor (CSF): Those activities and/or processes that must be completed and/or controlled to enable a company to reach its goals.

Cube: The volume of the shipment or package or storage location (the product of the length x width x height).

Cubage: Cubic volume of space being used or available for shipping or storage.

Cube Utilization: The use of space within a storage area, trailer, or container. Cube utilization is generally calculated as a percentage of total space or of total "usable" space. Note that there is a point at which too high percent utilization can create inefficiency.

Cubic Space: The measurement of total space or volume available or required in transportation and warehousing. The length x width x height of the storage location or container.

Cumulative Available-to-Promise: A calculation that yields future availability based on planned production or purchases and consumption across multiple future periods. *Also See: Available-to-Promise*

Cumulative Lead Time: The maximum time required to source components, build and ship a product.

Cumulative Source/Make Cycle Time: The cumulative internal and external lead time to manufacture shippable product, assuming that there is no inventory on-hand, no materials or parts on order, and no prior forecasts existing with suppliers (an element of Total Supply Chain Response Time).

Calculation: The critical path along the following elements: Total Sourcing Lead Time, Manufacturing Order Release to Start Manufacturing, Total Manufacture Cycle Time (Make-to-Order, Engineer-to-Order, Configure/Package-to-Order) or Manufacture Cycle Time (Make-to-Stock) – Complete Manufacture to Ship Time.

Note: Determined separately for Make-to-Order, Configure/Package-to-Order, Engineer-to-Order, and Make-to-Stock products.

Currency Adjustment Factor (CAF): An added charge assessed by water carriers for currency value changes.

Current Good Manufacturing Practice (CGMP): Regulations enforced by the U.S. Food and Drug Administration for food and chemical manufacturers and packagers.

Customer: 1) in distribution, the trading partner or reseller (i.e., Wal-Mart, Safeway, or CVS) and 2) in direct-to-consumer, the end customer or user.

Customer Acquisition or Retention: The rate by which new customers are acquired, or existing customers are retained. A key selling point to potential marquis partners. *Also See: Marquis Partner*

Customer Driven: The end user, or customer, motivates what is produced or how it is delivered.

Customer Facing: Those personnel or activities whose jobs entail actual contact with the customer. The manner in which a business service feature is experienced or seen by a customer.

Customer Interaction Center (CIC): For the CIC you can call all standard and user-defined business processes. *Also See: Call Center*

Customer Operations Performance Center (COPC): Stands for Benefits, Benchmarking COPC standards and improvements. Consulting services, training, certification, and benchmarking services.

Customer Order: An actual order, not a forecast or planned order, from a customer for specific products or services.

Customer/Order Fulfillment Process: The typical business process that includes receipt and processing of a customer order through delivery.

Customer Profitability: The practice of placing a value on the profit generated by business done with a particular customer.

Customer Receipt of Order to Installation Complete: Average lead-time from receipt of goods at the customer to the time when installation (if applicable) is complete, including the following sub-elements: time to get product up and running, and product acceptance by customer (an element of Order Fulfillment Lead Time).

Note: Determined separately for Make-to-Order, Configure/Package-to-Order, Engineer-to-Order, and Make-to-Stock products.

Customer Relationship Management (CRM): This refers to information systems that help sales and marketing functions, as opposed to the Enterprise Resource Planning (ERP), which is for back-end integration.

Customer Segmentation: Dividing customers into groups based on specific criteria, such as products purchased, customer geographic location, etc.

Customer Service: Activities involved in providing the full range of services to customers.

Customer Service Representative (CSR): An individual who provides customer support; main point of contact for the customer.

Customer Signature/Authorization to Order Receipt: Average lead time from customer authorization of an order to the time that that order is received and order entry commences. This is an element of order fulfillment lead time.

Note: This is determined separately for make-to-order, configure/package-to-order, engineer-to-order, and make-to-stock products. Note: Determined separately for Make-to-Order, Configure/Package-to-Order, Engineer-to-Order, and Make-to-Stock products.

CUSTOMER WAIT TIME (CWT): The total elapsed time between issuance of a customer order and satisfaction of that order.

Customer-Supplier Partnership: An extended relationship between buyers and sellers based on confidence, credibility, and mutual benefit. The buyer, on its part, provides long-term contracts and assurance of only a small number of competing suppliers. In reciprocation, the seller implements customer's suggestions and commits to continuous improvement in quality of product and delivery

Customization: Creating a product from existing components into an individual order. Synonym: Build to Order.

Customs and Border Protection, U.S. (CBP): Fanned during the creation of the Department of Homeland Security in 2003, CBP consists primarily of the customs inspection function formerly performed by the U.S. Customs Service as part of the Department of Treasury, the immigration inspection function formerly performed by the Immigration and Naturalization Service (INS), and the Border Patrol, formerly part of the Department of Justice.

Customs House Broker: A business firm that oversees the movement of international shipments through customs and ensures that the documentation accompanying a shipment is complete and accurate.

Customs-Trade Partnership against Terrorism (C-TPAT): A joint government/business initiative to build cooperative relationships that strengthen overall supply chain and border security. The voluntary program is designed to share information that will protect against terrorists' compromising the supply chain.

Cycle Counting: An inventory control and management practice that refers to a process of regularly scheduled inventory counts (usually daily) that "cycles" through your inventory. Users determine how often certain items or locations are counted using frequency or dollar values segregated into "ABC" categories. Cycle counting can eliminate the need for wall to wall physical counts and can maintain a higher level of on-going accuracy.

Cycle Inventory: An inventory system where counts are performed continuously, often eliminating the need for an annual overall inventory. It is usually set up so that A items are counted regularly (i.e. every month), B items are counted semi-regularly (every quarter or six months), and C items are counted perhaps only once a year.

Cycle Time: The amount of time it takes to complete a business process.

Cycle Time to Process Excess Product Returns for Resale: The total time to process goods returned as Excess by customer or distribution centers, in preparation for resale. This cycle time includes the time a Return Product Authorization (RPA) is created to the time the RPA is approved, from Product Available for Pick-up to Product Received and from Product Receipt to Product Available for use.

Cycle Time to Process Obsolete and End-of-Life Product Returns for Disposal: The total time to process goods returned as Obsolete and End of Life to actual Disposal. This cycle time includes the time a Return Product Authorization (RPA) is created to the time the RPA is approved, from Product Available for Pick-up to Product Received and from Product Receipt to Product Disposal/Recycle.

Cycle Time to Repair or Refurbish Returns for Use: The total time to process goods returned for repair or refurbishing. This cycle time includes the time a Return Product Authorization (RPA) is created to the time the RPA is approved, from Product Available for Pick-up to Product Received, from Product Receipt to Product Repair/Refurbish begin, and from Product Repair/Refurbish begin to Product Available for use.

Cyclical Demand: A situation where demand patterns for a product run in cycles driven by seasonality or other predictable factor

D

Dangerous Goods: Articles or substances capable of posing significant health, safety, or environmental risk, and that ordinarily require special attention including packaging and labeling when stored or transported. Also referred to as Hazardous Goods or Hazardous Materials (HazMat).

Dashboard: A performance measurement tool used to capture a summary of the key performance indicators (KPIs)/metrics of a company. Metrics dashboards/scorecards should be easy to read and feature "red, yellow, green" indicators to flag when metrics targets are not being met. Ideally, a dashboard/scorecard should be cross-functional in nature and include both financial and non-financial measures. In addition, scorecards should be reviewed regularly-at least on a monthly basis-and weekly for key functions-such as manufacturing and distribution-where activities are critical to the success of a company. The dashboard/scorecards philosophy can also be applied to external supply chain partners (such as suppliers) to ensure that supplier's objectives and practices align. *Synonym: Scorecard*

Data Cleansing: The process of detecting and cleaning inaccurate, incomplete, incorrect, and irrelevant records in a dataset. The records are deleted, modified or replaced as needed.

Data Communications: The electronic transmission of data, usually in computer readable form, using a variety of transmission vehicles and paths.

Data Dictionary: Lists the data elements for which standards exist. The Joint Electronic Document Interchange (JEDI) committee developed a data dictionary that is employed by many EDI users.

Data Field Formatting: The parameters placed on a column within a database or data entry form on a website. An example of a parameter would be the 8 character limitation for any text entered into a particular data field.

Data Integration: The process of integrating data residing in different sources, and creating a unified view of the data for users.

Data Integrity: Assurance that the data is "whole" or complete. The data integrity perseveres during retrieval, storage, and transfer. In database management, it refers to the process of ensuring the data accurately reflects the environment it is modeling or representing.

Data Mining: The process of extracting and analyzing data, typically from a computer database, to gather knowledge about hidden patterns or unknown relationships in order to achieve specific business objectives.

Data Pool: A repository of Data within the Global Data Synchronization Network where trading partners can obtain, maintain and exchange information on items and parties in a standard format through electronic means.

Data Warehouse: A storage architecture designed to hold data extracted from transaction systems, operational data stores and external sources. A repository of an organization's electronically stored data designed in such a way as to facilitate reporting and analysis, the warehouse combines data in an aggregate, summary form suitable for enterprise-wide data analysis and reporting for predefined business needs.

Database: Data stored in computer-readable form, usually indexed or sorted in a logical order by which users can find a particular item of data they need.

Date Code: An identification applied to a product container or label that provides the specific date of production of the contents. Sometimes it is an actual date, but frequently it is coded for internal purposes. Date codes are often used during product recalls.

Days of Supply: Measure of quantity of inventory-on-hand. In relation to number of days for which usage that will be covered. For example, if a component is consumed in sales or manufacturing at the rate of 100 per day, and there are 1,585 units available on-hand, this represents 15.85 days' supply. The goal, in most cases, is to demonstrate efficiency through having a high turnover rate and therefore a low days' inventory. However, realize that this ratio can be unfavorable if either too high or too low. A company must balance the cost of carrying inventory with its unit and acquisition costs, with the potential of lost business and ultimately lost customers if shortages are pervasive.

Days' Inventory: *See: Days of Supply*

Days Payable Outstanding (DPO) is an estimate of the length of time the company takes to pay its vendors after receiving inventory. If the firm receives favorable terms from suppliers, it has the net effect of providing the firm with free financing. If terms are reduced and the company is forced to pay at the time of receipt of goods, it reduces financing by the trade and increases the firm's working capital requirements. It is calculated: Days Payable Outstanding= 365 / Payables Turnover (Payables Turnover= Purchases/ Payables).

Days Sales Outstanding (DSO): also known as Collection Period (period average), is a financial indicator that shows both the age, in ten days, of a company's accounts receivable and the average time it takes to tum the receivables into cash. It is compared to company and industry averages, as well as company selling terms (e.g., Net 30) for determination of acceptability by the company. DSO is calculated: DSO = (Total Receivables Credit Sales in the Period Analyzed) x Number of Days in the Period Analyzed. Note: Only credit sales are to be used. Cash sales are excluded.

DC Bypass: Also known as "Direct to Store" is a practice that occurs when vendor's ship goods directly to the retail store instead of to the retailer's distribution center (DC).

Dead on Arrival (DOA): A term used to describe products that are not functional when delivered. Synonym: Defective.

Deadhead: The return of an empty transportation container back to a transportation facility. Commonly used description of an empty backhaul. *See: Backhaul*

Deadweight Tons (DWT): The cargo carrying capacity of a vessel, including fuel oil, stores and provisions.

Decentralized Authority: A situation in which a company management gives decision-making authority to managers at many organizational levels.

Decision Support System (DSS): Software that speeds access and simplifies data analysis, queries, etc., within a database management system.

Declaration of Dangerous Goods: To comply with the U.S. regulations, exporters are required to provide special notices to inland and ocean transport companies when goods are hazardous.

Declared Value: The value of the goods, declared by the shipper on a bill of lading, for the purpose of determining a freight rate or the limit of the carrier's liability. Also used by customs as the basis for calculation of duties, etc.

Decline: As demand continues to drop, companies try to adopt product innovations to keep customers interested, but at some point, products do not appeal or meet customers' expectations. At this stage, cost is a critical factor.

Dedicated Contract Carriage: A third-party service that dedicates equipment (vehicles) and drivers to a single customer for its exclusive use on a contractual basis.

Defect Analysis: A combination of flaw detection-so they may be removed from the product or process-and analysis of defects and errors received to prevent future defects in the product or process.

Defective Goods Inventory (DGI): Those items that have been returned, have been delivered damaged and have a freight claim outstanding or have been damaged in some way during warehouse handling.

Defense Working Capital Fund (DWCF): funding for PBL programs.

Delimiters: 1) ASCII, characters that are used to separate data elements within a data stream. 2) EDI, two levels of separators and a terminator that are integrals part of a transferred data stream. Delimiters are specified in the interchange header. From highest to lowest level, the separators and terminator are segment terminator, data element separator, and component element separator (used only in EDIFACT).

Delivery Appointment: The time agreed upon between two enterprises for goods or transportation equipment to arrive at a selected location. Typically used to help plan warehouse shipping and receiving/inspection operations and to manage backup of carriers at loading docks.

Delivery-Duty- Paid: Supplier/manufacturer arrangement in which suppliers are responsible for the transport of the goods they have produced, that is being sent to a manufacturer. This responsibility includes tasks such as ensuring products get through Customs.

Delivery Performance to Commit Date: The percentage of orders that are fulfilled on or before the internal Commit date, used as a measure of internal scheduling systems effectiveness. Delivery measurements are based on the date a complete order is shipped or the ship-to date of a complete order. A complete order has all items on the order delivered in the quantities requested. An order must be complete to be considered fulfilled. Multiple line items on a single order with different planned delivery dates constitute multiple orders, and multiple planned delivery dates on a single line item also constitute multiple orders.

Calculation: Total number of orders delivered in full and on time to the scheduled commit date/ Total number of orders delivered

Delivery Performance to Request Date: The percentage of orders that are fulfilled on or before the customer's requested date used as a measure of responsiveness to market demand. Delivery measurements are based on the date a complete order is shipped or the ship-to date of a complete order. A complete order has all items on the order delivered in the quantities requested. An order must be complete to be considered fulfilled. Multiple line items on a single order with different planned delivery dates constitute multiple orders, and multiple planned delivery dates on a single line item also constitute multiple orders.

Calculation: Total number of orders delivered in full and on time to the customer's request date/ Total number of orders delivered

Delphi Method: A systematic forecasting method that relies on a panel of independent experts providing answers to questionnaires in two or more rounds in an effort to gain a consensus opinion.

Demand: What customers or users actually want. Typically associated with the consumption of products or services as opposed to a prediction or forecast.

Demand Based Production: When inventory is "pulled" through production a work center only when needed to satisfy customer a customer requirement.

Demand Chain: Another name for the supply chain, but emphasizing customer or end-user demand pulling materials and product through the chain.

Demand Chain Management: Same as supply chain management, but emphasizing consumer pull versus supplier push.

Demand-Driven Supply Network (DDSN): A system of technologies and processes that sense and react to real-time demand across a network of customers, suppliers and employees. In other words, a consumer purchase triggers real-time information movement throughout the supply network, which then initiates movement of product through the network.

Demand Management: The proactive compilation of requirements information regarding demand (i.e., customers, sales, marketing, finance) and the firm's capabilities from the supply side (i.e., supply, operations and logistics management); the development of a consensus regarding the ability to match the requirements and capabilities; and the agreement upon a synthesized plan that can most effectively meet the customer requirements within the constraints imposed by supply chain capabilities.

Demand Patterns: A regular or repeating trend by which the desire for goods changes over specific time intervals. Demand patterns include stationary (even demand), trend (predictable growth or decline), seasonal (patterns that repeat cycle after cycle), cyclical (patterns that are influenced by external factors), trend with seasonality (predictable growth or decline based on cycles), and random (changes and variances that are not predictable).

Demand Planning: The process of identifying, aggregating, and prioritizing all sources of demand for the integrated supply chain of a product or service at the appropriate level, horizon, and interval. The sales forecast is comprised of the following concepts:

1. The sales forecasting level is the focal point in the corporate hierarchy where the forecast is needed at the most generic level (i.e., corporate forecast, divisional forecast, product line forecast, SKU, and SKU by location).
2. The sales forecasting time horizon generally coincides with the time frame of the plan for which it was developed (i.e., annual, 1-5 years, 1-6 months, daily, weekly, and monthly).
3. The sales forecasting time interval generally coincides with how often the plan is updated (i.e., daily, weekly, monthly, and quarterly).

Demand Planning Systems: The systems that assist in the process of identifying, aggregating, and prioritizing all sources of demand for the integrated supply chain of a product or service at the appropriate level, horizon, and interval.

Demand Pull: The concept defined in lean theory that triggers production of materials only upon receipt of an actual customer order and aligns the production capacity of the supply chain to external customer demand patterns.

Demand Shaping: Using programs, including price, new product launch, trade and sales incentives, promotions, and marketing programs, to increase what customers want to buy.

Demand Sensing: Using channel data to reduce latency in sensing customer buying trends.

Demand Signal: A signal from a consumer, customer, or using operation that triggers the issue of product or raw material. The demand signal is most efficiently an electronic data transmission, but could be a physical document, Kanban, or telephone call.

Demand-Side Analysis: A system based on economic, geographic, and demographic trends offering planners an opportunity to gain accurate perspective on future demand for products or services.

Demand Supply Balancing: The process of identifying and measuring the gaps and imbalances between demand and resources in order to determine how to best resolve the variances through marketing, pricing, packaging, warehousing, outsource plans, or some other action that will optimize service, flexibility, costs, and assets (or other supply chain inconsistencies) in an iterative and collaborative environment.

Demand Time Fence (DTF): A feature of MRP type systems that allows for defining the point in time from the current date where all forecasted orders should be discarded in favor of actual customer orders. There may be a blend of actual and forecast orders beyond the time fence. *See: Consuming the Forecast.*

Demographic Segmentation: A market segmentation strategy where the intended audience for a given product is divided according to geographic units, such as nations, states, regions, counties, cities, or neighborhoods.

De-Manufacturing: Refers to the process of going in and taking back assets and harvesting the components and parts. After the components are tested, they may be sold into the secondary market or may be upgraded to "as new" and used in production again.

Demurrage: The carrier charges and fees applied when rail freight cars and ships are retained beyond a specific loading or unloading time. *Also See: Detention Fee*

Denied Party List (DPL): A listing of all the entities with whom a company cannot do business due to company policy or government requirements. The Export DPL list is based on information supplied by the United States Government Federal Register and other sources.

Density: A physical characteristic of a commodity measuring its mass per unit volume or pounds per cubic foot; an important factor in rate making, since density affects the utilization of a carrier's vehicle.

Density Rate: A rate based upon the density and shipment weight.

Department of Energy (DOE): Cabinet level department in the United States Government charged with developing energy and safety policies and guidelines regarding the handling of nuclear material within the United States.

Department of Homeland Security (DHS): Cabinet level department in the United States Government responsible for protecting the United States from terrorist attacks and natural disasters.

Dependent Demand: A term in economics in which demand for one good or service occurs as a result of demand for another; this often occurs when the former is a component of production of the latter.

Depot: A location where a substance is stored usually for later utilization. A Repair Depot is a location/facility where assets are rebuilt or repaired.

Deregulation: Revisions or complete elimination of economic regulations controlling transportation. The Motor Carrier Act of 1980 and the Staggers Act of 1980 revised economic controls over motor carriers and railroads, and the Airline Deregulation Act of 1978 eliminated economic controls over air carriers.

Derived demand: A term in economics where a demand for one good or service occurs as a result of demand for another. This may occur as the former is a part of production of the second. For example, demand for coal leads to derived demand for mining, as coal must be mined for coal to be consumed.

Design for Manufacture/ Assembly (DFMA): A product design methodology that provides a quantitative evaluation of product designs.

Design of Experiments (DoE): A branch of applied statistics dealing with planning, conducting, analyzing, and interpreting controlled tests to evaluate the factors that control the value of a parameter or group of parameters.

Destination-Enhanced Consolidation: Ganging of smaller shipments to cut cost, often as directed by a system or via pooling with a third-party.

Detention Fee: The carrier charges and fees applied when rail freight cars and ships are retained beyond a specified loading or unloading time. Can also apply to traditional trucking carriers for live loading/unloading. *Also See: Demurrage*

Devanning: The unloading of cargo from a container or other piece of equipment.

Differential: A discount offered by a carrier that faces a service time disadvantage over a route.

Differentiation: In the postponement supply chain model, this is the point where an end product assumes unique characteristics through final assembly configuration and/or packaging.

Digital Signature: Electronically generated, digitized (as opposed to graphically created) authorization that is uniquely linkable and traceable to an empowered officer.

Direct Channel: Your own sales force sells to the customer. Your entity may ship to the customer, or a third party may handle shipment, but in either case your entity owns the sales contract and retains rights to the receivable from the customer. Your end customer may be a retail outlet. The movement to the customer may be direct from the factory, or the product may move through a distribution network owned by your company. Order information in this channel may be transmitted by electronic means.

Direct Cost: A cost that can be directly traced to a cost object since a direct or repeatable cause-and-effect relationship exists. A direct cost uses a direct assignment or cost causal relationship to transfer costs. Direct costs can consist of materials used and labor directly involved in production. *Also See: Indirect Cost, Tracing*

Direct Debit (DD): A method of ACH collection used where the debtor gives authorization to debit his or her account upon the receipt of an entry issued by a creditor. *Also See: Clearinghouse*

Direct product profitability (DPP): Calculation of the net profit contribution attributable to a specific product or product line.

Direct Production Material: Material that is used in the manufacturing/content of a product (examples: purchased parts, solder, SMT glues, adhesives, mechanical parts, etc. Bill-of-Materials parts, etc.).

Direct Retail Locations: A retail location that purchases products directly from your organization or responding entity.

Direct Store Delivery (DSD): Process of shipping direct from a manufacturer's plant or distribution center to the customer's retail store, thus bypassing the customer's distribution center. *Also see Direct-to-Store Delivery*

Direct Transmission: A transmission whereby data is exchanged directly between sender and receiver computers, without an intervening third-party service. Also called a point-to-point transmission.

Directed Tasks: Tasks that can be completed based upon detailed information provided by the computer system. An order picking task where the computer details the specific item, location, and quantity to pick is an example of a directed task. If the computer could not specify the location and quantity forcing the worker to choose locations or change quantities, it would not be a directed task. Directed tasks set up the opportunity for confirmation transactions.

Disaster Recovery Planning (DRP): Contingency planning specifically related to recovering hardware and software (e.g. data centers, application software, operations, personnel, and telecommunications) during information system outages.

Discontinuous Demand: A material demand pattern where periods of demand are separated by periods with little or no demand. Similar to a cyclical demand pattern, but without any expected cyclical pattern Synonym: Lumpy Demand.

Discrete Manufacturing: Discrete manufacturing processes create products by assembling unconnected distinct parts as in the production of distinct items such as automobiles, appliances, or computers.

Discrete Order Picking: An order picking method where each individual order is picked, line by line, prior to beginning picking of another order. *Also See: Batch Picking, Order Picking, Zone Picking*

Discrete Order Quantity: A production planning technique that generates planned orders in quantities equal to the net customer order requirements in each period. *Also See: Lot for Lot*

Disintermediation: When the traditional sales channels are disassembled and the middleman gets cut out of the deal, such as where the manufacturer ships direct to a retailer, bypassing the distributor.

Dispatching: The carrier activities involved with controlling equipment; involves arranging for fuel, drivers, crews, equipment, and terminal space.

Distributed Inventory: Inventory that is geographically dispersed. For example, where a company maintains inventory in multiple distribution centers to provide a higher level of customer service.

Distribution: The activities associated with moving materials from source to destination. Can be associated with movement from a manufacturer or distributor to customers, retailers or other secondary warehousing / distribution points.

Distribution Center (DC): The warehouse facility that holds inventory from manufacturing pending distribution to the appropriate stores.

Distribution Channel: One or more companies or individuals who participate in the flow of goods and services from the manufacturer to the final user or consumer.

Distribution Channel Management: The organizational and pipeline strategy for getting products to customers. Direct channels involve company sales forces, facilities, and/or direct shipments to customers. Indirect channels involve the use of wholesalers, distributors, and/or other parties to supply the products to customers. Many companies use both strategies, depending on markets and effectiveness.

Distribution On Demand (DOD): The order fulfillment state a distribution operation achieves when it can respond, closest to real time, to changes in demand while shipping 100 percent customer compliant orders at the least cost.

Distribution Planning: The process involved in planning for distribution activities. Activities may include inbound / outbound transportation, warehouse management, setting inventory levels, put away and picking, packaging and loading, and various administrative functions.

Distribution Requirements Planning (DRP): A system of determining demands for inventory at distribution centers and consolidating demand information in reverse as input to the production and materials system.

Distribution Resource Planning (DRP II): A computerized system that integrates distribution with manufacturing by identifying requirements for finished goods and producing schedules for inventory and its movement within the distribution process. Distribution resource planning systems receive data on sales forecasts, customer order and delivery requirements, available inventory, logistics, and manufacturing and purchasing lead times. This data is analyzed to produce a time-phased schedule of resource requirements that is matched against existing supply sources and production schedules to identify the actions that must be taken to synchronize supply and demand.

Distribution Warehouse: A warehouse that stores finished goods and from which customer orders are assembled.

Distributor: A business and industry that acts as a third party local representative and distribution point for a manufacturing firm. These firms may perform some light assembly or kitting of goods, but generally provide a buffer for finished goods. Distributors typically purchase the goods in quantity from the manufacturer and ship to customers in smaller quantities. Synonym: Wholesaler.

Diversion: The practice of selling goods to a competitor that the vendor assumes would be used to service that Customer's store. Example; Grocery Store Chain A buys orange juice from Minute Maid. Grocery Store Chain A, because of their sales volume or because of promotion, can buy product for $12.50 per case. Grocery Store Chain B, because of a lower sales volume, buys the same orange juice for $14.50 per case. Grocery Store Chain A and Grocery Store Chain B get together and make a deal. Grocery Store Chain A resells that product to Grocery Store Chain B for $13.50 per case. Grocery Store Chain A makes $1.00 per case and Grocery Store Chain B gets product for $1.00 less per case than it can buy from Minute Maid.

Diversity: An aspect of a company's social responsibility program related to the use of all people in the workplace, regardless of ethnicity, gender, age, religion, disability, national origin and sexual orientation.

DMAIC: An acronym used by Six Sigma practitioners to remind them of the steps in a Six Sigma improvement project - Define, Measure, Analyze, Improve, Control.

DMZ Separation: Demilitarized zones (DMZ) act as buffers between a trusted network (Supervisory Control and Data Acquisition or SCADA network) and the corporate network or Internet-separated through additional firewalls and routers-which provide an extra layer of security against cyber-attacks. Utilizing DMZ buffers is becoming an increasingly common method to segregate business applications from the SCADA network and is a highly recommended additional security measure. A DMZ is sometimes called a "Perimeter network" or a “Three-homed perimeter network." SI Security, a leading intelligence security company, defines a DMZ as: "a network added between a protected network and an external network in order to provide an additional layer of security."

Dock Leveler: A device used to bridge the gap between the dock and the trailer bed of the vehicle. It may be mechanically, hydraulically, or manually operated.

Dock-to-Stock: A practice where pre-qualified product is received into inventory, eliminating the normal receiving and inspection handling involved.

Also, a warehouse metric used to benchmark the amount of time required to perform the processes associated with getting received items into storage.

Dock-to-Stock Cycle Time: The elapsed time beginning with the delivery of goods from the supplier and ending when those goods are put away in the warehouse and recorded into the inventory management system.

Document: In EDI, a form, such as an invoice or a purchase order, that trading partners have agreed to exchange and that the EDI software handles within its compliance-checking logic.

Dock receipt: A receipt that indicates an export shipment has been delivered to a steamship company by a domestic carrier. Provides the ocean carrier with verification of the receipt and the delivering carrier with proof of delivery.

Documentation: The papers attached or pertaining to goods requiring transportation and/or transfer of ownership. These may include the packing list, hazardous materials declarations, export / customs documents, etc.

Domain: A computer term for the following: 1) Highest subdivision of the Internet, for the most part by country (except in the U.S., where it's by type of organization, such as educational, commercial, and government). Usually the last part of a host name; for example, the domain part of ibm.com is .com, which represents the domain of commercial sites in the U.S. 2) In corporate data networks, a group of client computers controlled by a server system.

Domestic Trunk Line Carrier: An air carrier classification for carriers that operate between major population centers. These carriers are now classified as major carriers.

Dormant Route: A route over that a carrier failed to provide service 5 days a week for 13 weeks out of a 26-week period.

Double Bottoms: A motor carrier operation involving two trailers being pulled by one tractor.

Double Order Point System: An inventory management system that has two order points, one which includes the normal demand expected during the replenishment cycle, and the second being associated with demand expected during the manufacturing process. The goal is to enable facilities in a distribution network to alert a central warehouse or manufacturing of future replenishment orders.

Double-Pallet Jack: A mechanized device for transporting two standard pallets simultaneously.

Double Stack: Two containers, one on top of the other, loaded on a railroad flatcar; an intermodal service.

Download: To merge temporary files containing a day's or weeks' worth of information with the main data base in order to update it.

Downside Flex Agreement: This is a flexibility agreement with a supplier where the upside and down side are negotiated in advance for lead-time, cost, etc.

Downstream: Referring to the demand side of the supply chain. One or more companies or individuals who participate in the flow of goods and services moving from the manufacturer to the final user or consumer. Opposite of Upstream.

Drayage: Transportation of materials and freight on a local basis, but intermodal freight carriage may also be referred to as drayage.

Driving Time Regulations: Rules administered by the U.S. Department of Transportation that limit the maximum time a driver may drive in interstate commerce; both daily and weekly maximums are prescribed.

Drop: A situation in that an equipment operator deposits a trailer or boxcar at a facility at which it is to be loaded or unloaded.

Drop and Hook: An arrangement among shipper, carrier and consignee whereby the carrier leaves a trailer filled with freight at a destination and hooks up and hauls away an empty trailer.

Drop Trailers: Trailers that are unhooked from a tractor when the truck reaches its destinations

Drop Yard: Temporary "parking lots" for containers or cargo, located off the wharves and sometimes next to rail yards or import warehouses.

Drop Ship: A customer fulfillment strategy where products are shipped directly from the manufacturer or distributor to a customer bypassing the retail or secondary distribution location. Intended to expedite delivery and reduce handling costs. Billing transactions occur in the normal manner, only the material flow is altered.

Drum-Buffer-Rope (DBR): A manufacturing execution methodology, named for its three components. The drum is the physical constraint of the plant: the work center or machine or operation that limits the ability of the entire system to produce more. The rest of the plant follows the beat of the drum. They make sure the drum has work and that anything the drum has processed does not get wasted.

Dual Operation: A motor carrier that has both common and contract carrier operating authority.

Dual Rate System: An international water carrier pricing system where a shipper signing an exclusive use agreement with the conference pays a lower rate (10 percent to percent15) than non-signing shippers for an identical shipment.

Dumping: The act of selling goods below costs in selected markets in an effort to gain market share or eliminate competition.

Dunnage: The materials used in packaging, holds and containers to protect goods from damage.

DUNS Number: A unique nine-digit number assigned by Dun and Bradstreet to identify a company.

DUNS: Data Universal Numbering System.

Duty Free Zone (DFZ): An area where goods or cargo can be stored without paying import customs duties while awaiting manufacturing or future transport.

Durable Goods: A good that does not quickly wear out, or more specifically, it yields services or utility over time (typically 3 years or more) rather than being completely used up when used once.

Dwell Time: The period of time during which a dynamic process is halted in order for another process to occur.

Dynamic Lot Sizing: A lot-sizing technique where the order quantity subject to continuous re-computation to take into account that demand for the product varies over time. *See: Least total cost, Least unit cost, Wagner-Whitin algorithm.*

Dynamic Process Control (DPC): Continuous monitoring of process performance and adjustment of control parameters to optimize process output.

Dynamic Rescheduling: A functional capability of resource planning and operations management systems that provides the ability to reschedule activities "on the fly" in the event of a change in one of the factors affecting the schedule, such as a late shipment or equipment failure.

E

EAN.UCC: European Article Numbering' Uniform Code Council (now the European office of GS_1). The EAN.UCC System provides identification standards to uniquely identify trade items, logistics units, locations, assets, and service relations worldwide. The identification standards define the construction of globally-unique and unambiguous numbers.

EAN.UCC Information Network (EIN): The International and the Uniform Code Council network for the exchange of Global Data Synchronization.

Network (GDSN), master data between pw1ners of the global supply and demand chain which is now a part of GS_1.

Early Supplier Involvement (ESI): The supplier management strategy that involves suppliers during the beginning of the product design process to draw on their experience and knowledge in an effort to better designs and higher quality results.

Earnings Before Interest and Taxes (EBIT): A measure of a company's earning power from ongoing operations, equal to earnings (revenues minus cost of sales, operating expenses, and taxes) before deduction of interest payments and income taxes. Also called operating profit.

Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA): A company accounting metric for understanding a business's ability to generate cash flow for its owners and for judging a company's operating performance.

Economic Order Quantity (EOQ): An inventory model that determines how much to order by determining the amount that will meet customer service levels while minimizing total ordering and holding costs.

Economic Value Added (EVA): A measurement of shareholder value as a company's operating profits after tax, less an appropriate charge for the capital used in creating the profits.

Economy of Scale: The cost advantages that a business obtains due to expansion. They are factors that cause a producer’s average cost per unit to fall as scale is increased.

EDIFACT: An abbreviation of the Electronic Data Interchange for Administration, Commerce, and Transport. The United Nations EDI standard.

EDI Standards: Criteria that define the data content and format requirements for specific business transactions (e.g., purchase orders). Using standard formatting allows companies to exchange transactions with multiple trading partners easily. Also related to the American National Standard's Institute and the Uniform Code Council.

EDI Transmission: A functional group of one or more EDI transactions that are sent to the same location, in the same transmission, and are identified by a functional group header and trailer.

Efficient Consumer Response (ECR): A demand driven replenishment system designed to link all parties in the logistics channel to create a massive flow-through distribution network. Replenishment is based upon consumer demand and point of sale information.

e-Commerce/Electronic Commerce (EC): Conducting business electronically via traditional EDI technologies, or online via the Internet. In the traditional sense of selling goods, it is possible to do this electronically because of certain software programs that run the main functions of an e-commerce website, such as product display, online ordering, and inventory management. The definition of e-commerce includes business activity that is business-to-business (B2B) and business-to-consumer (B2C).

Electronic Data Interchange (EDI): Inter-company, computer-to-computer transmission of business information in a standard format. For EDI purists, "computer-to-computer" means direct transmission from the originating application program to the receiving, or processing, application program. An EDI transmission consists only of business data, not any accompanying verbiage or free-form messages. Purists might also contend that a standard format is one that is approved by a national or international standards organization, as opposed to formats developed by industry groups or companies.

Electronic Data Interchange Association (EDIA): A national body that propagates and controls the use of EDI in a given country. All EDIAs are nonprofit organizations dedicated to encouraging EDI growth. The EDIA in the United States was formerly the Transportation Data Coordinating Committee (TDCC) and administered the development of standards in transportation and other industries.

Electronic Funds Transfer (EFT): Refers to the transactions and related computer-based systems used to perform financial (typically banking) transactions between organizations and accounts electronically.

Electronic Product Code (EPC or ePC): An identification scheme for universally identifying physical objects via RFID tags and other means. Standardized EPC data consists of among other partitions of data, an EPC Manager Number, an object, class identification, a filter value, and a serial number used to uniquely identify the instance of the object. Information on the tag may include asset numbers, container code numbers, locations, Global Trade Item Numbers (GTIN), etc. The EPC is a 96-bit tag that, unlike a UPC number that only provides information specific to a group of products, gives each product its own specific identifying number, providing greater accuracy in tracking. EPC standards are managed by the global standards organization known as GS1.

Electronic Signature: A form of authentication that provides identification and validation of a transaction by means of an authorization code identifying the individual or organization.

Elkins Act: An amendment to the Interstate Commerce Act that prohibits giving rebates.

e-Marketplace: A web-based service that allows individuals or companies to offer products and services or make bids to buy products or services.

Embargo: A prohibition upon exports or imports, either with specific products or specific countries.

Empirical: Denotes information gained by means of observation, experience, or experiment. A central concept in science and the scientific method is that **all** evidence must be empirical, or empirically based. That is, dependent on evidence or consequences that are observable by the senses.

Employee Performance Management (EPM): A system to develop, monitor, provide feedback and train employees using performance measures to assess their overall development and understanding of tasks.

Empowerment: The process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. In the workplace empowered employees have the authority to make decisions and take action in their work areas without prior approval.

Encryption: The transformation of readable text into coded text for security purposes.

End Item: The top level item in a bill of materials. Typically a finished product that can be sold as a completed item or repair part. Synonym: Finished Goods Inventory.

End-of-Life (EOL): Planning and execution at the end of the life of a product. The challenge is making just the right amount to avoid: 1) ending up with excess, which has to be sold at great discounts or scrapped, or 2) ending up with shortages before the next generation is available.

End-of-Life Inventory: Inventory on hand that will satisfy future demand for products that are no longer in production at your entity. This differs from obsolete inventory because there is an expected future requirement for these products.

Engineering Change: The formal revision process for engineering drawings/designs in order to modify or correct a part. This can also be called an engineering change order.

Engineering Change Order (ECO): A documented and approved revision to a product or process specification.

Engineering Change Proposal (ECP): A proposal submitted by the seller in response to a buyer request for an ECP to change the existing contract. It is an exploratory activity. Only the buyer can initiate the request for an ECP. This activity is usually preceded by a request for change. The user, buyer, or the seller can initiate a request for change to the contract.

Engineer-to-Order: A process in which the manufacturing organization must first prepare (engineer) significant product or process documentation before manufacture may begin.

En-route: A term used for goods in transit or on the way to a destination.

Enterprise Application Integration (EAI): A computer term for the tools and techniques used in linking ERP and other enterprise systems together. Linking systems is key for business. Gartner say “firms implementing enterprise applications spend at least 30 percent on point-to-point interfaces”. Also sometimes referred to as "middleware".

Enterprise-Wide ABM: A management information system that uses activity-based information to facilitate decision making across an organization.

Enterprise Resource Planning (ERP) System: A class of software for planning and managing" enterprise-wide" the resources needed to take customer orders, ship them, account for them and replenish all needed goods according to customer orders and forecasts. Often includes electronic commerce with suppliers. Examples of ERP systems are the application suites from SAP, Oracle, and other suppliers.

Enveloping: An EDI management software function that groups all documents of the same type, or functional group, and bound for the same destination into an electronic envelope. Enveloping is useful where there are multiple documents such as orders or invoices issued to a single trading partner that need to be sent as a packet.

Environmental Health and Safety (EH&S): The category of processes, procedures and regulations related to addressing the needs of maintaining environmental quality standards for health and safety. Includes the RoHS (Restriction of Hazardous Substances) and WEEE (Waste Electrical and Electronic) standards. Frequently referred to as a part of' corporate citizenship".

Environmental Protection Agency (EPA): A federa1 agency in the United States Government that is tasked with regulating chemicals and protecting human health by safeguarding the natural environment (air, water, and land).

Environmentally Sensitive Engineering: A design process where issues related to disposal or recycling of packaging and used products is considered. May be part of a regulatory requirement associated with programs such as RoHS or WEEE to address compounds that are hazardous to the environment.

ePedigree: An electronic document that satisfies a pedigree requirement. The primary purpose of an ePedigree is to protect consumers from contaminated medicine or counterfeit drugs.

Equipment: The rolling stock carriers use to facilitate the transportation services that they provide, including containers, trucks, chassis, vessels, and airplanes, among others.

Equipment I.D.: An identifier assigned by the carrier to a piece of equipment.

Equipment Positioning: The process of placing equipment at a selected location.

Ergonomic: The science of creating workspaces and products that are human friendly to use.

Ethernet: A computer term for the most commonly used type of local area network (LAN) communication protocol using coaxial or twisted pair wiring.

Ethical Standards: Principals, which when followed, promote values such as trust, good behavior, fairness, and/or kindness.

European Article Number (EAN): A defined numbering mechanism used in Europe to uniquely identify every retail product and packaging option. The EAN is similar in concept and design to the UPC code and is usually what the barcode represents on goods. *Also See: Uniform Product Code*

Evaluated Receipts Settlement (ERS): A process for authorizing payment for goods based on actual receipts with purchase order data, when price has already been negotiated. The basic premise behind ERS is that all of the information in the invoice is already transmitted in the shipping documentation. Therefore, the invoice is eliminated and the shipping documentation is used to pay the vendor.

Exception-Based Processing: A computer term for applications that automatically highlight particular events or results that fall outside pre-determined parameters. This saves considerable effort by automatically finding problems and alerting the right persons. An example would be where a shortage of an item on a purchase order receipt would create an automatic notification of the purchasing agent for follow-up.

Excess and Obsolescence (E&O): The accounting value assigned to the cost associated with inventory that is disposed of as being excess or obsolete.

Exclusive Patronage Agreements: A shipper agrees to use only member liner firms of a conference in return for a 10 percent to 15 percent rate reduction.

Exclusive Use: Carrier vehicles that are assigned to a specific shipper for its exclusive use.

Executive Dashboard: A series of cross-functional metrics that span the performance of the entire company and indicate the overall health of the company. Usually an Executive Dashboard includes the top KPIs for the company - and when possible is limited to the 'vital few' that fit on a one page summary.

Exemplar: Refers to a model or practice that should be imitated.

Exempt Carrier: A for-hire carrier that is free from economic regulation. Trucks hauling certain commodities are exempt from Interstate Commerce Commission economic regulation. By far the largest portion of exempt carriers transport agricultural commodities or seafood.

Expediting: 1) Moving shipments through regular channels at an accelerated rate. 2) To take extraordinary action because of an increase in relative priority, perhaps due to a sudden increase in demand. *Synonym: Stockchase*

Expert System: A computer program that mimics a human expert.

Exponential Smoothing Forecast: A statistical analysis technique that can be applied to time series data, either to produce smoothed data for presentation, or to make forecasts. The time series data themselves are a sequence of observations. The observed phenomenon may be an essentially random process, or it may be an orderly, but noisy, process.

Export: 1) In logistics, the movement of products from one country to another. For example, significant volumes of cut flowers are exported from The Netherlands to other countries of the world. 2) A computer term referring to the transfer of information from a source (system or database) to a target.

Export Broker: An enterprise that brings together buyer and seller for a fee, then eventually withdraws from the transaction.

Export Compliance: Complying with rules for exporting products, including packaging, labeling, and documentation.

Export declaration: A document required by the Department of commerce that provides information as to the nature, value, etc., of export activity.

Export License: A document secured from a government authorizing an exporter to export a specific quantity of a controlled commodity to a certain country. An export license is often required if a government has placed embargoes or other restrictions upon exports.

Export Sales Contract: The initial document in any international transaction; it details the specifics of the sales agreement between the buyer and seller.

Exporter Identification Number (EIN): A number required for the exporter on the Shipper's Export Declaration. A corporation may use their Federal Employer Identification Number as issued by the IRS; individuals can use their Social Security Numbers.

External Customers: External customers are consumers of products and services a company sells.

Extended Enterprise: Refers to the concept where an organization's internal capabilities are extended by virtue of their supply chain partners to form a larger logical entity.

External Factory: Refers to the concept where an organization's internal production capabilities are extended through the addition those of its suppliers.

External Registration Company: A company that performs audits against an established set of standards, i.e. ISO 9001:2008.

Ex Works (EXW): An international trade term (Inco terms, International Chamber of Commerce) requiring the seller to deliver goods at his or her own place of business. All other transportation costs and risks are assumed by the buyer.

F

Fabricator: An industrial term, applies to firms that build machines, structures components and other equipment, by cutting, shaping otherwise creating components from raw materials, and assembling components made from raw materials.

Facilities: An installation, contrivance, or other thing that facilitates something; a place for doing something: Commercial or institutional buildings, including offices, plants and warehouses.

Factory Gate Pricing: Like DSD in reverse, factory gate pricing (FGP) is a supply chain initiative that has been gaining popularity among retailers in England. With FGP, retailers buy goods at the suppliers' "gate" and take care of getting it to their stores or distribution centers, either with their own trucks or those of their contracted carriers.

Failure Modes Effects Analysis (FMEA): A pro-active method of predicting faults and failures so that preventive action can be taken.

Fair Labor Standards Act (FLSA): A United States federal law that established a national minimum wage. It guarantees time and a half for overtime in certain jobs and prohibits most employment of minors in "oppressive child labor."

Fair Return: A level of profit that enables a carrier to realize a rate of return on investment or property value that the regulatory agencies deem acceptable for that level of risk.

Fair-share Quantity Logic: A stock management/distribution technique that attempts to fairly share a given volume of available stock between multiple customers or distribution centers when the stock available is less than the cumulative demand.

Fair value: The value of the carrier's property; the basis of calculation has included original cost minus depreciation, replacement cost, and market value.

Fast and Secure Trade (FAST): U.S. Customs program that allows importers on the U.S./Canada border to obtain expedited release for qualifying commercial shipments.

Fast Moving Consumer Goods (FMCG): Fast Moving Consumer Goods are packaged commercial products that are consumed through use. They include pre- packaged food and drinks, alcohol, health and beauty items, tobacco products, paper products, household cleansers and chemicals, animal care items, anything that we need, can buy right off the shelf, and use up through daily living.

Feature: A unique aspect of a specific product or service that has been identified and provided as a marketing advantage. Features may be inherent in the basic product or can be added as an option or accessory. In some cases a variety of a specific feature may be offered and some features could be required or optional.

Federal Acquisition Regulation (FAR): A U.S. DoD document that describes rules and processes for acquiring products and / or services from suppliers.

Federal Acquisition Regulation Supplement (FARS): A U.S. DoD document that provides various definitions of commerciality of which any one of these or combination of these can be used to justify commerciality.

Federal Aviation Administration (FAA): The federal agency charged with administering federal safety regulations governing air transportation.

Federal Drug Administration (FDA): An agency of the United States Department of Health and Human Services that is responsible for the regulation of and supervision of the safety of foods, dietary supplements, drugs, vaccines, biological medical products, blood products, medical devices, radiation-emitting devices, veterinary products, and cosmetics.

Federal Emergency Management Agency (FEMA): An agency that is part of the United States Department of Homeland Security. It is responsible for coordinating a response to any disaster within the United States, in the case that the event possibly overwhelms the resources of local and state authorities.

Federal Maritime Commission: A regulatory agency that controls services, practices, and agreements of international water common carriers and noncontiguous domestic water carriers.

Feeder Railroad Development Program: A Federal program that allows any financially responsible person (except Class I and Class II carriers) with ICC approval to acquire a rail line having a density of less than 3 million gross ton-miles per year, in order to avert the line being abandoned.

Field Finished Goods: Inventory that is kept at locations outside the four walls of the manufacturing plant (i.e., distribution center or warehouse).

Field Service Parts: Parts inventory kept at locations outside the four walls of the manufacturing plant (i.e., distribution center or warehouse, service vehicle stock, etc.).

Field Warehouse: A warehouse on the property of the owner of the goods that stores goods that are under the custody of a bona fide public warehouse manager. The public warehouse receipt is used as collateral for a loan.

File Transfer Protocol (FTP): The Internet service that transfers files from one computer to another.

Filed rate doctrine: The legal rate the common carrier may charge; it is the rate published in the carrier's tariff on file with the ICC.

Fill Rate: The percentage of order items that the picking operation actually fills within a given period of time.

Fill Rates by Order: Whether orders are received and released consistently, or released from a blanket purchase order, this metric measures the percentage of ship-from-stock orders shipped within 24 hours of order "release". Make-to-Stock schedules attempt to time the availability of finished goods to match forecasted customer orders or releases. Orders that were not shipped within 24 hours due to consolidation but were available for shipment within 24 hours are reported separately. In calculating elapsed time for order fill rates, the interval begins at ship release and ends when material is consigned for shipment.

***Calculation**:* [Number of orders filled from stock shipped within 24 hours of order release]/ [Total number of stock orders]

Note: The same concept of fill rates can be applied to order lines and individual products to provide statistics on percentage of lines shipped completely and percentage of products shipped completely.

Final Assembly: The highest level assembled product, as it is shipped to customers. This terminology is typically used when products consist of many possible features and options that may only be combined when an actual order is received. *Also See: End Item, Assemble to Order*

Final Assembly Schedule (FAS): A list of scheduled operations required to produce completed products in a make-to-order or assemble-to-order manufacturing process. It may involve secondary operations beyond the final assembly that are required to complete sub-assemblies of components needed to assemble the finished product.

Finance Lease: An equipment-leasing arrangement that provides the lessee with a means of financing for the leased equipment; a common method for leasing motor carrier trailers.

Financial Responsibility: Motor carriers are required to have body injury and property damage (not cargo) insurance of not less than $500,000 per incident per vehicle; higher financial responsibility limits apply for motor carriers transporting oil or hazardous materials.

Finished Goods Inventory (FG or FG I): Products completely manufactured, packaged, stored, and ready for distribution. *Also See: End Item*

Finite Forward Scheduling: A capacity constrained scheduling technique that creates a production schedule using forecast demand by proceeding sequentially through incremental future periods while not exceeding the available capacity during each period. *Also See: Finite Scheduling*

Finite Scheduling: A method of creating production schedules that takes resource availability into account. Schedule dates are adjusted forward or backward in time as necessary in order to maintain capacity constraints.

Firm Planned Order: A planned order that has been committed to production. *Also See: Planned Order*

First Expired, First Out (FEFO): A stock control rule allowing the management of products having an eat-by date or short shelf life. FEFO can be used for any product but is most frequently used for food or cold storage.

First In, First Out (FIFO): Warehousing term meaning that the first items stored are the first used. In accounting this term is associated with the valuing of inventory such that the latest purchases are reflected in book inventory. While generally considered an accounting notion, FIFO usage is common where products may have a shelf life. *Also See: Book Inventory*

First Mover Advantage: Market innovator, putting the company in the leadership position.

First Pass Yield: The ratio of usable, specification conforming output from a process to its input, achieved without rework or reprocessing.

Fixed Costs: Costs that do not fluctuate with business volume in the short run. Fixed costs include items such as depreciation on buildings and fixtures.

Fixed Interval Inventory Model: A setup wherein each time an order is placed for an item, the same (fixed) quantity is ordered.

Fixed Interval Order System: *See: Fixed Reorder Cycle Inventory Model*

Fixed Order Quantity: An inventory reorder method that causes all replenishment orders to be a pre-determined size or a multiple thereof. This is typically introduced to accommodate price breaks, packaging or shipping requirements.

Fixed Overhead: Cost elements such as depreciation, rent, insurance, and office expense, etc., that do not vary as a result of output volume or sales revenue. *Also See: Indirect Cost*

Fixed Quantity Inventory Model: A setup wherein a company orders the same (fixed) quantity each time it places an order for an item.

Fixed-Period Requirements: A re-order technique where the quantity to be ordered should be enough to cover forecast requirements for a fixed number of periods. *Also See: Discrete Order Quantity*

Fixed Price (FP): A type of contract where a specified price is paid for a specific product, service, or goal. Also referred to as FFP or Firm Fixed Price.

Fixed Reorder Cycle Inventory Model: A re-ordering strategy where orders are placed on a fixed order schedule and the order quantity is adjusted from order to order to accommodate actual consumption or forecast requirements. *Also See: Fixed Reorder Quantity Inventory Model*

Fixed Reorder Quantity Inventory Model: A re-ordering strategy where orders are placed for a fixed order quantity whenever the quantity on hand plus on order reaches a pre-defined order point. *Also See: Fixed Reorder Cycle Inventory Model*

Fixed-Location Storage: A stocking strategy that uses set warehouse locations assigned to each SKU. If additional storage is required the excess stock will be placed in an "overflow" area with appropriate cross references in systems or on bin labels. Locations are typically reviewed periodically as a part of a slotting strategy.

Flag of Convenience: A ship owner registers a ship in a nation that offers conveniences in the areas of taxes, manning, and safety requirements. Liberia and Panama are two nations known for flags of convenience.

Flat: A loadable platform having no superstructure whatever but having the same length and width as the base of a container and equipped with top and bottom corner fittings. This is an alternative term used for certain types of specific purpose containers – namely platform containers and platform-based containers with incomplete structures.

Flatbed: A flatbed is a type of truck trailer that consists of a floor and no enclosure. A flatbed may be used with "sideboards" or "tie downs" that keep loose cargo from falling off.

Flatcar: A rail car without sides; used for hauling machinery.

Flexibility: Ability to respond quickly and efficiently to changing customer and consumer demands.

Flexible-Path Equipment: Materials handling devices that include hand trucks and forklifts.

Flexible Specialization: A strategy based on multi-use equipment, skilled workers and innovative senior management to accommodate the continuous change that occurs in the marketplace.

Float: The time required for documents, payments, etc., to get from one trading partner to another.

Floor loading: Containerized freight is usually not palletized. Instead, the bottom layer of boxes is loaded onto the floor of the container. As a result, more boxes can be loaded into a container but the containers take much longer to unload.

Floor-Ready Merchandise (FRM): Goods shipped by suppliers to retailers with all necessary tags, prices, security devices, etc., already attached, so goods can be cross docked rapidly through retail DCs, or received directly at stores.

Flow Rack: Storage rack that utilizes shelves (metal) that are equipped with rollers or wheels. Such an arrangement allows product and materials to "flow" from the back of the rack to the front and therein making the product more accessible for small-quantity order-picking.

Flow-Through Distribution: A process in a distribution center in which products from multiple locations are brought in to the D.C. and are re-sorted by delivery destination and shipped in the same day. Typically involving a combination of TL and LTL carrier resources, this practice eliminates warehousing, reduces inventory levels and speeds order turnaround time. Also known as a "cross-dock" process in the transportation business. *See: Cross Docking*.

F.O.B.: A term of sale defining who is to incur transportation charges for the shipment, who is to control the shipment movement, or where title to the goods passes to the buyer; originally meant "free on board ship."

FOB Destination: Title passes at destination and seller has total responsibility until shipment is delivered.

FOB Origin: Title passes at origin, and buyer has total responsibility over the goods while in shipment.

For-hire Carrier: A carrier that provides transportation service to the public on a fee basis.

Forecast: An estimate of future customer demand. Forecasts are typically made using scientific techniques based on historical usage and adjusted to accommodate various factors such as life cycle, cyclical usage patterns, promotions and pricing actions. *Also See: Exponential Smoothing Forecast, Intrinsic Forecasting Method.*

Forecast Accuracy: A measurement of the level of accuracy inherent in your forecast as a percent of actual units or dollars shipped. Forecast accuracy in the supply chain is typically measured using the Mean Absolute Percent Error (MAPE). However, there are confusions between the statistical definition of MAPE and its application among supply chain planners. Statistically MAPE is defined as the average of percentage errors. Most practitioners however define and use the MAPE as the Mean Absolute Deviation divided by Average Sales. You can think of this as a volume-weighted MAPE. In some references, this is also referred to as the mean absolute difference (MAD)/mean ratio.

Calculation: [Actual-Forecast)/Sum of Actual

Forecast Cycle: Cycle time between forecast regenerations that reflect true changes in marketplace demand for shippable end products.

Forecasting: Predictions of how much of a product will be purchased by customers. Relies upon both quantitative and qualitative methods. *Also See: Forecast*

Foreign Trade Zone (FTZ): An area or zone set aside at or near a port or airport, under the control of the U.S. Customs Service, for holding goods duty-free pending customs clearance.

Forklift Truck: A machine-powered device that is used to raise and lower freight and to move freight to different warehouse locations.

Form Utility: The value created in a good by changing its form, through the production process.

Four P's: A set of 4 elements referred to as the 'marketing mix', it is a set of controllable tactical marketing tools that work together to achieve company objectives. The elements are product, price, place, and promotion.

Fourier series: A mathematical equation used in forecasting. An infinite series in which the terms are constants multiplied by sine or cosine functions of integer multiples of the variable and that is used in the analysis of periodic functions.

Four Wall Inventory: The stock that is contained within a single facility or building.

Fourth-Party Logistics (4PL): Differs from third-party logistics in the following ways;

1. 4PL organization is often a separate entity established as a joint venture or long-term contract between a primary client and one or more partners;
2. 4PL organization acts as a single interface between the client and multiple logistics service providers;
3. All aspects (ideally) of the client's supply chain are managed by the 4PL organization;
4. It is possible for a major third-party logistics provider to form a 4PL organization within its existing structure.

The term was registered by Accenture as a trademark in 1996 and defined as *"A supply chain integrator that assembles and manages the resources, capabilities, and technology of its own organization with those of complementary service providers to deliver a comprehensive supply chain solution."* but is no longer registered. *Also See: Lead Logistics Provider*

Forty-Foot Equivalent Unit (FEU): A standard size intermodal container.

Free Alongside Ship (FAS): A shipping contract term indicating that the seller must place the goods alongside the ship at the named port and be liable for all charges and risks prior to placement. The seller must clear the goods for export; this changed in the 2000 version of the Inco terms. Suitable for maritime transport only.

Free on Board (FOB): Contractual terms between a buyer and a seller, which define where title transfer takes place.

Free Time: The period of time allowed for the removal or accumulation of cargo before charges become applicable.

Free Trade Zone (FTZ): Also known as an export processing zone (EPZ), one or more special areas of a country where some normal trade barriers such as tariffs and quotas are eliminated and bureaucratic requirements are lowered in hopes of attracting new business and foreign investments. Free trade zones can be defined as labor intensive manufacturing centers that involve the import of raw materials or components and the export of factory products.

Freezing inventory balances: In most cycle counting programs the term "freezing" refers to copying the current on-hand inventory balance into the cycle count file. This may also be referred to as taking a snapshot of the inventory balance. It rarely means that the inventory is actually frozen in a way that prevents transactions from occurring.

Freight: Goods being transported from one place to another.

Freight-All-Kinds (FAK): An approach to rate making whereby the ante is based only upon the shipment weight and distance; widely used in TOFC service.

Freight Bill: The carrier's invoice for transportation charges applicable to a freight shipment.

Freight Carriers: Companies that haul freight, also called "for-hire" carriers. Methods of transportation include trucking, railroads, airlines, and sea borne shipping.

Freight Charge: The rate established for transporting freight.

Freight Collect: The freight and charges to be paid by the consignee.

Freight Consolidation: The act of combining individual shipments into a single lot in order to reduce costs or improve transport equipment utilization. Consolidation can take a variety of forms by customer, geography, shipping land or schedule. Consolidation may occur at the shipping facility or may be a service of a third party.

Freight Forwarder: An organization that provides logistics services as an intermediary between the shipper and the carrier, typically on international shipments. Freight forwarders provide the ability to respond quickly and efficiently to changing customer and consumer demands and international shipping (import/export) requirements.

Freight Prepaid: The freight and charges to be paid by the consignor.

Front haul: The first leg of the truck trip that involves hauling a load or several loads to targeted destinations.

Frozen Zone: In forecasting, this is the period in which no changes can be made to scheduled work orders based on changes in demand. Use of a frozen zone provides stability in the manufacturing schedule.

Fulfillment: The act of fulfilling a customer order. Fulfillment includes order management, picking, packaging, and shipping.

Full Container Load (FCL): A term used when goods occupy a whole container.

Full Mission-Capable (FMC): Used in DoD PBL to describe the material condition of any piece of military equipment, aircraft, or training device indicating that it can perform all of its missions. Also called FMC.

Full-Service Leasing: An equipment-leasing arrangement that includes a variety of services to support leased equipment (i.e., motor carrier tractors).

Full-Time Equivalents (FTE): Frequently organizations make use of contract and temporary employees; please convert contract, part-time, and temporary employees to full-time equivalents. For example, two contract employees who worked for six months full-time and a half-time regular employee would constitute 1.5 full-time equivalents. 1FTE = 2000 hours per year.

Full Truckload (FTL): A term that defines a shipment that occupies at least one complete truck trailer, or allows for no other shippers goods to be carried at the same time.

Fulfillment Agent: May be designated as an agent to plan, schedule, or control the process of executing the logistics chain.

Fully Allocated Cost: The variable cost associated with a particular unit of output plus an allocation of common cost.

Functional Acknowledgment (FA): A specific EDI Transaction Set (997) sent by the recipient of an EDI message to confirm the receipt of data but with no indication as to the recipient application's response to the message. The FA will confirm that the message contained the correct number of lines, etc., via control summaries, but does not report on the validity of the data.

Functional Group: Part of the hierarchical structure of EDI transmissions, a Functional Group contains one or more related Transaction Sets preceded by a Functional Group header and followed by a Functional Group trailer.

Functional Metric: A number resulting from an equation, showing the impact of one or more parts of a functional/department process. This is also known as a results measure as the metric measures the results of one aspect of the business. Example: Distribution Center Fill Rate.

Functional Silo: A view of an organization where each department or functional group is operated independent of other groups within the organization. Each group is referred to as a "Silo". This is the opposite of an integrated structure.

Fungible: A fungible item is one that could be exchanged with another equal part or quantity with no significant difference, and still satisfies the obligation; a commodity is a fungible item.

Future Order: A purchase or customer order that is placed for delivery at a time beyond the normal order cycle. The purpose may be to queue orders against future availability of new products, or as a means to advise suppliers of future requirements.

G

Gain Sharing: A method of incentive compensation where supply chain partners share collectively in savings from productivity improvements. The concept provides an incentive to both the buying and supplier organizations to focus on continually re-evaluating, re-energizing, and enhancing their business relationship. All aspects of value delivery are scrutinized including specification design, order processing, inbound transportation, inventory management, obsolescence programs, material yield, forecasting and inventory planning, product performance, and reverse logistics. The focus is on driving out limited value cost while protecting profit margins. *Also see: Performance Based Logistics*

Gap Analysis: The process of determining and documenting the variance (gap) between goals and current performance.

Garments on Hangers (GOH): Transport and storage of garments in hanging format, minimizing handling and pre-retailing requirements.

Gateway: The connection that permits messages to flow freely between two networks.

Gathering Lines: Oil pipelines that bring oil from the oil well to storage areas.

Gemba Kanri: A Lean management term that refers to the control and improvement of the value creating processes.

Genchi Genbutsu: A Japanese phrase used in Lean management that means “Go and see for yourself”. Rather than simply hear or read about a problem and make a suggestion for improvement, one should actually go to its direct location and experience the situation first hand.

General Agreement on Tariffs and Trade (GATT): The General Agreement on Tariffs and Trade started as an international trade organization in 1947, and has been superseded by the World Trade Organization (WTO). GATT (the agreement) covers international trade in goods. An updated General Agreement is now the WTO agreement governing trade in goods. The 1986-1994 “Uruguay Round” of GATT member discussions gave birth to the WTO and also created new rules for dealing with trade in services, relevant aspects of intellectual property, dispute settlement, and trade policy reviews. GATT 1947: The official legal term for the old (pre-1994) version of the GATT. GATT 1994: The official legal term for new version of the General Agreement, incorporated into the WTO, and including GATT 1947.

General Commodities Carrier: A common motor carrier that has operating authority to transport general commodities, or all commodities not listed as special commodities.

General-Merchandise Warehouse: A warehouse that is used to store goods that are readily handled, are packaged, and do not require a controlled environment.

General Order (GO): A customs term referring to a warehouse where merchandise not entered within five working days after the carrier's arrival is stored at the risk and expense of the importer.

Global Commerce Initiative (GCI): A business requirements group that brings manufacturers and retailers together on a worldwide basis to simplify and enhance global commerce and improve consumer value in the overall retail supply chain. It is a global user group, and its charter is to drive the implementation of EAN.UCCs standards and best practices.

Global Data Synchronization Network (GDSN): The GDSN is an Internet-based, interconnected network of interoperable data pools and a Global Registry, the GS1 Global Registry that enables companies around the world to exchange standardized and synchronized supply chain data with their trading partners.

Global Location Number (GLN): Unique location number mandatory within the Global Data Synchronization process to identify data owners/info providers, etc., such as distributors, brokers, and manufacturers.

Global Positioning System (GPS): A system that uses satellites to precisely locate an object on earth. Used by trucking companies to locate over- the-road equipment.

Global Standards Management Process (GSMP): The Global Standards Management Process (GSMP) is the Global Process established in January 2002 by EAN International and the Uniform Code Council, Inc. (UCC) for the development and maintenance of Global Standards and Global Implementation Guidelines that are part of the EAN.UCC system.

Global Strategy: An organization's strategic guide to globalization. A global strategy may be appropriate in industries where firms are faced with strong pressures for cost reduction but with weak pressures for local responsiveness. Therefore, the strategy allows these firms to sell a standardized product worldwide. However, fixed costs (capital equipment) are substantial. Nevertheless, these firms are able to take advantage of scale economies and experience curve effects because of the ability to mass-produce a standard product that can be exported – providing that demand is greater than the costs involved.

Global Trade Item Number (GTIN): A unique number that comprises up to 14 digits and is used to identify an item (product or service) for which there is a need to retrieve pre-defined information that may be priced, ordered or invoiced at any point in the supply chain. The definition covers raw materials through end user products and includes services, all of which have pre-defined characteristics. GTIN is the globally-unique EAN.UCC System identification number, or key, used for trade items (products and services). It's used for uniquely identifying trade items (products and services) sold, delivered, warehoused, and billed throughout the retail and commercial distribution channels. Unlike a UPC number, that only provides information specific to a group of products, the GTIN gives each product its own specific identifying number, providing greater tracking accuracy. *See: EPC*

Globalization: The process of making something worldwide in scope or application.

Going-concern value: The value that a firm has as an entity, as opposed to the sum of the values of each of its parts taken separately; particularly important in determining what constitutes a reasonable railroad rate.

Gondola: A rail car with a flat platform and sides three to five feet high; used for top loading of items that are long and heavy.

Good Distribution Practices: Quality warranty system that provides guidelines for the proper distribution of medicinal products for human use. The guidelines cover such areas as requirements for purchase, receiving, storage, and export of drugs intended for human consumption. Good Distribution Practices are based on the Code of Federal Regulations 21 CFR, parts 210 and 211, and USP 1079.

Good Manufacturing Practices (GMP): Requirements governing the quality procedures of medical device manufacturers. Good Manufacturing Practices are based on the Code of Federal Regulations 21 CFR, parts 808, 812, and 820.

Goods Received Note (GRN): Documentation raised by the recipient of materials or products.

Goods: A term associated with more than one definition:

1. Common term indicating movable property, merchandise, or wares;
2. All materials that are used to satisfy demands;
3. Whole or part of the cargo received from the shipper, including any equipment supplied by the shipper.

Grandfather clause: A provision that enabled motor carriers engaged in lawful trucking operations before the passage of the Motor Carrier Act of 1935 to secure common carrier authority without proving public convenience and necessity; a similar provision exists for other modes.

Granger laws: State laws passed before 1870 in Midwestern states to control rail transportation.

Graphics Interchange Format (GIF): A graphical file format commonly used to display indexed-color images on the World Wide Web. GIF is a compressed format, designed to minimize file transfer time over standard phone lines.

Great Lakes carriers: Water carriers that operate on the five Great lakes.

Green Strategy: Comprehensive management plans that have the final goal of achieving environmental and economic sustainability. They are integrated, all-inclusive strategies that replace traditional single-issue policies. *Also See: Sustainability*

Greenhouse Gas Emissions: The release of greenhouse gases into the atmosphere by human activities. Greenhouse Gases are identified as water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Grid Technique: A quantitative technique to determine the least-cost center, given raw materials sources and markets, for locating a plant or warehouse.

Green Field: A method used to launch a new process or initiative whereon others of that type have previously existed.

Green Lane: A concept that would give C-TPAT members that demonstrate the highest standard of secure practices additional benefits for exceeding the minimum requirements of the program. Green Lane benefits would include expedited movement of cargo, especially during an incident of national significance.

Groupthink: A situation in which critical information is withheld from the team because individual members censor or restrain themselves, either because they believe their concerns are not worth discussing or because they are afraid of confrontation.

Gross Inventory: Value of inventory at standard cost before any reserves for excess and obsolete items are taken.

Gross Margin: The amount of contribution to the business enterprise, after paying for direct-fixed and direct-variable unit costs, required to cover overheads (fixed commitments) and provide a buffer for unknown items. It expresses the relationship between gross profit and sales revenue.

Gross National Product (GNP): A measure of a nation's output; the total value of all final goods and services produced during a period of time.

Gross Weight: The total weight of the vehicle and the payload of freight or passengers.

Growth: In this stage, the sales of a product are expanding. Changes to product design, manufacturing processes, and quality are all evolving to maximize this revenue stream. The supply chain is also monitored and evaluated to make sure production capacity can be maintained or even expanded.

GS1: The new name of EAN International. The GS1 US is the new name of the Uniform Code Council, Inc. ® (UCC®) the GS1 Member Organization for the U.S., the association that administrates UCS, WINS, and VICS and provides UCS identification codes and UPCs. GS1 subgroups also manage the standards for electronic product codes (EPC Global) and Rosetta net.

Guaranteed Loans: Loans made to railroads that are cosigned and guaranteed by the federal government.

H

Handling Costs: The cost involved in moving, transferring, preparing, and otherwise handling inventory.

Harmonized Code: An international classification system that assigns identification numbers to specific products. The coding system ensures that all parties in international trade use a consistent classification for the purposes of documentation, statistical control, and duty assessment.

Haulage: The inland transport service that is offered by the carrier under the terms and conditions of the tariff and of the relative transport document.

Hawthorne Effect: From a study conducted at the Hawthorne Plant of Western Electric Company in 1927-1932 which found that the act of showing people that you are concerned usually results in better job performance. Studying and monitoring of activities are typically seen as being concerned and results in improved productivity.

Hazardous Material: A substance or material that the Department of Transportation has determined to be capable of posing a risk to health, safety, and property when stored or transported in commerce. *Also See: Material Safety Data Sheet*

Hedge Inventory: Excess inventories held to provide a buffer against risks associated with some contingent event. Events include price increases and availability reductions associated with work stoppages, plant shutdowns, disasters or acts of terrorism.

Heijunka: An element of the Toyota Production System that averages volume and sequence of scheduled items to provide level production and help enable just in time (JIT).

Hierarchy of Cost Assignability: In cost accounting, an approach to group activity costs at the level of an organization where they are incurred, or can be directly related. Examples are the level where individual units are identified (unit-level), where batches of units are organized or processed (batch-level), where a process is operated or supported (process-level), or where costs cannot be objectively assigned to lower level activities or processes (facility-level). This approach is used to better understand the nature of the costs, including the level in the organization at which they are incurred, the level to which they can be initially assigned (attached) and the degree to which they are assignable to other activity and/or cost object levels, i.e. activity or cost object cost, or sustaining costs.

Highway Trust Fund: Federal highway use tax revenues are paid into this fund, and the federal government's share of highway construction is paid from the fund.

Highway Use Taxes: Taxes assessed by federal and state governments against users of the highway (the fuel tax is an example). The use tax money is used to pay for the construction, maintenance, and policing of highways.

Hi-low: Usually refers to a forklift truck on which the operator must stand rather than sit.

Home Page: The starting point for a website. It is the page that is retrieved and displayed by default when a user visits the website. The default home-page name for a server depends on the server's configuration. On many web servers, it is index.html or default.htm. Some web servers support multiple home pages.

Honeycombing: The practice of removing merchandise in pallet load quantities where the space is not exhausted in an orderly fashion. This results in inefficiencies due to the fact that the received merchandise may not be efficiently stored in the space that is created by the honeycombing. The storing or withdrawal of supplies in a manner that results in vacant space that is not usable for storage of other items and creation of unoccupied space resulting from withdrawal of unit loads is one of the major hidden costs of warehousing.

Honeycomb Loss: When storing multiple SKUs in a single region, full utilization of all of the available space is not desirable because it could result in some items not being accessible. Honeycomb loss, the price paid for accessibility, is the unusable empty storage space in a lane or stack due to the storage of only a single SKU in each lane or stack since storing items from different SKUs would block access.

Hopper Cars: Rail cars that permit top loading and bottom unloading of bulk commodities; some hopper cars have permanent tops with hatches to provide protection against the elements.

Horizontal Play/Horizontal Hub: This is a term for a function that cuts across many industries; usually defines a facility or organization that is providing a common service.

Hoshin Planning: Also "Hosin Kanri" is a step-by-step strategic planning process that assesses breakthrough strategic objectives against daily management tasks and activities. It provides a visual map at all levels of the organization provides clear strategic direction. A company develops up to four vision statements that indicate where the company should be in the next five years. Company goals and work plans are developed based on the vision statements. Periodic audits are then conducted to monitor progress.

Hostler: An individual employed to move trucks and trailers within a terminal or warehouse yard area.

Household Goods Warehouse: A warehouse that is used to store household goods.

House Air Waybill (HAWB): A bill of lading issued by a forwarder to a shipper as a receipt for goods that the forwarder will consolidate with cargo from other shippers for transport.

Hub: Can be defined as:

1. A large retailer or manufacturer having many trading partners or;
2. A reference for a transportation network as in "hub and spoke" that is common in the airline and trucking industry. For example, a hub airport serves as the focal point for the origin and termination of long-distance flights where flights from outlying areas are fed into the hub

airport for connecting flights or;

3. A common connection point for devices in a network. A Web "hub" is one of the initial names for what is now known as a "portal".

It came from the creative idea of producing a website, which would contain many different "portal spots" (small boxes that looked like ads, with links to different yet related content). This content, combined with Internet technology, made this idea a milestone in the development and appearance of websites, primarily due to the ability to display a lot of useful content and store one's preferred information on a secured server. The web term "hub" was replaced with portal.

Hub Airport: An airport that serves as the focal point for the origin and termination of long-distance flights; flights from outlying areas are fed into the hub airport for connecting flights.

Human Factor Design: Incorporating scientific data on human physical capabilities into the design of equipment, products and systems.

Human-Machine Interface: Any point where data is communicated from a worker to a computer or from a computer to a worker. Data entry programs, inquire programs, reports, documents, LED displays, and voice commands are all examples of human-machine interfaces.

Human Resources (HR): The function broadly responsible for the organizational function that deals with the people and issues related to people such as compensation, hiring, performance management, and training.

Hundredweight (cwt): A pricing unit used in transportation (equal to 100 pounds).

Hurdle Rate: The required rate of return in a discounted cash flow analysis, above which an investment makes sense and below which it does not.

Hybrid Inventory System: An inventory system combining features multiple methodologies such as push and pull, fixed and variable / dynamic, etc. *Also See: Fixed Reorder Cycle Inventory Model, Fixed Reorder Quantity Inventory Model*

I

Igloos: Pallets and containers used in air transportation; the igloo shape is designed to fit the internal wall contours of a narrow-body airplane.

Image Processing: This allows a company to take electronic photographs of documents. The electronic photograph then can be stored in a computer and retrieved from computer storage to replicate the document on a printer. The thousands of bytes of data composing a single document are encoded in an optical disk. Many carriers now use image processing to provide proof-of-delivery documents to a shipper. The consignee signs an electronic pad that automatically digitizes a consignee's signature for downloading into a computer. A copy of that signature then can be produced to demonstrate that a delivery took place.

Import: Movement of products from one country into another. The import of automobiles from Germany to the U.S. is an example.

Importation Point: The location (port, airport or border crossing) where goods will be cleared for importation into a country.

Import/Export License: Official authorization issued by a government agency that allows for the transport of goods across their national boundaries. Licenses may be required for all, or only specific classes of commodities.

Impressions: With regard to online advertising, it is the number of times an ad banner is downloaded and presumably seen by users. Guaranteed impressions refer to the minimum number of times an ad banner will be seen by users.

In Bond: Goods are held or transported In-Bond under customs control either until import duties or other charges are paid, or to avoid paying the duties or charges until a later date.

In Gate: The transaction or interchange that occurs at the time a container is received by a rail terminal or water port from another carrier.

In-store Implementation (ISI): Refers to the collective physical and informational actions performed at retail to actualize merchandising, marketing and media plans in the store. ISI encompasses compliance, measurement and communications activities, and is defined by a Plan-Do-Measure process cycle that controls implementation plans and work and communicates implementation signals.

Inbound Logistics: The movement of materials from suppliers and vendors into production processes or storage facilities.

Incentive Fee: A premium fee that is based upon the control of costs in a cost-plus-incentive-fee contract.

Incentive Rate: A rate designed to induce the shipper to ship heavier volumes per shipment.

INCOTERMS: International terms of sale developed by the International Chamber of Commerce to define sellers' and buyers' responsibilities.

Indemnity Bond: An agreement to hold a carrier harmless with regard to a liability.

Independent Action: A carrier that is a member of a rate bureau has the right to publish a rate that differs from the rate published by the rate bureau.

Independent Demand: In a requirement planning system, the independent demand is that which is not related to a parent product in a product structure bill of materials or planning bill. Independent demand is typically end customer demand that must be separately forecast.

Independent Trading Exchange (ITE): Often used synonymously with B2B, e-marketplace or Virtual Commerce Network (VCN). ITE is a more precise term, connoting many-to-many transactions, whereas the others do not specify the transactions.

Indirect Cost: A resource or activity cost such as operation costs and overhead that cannot be directly traced to a final cost object since no direct or repeatable cause-and-effect relationship exists. An indirect cost uses an assignment or allocation to transfer cost. *Also See: Direct Cost*

Indirect/Distributor Channel: Your Company sells and ships to the distributor. The distributor sells and ships to the end user. This may occur in multiple stages. Ultimately your products may pass through the Indirect/Distributor Channel and arrive at a retail outlet. Order information in this channel may be transmitted by electronic means. These means may include EDI, brokered systems, or linked electronic systems.

Indirect Retail Locations: A retail location that ultimately sells your product to consumers, but who purchases your products from an intermediary, like a distributor or wholesaler.

Infinite Loading: A method used in calculating work center activity loading where there are no constraints placed on the capacity of the work centers. In other words, the calculation assumes an infinite amount of capacity is available.

Inherent Advantage: The cost and service benefits of one mode compared with other modes.

Initial Contact Personnel: The first point of contact that a customer has with a company.

Inland Bill of Lading: The carriage contract used in transport from a shipping point overland to the exporter's international carrier location.

Inland Carrier: An enterprise that offers overland service to or from a point of import or export.

Inland Port: An inland port is a site located away from traditional land, air and coastal borders. It facilitates and processes international trade through strategic investments in multimodal transportation assets and by promoting value-added services as goods move through the supply chain.

Insourcing: The opposite of outsourcing, that is, a service performed in-house.

Inspection Certificate: A document certifying that merchandise (such as perishable goods) was in good condition immediately prior to shipment.

Integrated Carrier: A company that offers a blend of transportation services such as land, sea and air carriage, freight forwarding, and ground handling.

Integrated Logistics: A comprehensive, system-wide view of the entire supply chain as a single process, from raw materials supply through finished goods distribution. All functions that make up the supply chain are managed as a single entity, rather than managing individual functions separately.

Integrated Product Teams (IPT): To ensure a collaborative environment is maintained among all stakeholders. To do that, the U.S. DoD acquisition, capability needs, financial, and operational stakeholders shall maintain continuous and effective communications with each other through Integrated Product Teams.

Integrated Tow Barge: A series of barges that are connected together to operate as one unit.

Interchange: In EDI, the exchange of electronic information between companies. Also, the group of transaction sets transmitted from one sender to one receiver at one time. Delineated by interchange control segments.

Intercoastal carriers: Water carriers that transport freight between East and West Coast ports, usually by way of the Panama Canal.

Intercorporate hauling: A private carrier hauling the goods of a subsidiary and charging the subsidiary a fee: this is legal if the subsidiary is wholly owned (100 percent) or if the private carrier has common carrier authority.

Interleaving: The practice of assigning an employee multiple tasks that are to be performed concurrently. This technique is frequently used to define the practice of assigning multiple picking orders to a single picker who will pick them concurrently as he/she moves down the aisle.

Interline: Two or more motor carriers working together to haul the shipment to a destination. Carrier equipment may be interchanged from one carrier to the next, but usually the shipment is re-handled without the equipment.

Intermediately Positioned Warehouse: A supplies depot located in a specific region of a country in order to provide a high level of customer service. It distributes commodities only for that area.

Intermittent-Flow, Fixed-Path Equipment: Materials handling devices that include cranes, monorails, and stacker cranes.

Intermodal: Typically the handling of containers and swap-bodies between different forms of transport. Used to denote movements of cargo containers interchangeably between transport modes, i.e., motor, water, and air carriers, and where the equipment is compatible within the multiple systems. *Also See: multi-modal*

Intermodal Container Transfer Facility: A facility where cargo is transferred from one mode of transportation to another, usually from ship or truck to rail.

Intermodal Marketing Company (IMC): An intermediary that sells intermodal services to shippers.

Intermodal Transportation: Transporting freight by using two or more transportation modes such as by truck and rail or truck and oceangoing vessel.

Intermodal Transport Unit (ITU): Container, swap body or semi-trailer/goods road motor vehicle suitable for intermodal transport.

Internal customer: An individual or department which is a part of the supplying company as opposed to the companies' external customers *Also See: Customer*

Internal Labor and Overhead: The portion of COGS that is typically reported as labor and overhead, less any costs already classified as "outsourced."

Internal Rate of Return (IRR): A rate of return used in capital budgeting to measure and compare the profitability of investments. The IRR is sometimes called the effective interest rate**.**

Internal Water Carriers: Water carriers that operate over internal, navigable rivers such as the Mississippi, Ohio, and Missouri.

International Air Transport Association (IATA): An international air carrier rate bureau for passenger and freight movements.

International Civil Aeronautics Organization: An international agency that is responsible for air safety and for standardizing air traffic control, airport design, and safety features worldwide.

International Maritime Bureau (IMB): A special division of the International Chamber of Commerce.

International Maritime Organization (IMO): A United Nations-affiliated organization representing all maritime countries in matters affecting maritime transportation, including the movement of dangerous goods. The organization also is involved in deliberations on marine environmental pollution.

International Security, Trust, and Privacy Alliance (ISTPA): A global alliance of companies and technology providers working together to clarify and resolve evolving issues related to security, trust and privacy.

International Ship and Port Facility Security Code (ISPS): Adopted by the IMO and based on the U.S. MTSA, it came into force on July 1, 2004. It is a comprehensive, mandatory security regime for international shipping and port facility operations agreed to by the members of the IMO. Ships must be certified by their flag states to ensure that mandated security measures have been implemented; port facilities must undergo security vulnerability assessments that form the basis of security plans approved by their government authorities.

International Standards Organization (ISO): An organization within the United Nations to which all national and other standard setting bodies should or do defer. Develops and monitors international standards, including OSI, EDIFACT, and X.400.

International Warehouse Logistics Association: IWLA is a trade association of warehouse logistics providers that helps members run high-quality, profitable businesses. IWLA focuses on the warehouse logistics business, provides education, business building opportunities, and government advocacy that assist member companies to succeed and grow.

Internet Commerce: See E-Commerce.

Interstate Commerce: The transportation of persons or property between states; in the course of the movement, the shipment crosses a state boundary line.

Interstate Commerce Commission (ICC): An independent regulatory agency that implements federal economic regulations controlling railroads, motor carriers, pipelines, domestic water carriers, domestic surface freight forwarders, and brokers.

Interstate System: The National System of Interstate and Defense Highways, 42,000 miles of four-lane, limited-access roads connecting major population centers.

Intra-Manufacturing Re-plan Cycle: Average elapsed time, in calendar days, between the times a regenerated forecast is accepted by the end- product manufacturing/assembly location, and the time that the revised plan is reflected in the Master Production Schedule of all the affected internal sub-assembly/component producing plant(s). (An element of Total Supply Chain Response Time).

Intrastate Commerce: The transportation of persons or property between points within a state. A shipment between two points within a state may be interstate if the shipment had a prior or subsequent move outside of the state and the intent of the shipper was an interstate shipment at the time of shipment.

In-transit Inventory: Material moving between two or more locations, usually separated geographically; for example, finished goods is being shipped from a plant to a distribution center. In-transit inventory is an easily overlooked component of total supply chain availability.

Intrinsic Forecasting: A method of forecasting that looks at known available internal data (sales, usage, etc.) as opposed to the factors external to the business (demographics, weather, etc.).

Introduction: The product of many months or even years of market evaluation and product design, testing, and packaging. Introduction also requires designing and setting up a supply chain.

Inventory: Components, raw materials, work in process, finished goods and supplies required for the creation of goods and services; it can also refer to the number of units and/or value of the stock of goods held by a company.

Inventory Accuracy: This is when the on-hand quantity is equivalent to the perpetual balance (plus or minus the designated count tolerances). It can often be referred to as a percentage showing the variance between book inventory and actual count. This is a major performance metric for any organization that manages large inventories. Typical minimum and best practice averages would be 95 percent and 99 percent, respectively.

Inventory Balance Location Accuracy: When the on-hand quantity in the specified locations is equivalent to the perpetual balance (plus or minus the designated count tolerances).

Inventory Buffers: The products or supplies of an organization maintained on hand or in transit to stabilize variations in supply, demand, production, or lead time

Inventory Carrying Cost: One of the elements comprising a company's total supply-chain management costs. These costs consist of the following:

1. Opportunity Cost: The opportunity cost of holding inventory. This should be based on your company's own cost of capital standards using the following formula. Calculation: Cost of Capital x Average Net Value of Inventory.

2. Shrinkage: The costs associated with breakage, pilferage, and deterioration of inventories. Usually pertains to the loss of material through handling damage, theft, or neglect.

3. Insurance and Taxes: The cost of insuring inventories and taxes associated with the holding of inventory.

4. Total Obsolescence for Raw Material, WIP, and Finished Goods Inventory: Inventory reserves taken due to obsolescence and scrap and includes products exceeding the shelf life, i.e. spoils and is no good for use in its original purpose (do not include reserves taken for Field Service Parts).

5. Channel Obsolescence: Aging allowances paid to channel partners, provisions for buy-back agreements, etc. Includes all material that goes obsolete while in a distribution channel. Usually, a distributor will demand a refund on material that goes bad (shelf life) or is no longer needed because of changing needs.

6. Field Service Parts Obsolescence: Reserves taken due to obsolescence and scrap. Field Service Parts are those inventory reserves kept at locations outside the four walls of the manufacturing plant i.e., distribution center or warehouse.

Inventory Cycle Counting: *See: Cycle Counting*

Inventory Days of Supply (for RM, WIP, PFG, and FFG): Total gross value of inventory for the category (raw materials, work in process, partially finished goods, or fully-finished goods) at standard cost before reserves for excess and obsolescence, divided by the average daily usage. It includes only inventory that is on the books and currently owned by the business entity. Future liabilities such as consignments from suppliers are not included.

Calculation: [5 Point Annual Average Gross Inventory] / [Calendar Year Value of Transfers / 365]

Inventory Deployment: A technique for strategically positioning inventory to meet customer service levels while minimizing inventory and storage levels. Excess inventory is replaced using information derived through monitoring supply, demand, and inventory at rest and in motion.

Inventory Management: The process of ensuring the availability of products through inventory administration.

Inventory Planning Systems: The systems that help in strategically balancing the inventory policy and customer service levels throughout the supply chain. These systems calculate time-phased order quantities and safety stock using selected inventory strategies. Some inventory planning systems conduct a “what if” analysis and compare the current inventory policy with simulated inventory scenarios to improve the inventory return on investment (ROI).

Inventory Turns: This ratio measures how many times a company's inventory has been sold (turned over) during a period of time. The cost of goods sold divided by the average level of inventory on hand. Operationally, inventory turns are measured as total throughput divided by the average level of inventory for a given period. As examples – how many times a year the average inventory for a firm changes over or is sold.

Inventory Turnover: *See: Inventory Turns*

Inventory Velocity: The speed with which inventory moves through a defined cycle (i.e. from receiving to shipping).

Invoice: A detailed statement showing goods sold and amounts for each. The invoice is prepared by the seller and acts as the document that the buyer will use to make payment.

Irregular Route Carrier: A motor carrier that is permitted to provide service utilizing any route.

ISO 9000: A series of quality assurance standards compiled by the Geneva, Switzerland-based International Standardization Organization. In the United States, ISO is represented by the American National Standards Institute based in Washington, D.C.

ISO 14000 Series Standards: A standard for environmental management systems to be implemented in any business, regardless of size, location or income. The aim of the standard is to reduce the environmental footprint of a business and to decrease the pollution and waste a business produces.

Item: A uniquely identifiable piece of inventory. Also known as a part number or SKU, an item can be raw materials, fluids, component parts, subassemblies, finished assemblies, packaging, etc. Usually differentiated by form, fit, or function. Items that are painted different colors are generally viewed as different items.

IWLA: *See: International Warehouse Logistics Association*

J

Jidoka: The concept of adding an element of human judgment to automated equipment. In doing this, the equipment becomes capable of discriminating against unacceptable quality, and the automated process becomes more reliable. This concept, also known as automation, was pioneered by Sakichi Toyoda at the turn of the twentieth century when he invented automatic looms that stopped instantly when any thread broke. This permitted one operator to oversee many machines with no risk of producing large amounts of defective cloth. The term has since been extended beyond its original meaning to include any means of stopping production to prevent scrap, even where this capability is not built-in to the production machine itself.

Joint cost: A type of common cost where products are produced in fixed proportions, and the cost incurred to produce one product necessarily entails the production of another; the backhaul is an example.

Joint Depot Maintenance Activities Group (JDMAG): A U.S. DoD group that provides advice and support to the JG-DM. Maintains a web-site (www.jdmag.wpafb.af.mil/) that shows the Depot Maintenance Source of Repair decisions.

Joint Group on Depot Maintenance (JG-DM): The U.S. DoD flag level officers and civilians from each service that is responsible for depot maintenance. This group is responsible to review the depot maintenance function to achieve effective and affordable support for the nation's weapon systems.

Joint Photographic Expert Group (JPEG): A computer term that is an abbreviation for the Joint Photographic Expert Group. A graphical file format used to display high-resolution color images on the World Wide Web. JPEG images apply a user-specified compression scheme that can significantly reduce the large file size usually associated with photo-realistic color images. A higher level of compression results in lower image quality, whereas a lower level of compression results in higher image quality.

Joint rate: A rate over a route that involves two or more carriers to transport the shipment.

Joint Supplier Agreement (JSA): Indicative of Stage 3 Sourcing Practices, the JSA includes terms and conditions, objectives, process flows, performance targets, flexibility, balancing and incentives.

Just-in-Time (JIT): An inventory control system that controls material flow into assembly and manufacturing plants by coordinating demand and supply to the point where desired materials arrive just in time for use. An inventory reduction strategy that feeds production lines with products delivered "just in time". Developed by the auto industry, it refers to shipping goods in smaller, more frequent lots.

Just-in-Time II (JIT II): Vendor-managed operations taking place within a customer's facility. JIT II was popularized by the Bose Corporation. The supplier representatives, called "in plants", places orders to their own companies, relieving the customer's buyers from this task. Many also become involved at a deeper level, such as participating in new product development projects and manufacturing planning (concurrent planning).

K

Kaizen: Taken from the Japanese words "kai" (change) and "Zen" (good). The popular meaning is continual improvement of all areas of a company and not just quality. A business philosophy of continuous cost, quality problems, and delivery time reductions through rapid, team-based improvement activities. *Also See: Continuous Process Improvement*

Kaizen Blitz: A rapid improvement. This is a focused activity on a particular process or activity. The basic concept is to identify and quickly remove waste.

Kanban: Japanese word for "visible record", that loosely translated means card, billboard or sign. Popularized by Toyota Corporation, it uses standard containers or lot sizes to deliver needed parts to the assembly line "just in time" for use. Empty containers are then returned to the source as a signal to resupply the associated parts in the specified quantity.

Keiretsu: A set of companies with interlocking business relationships and shareholdings. It is a type of business group with a common set of objectives similar to a consortium.

Key Custodians: The persons, assigned by the security administrators of trading partners, that send or receive a component of either the master key or exchange key used to encrypt data encryption keys. This control technique involves dual control, with split knowledge that requires two key custodians.

Key Performance Indicator (KPI): A measure that is of strategic importance to a company or department. For example a supply chain flexibility metric is Supplier On-time Delivery Performance which indicates the percentage of orders that are fulfilled on or before the original requested date.

Kitting: Light assembly of components or parts into defined units ahead of production issue or customer shipment. Kitting reduces the need to maintain an inventory of pre-built completed products, but increases the time and labor consumed at shipment.

Knock-Down (KD): A flat, unformed cardboard box or tray. Knock-downs, also known as KDs, are constructed and glued in the recoup or packaging areas and used for repacked product. Many KDs are provided by the customer for their recouped products.

Knowledge Management Systems: Generally an IT based system for managing knowledge in organizations for supporting creation, capture, storage and dissemination of information.

L

Labor Management System (LMS) A software solution that provides a means of defining / documenting the most appropriate means of performing a process or task, provides an engineered methodology for calculating standard that show how long a task should take to complete and includes tools that can be used for planning activities and reporting performance against standards.

Lading: The cargo carried in a transportation vehicle.

Laid-down cost: *See: Landed Cost*

Land bridge: The movement of containers by ship-rail-ship on Japan-to-Europe moves; ships move containers to the U.S. Pacific Coast, rails move containers to an East Coast port, and ships deliver containers to Europe.

Land Grants: Grants of land given to railroads during their developmental stage to build tracks.

Landed Cost: Cost of product plus relevant logistics costs, such as transportation, warehousing, handling, etc. Also called Total Landed Cost or Net Landed Costs

Lane: A major origin-destination pair, i.e., traffic lane, an origin-destination pairing. An example could be a manufacturer in Chicago that ships to a destination in New York, producing the Chicago to New York traffic lane.

Lash Barges: Covered barges that are loaded on board oceangoing ships for movement to foreign destinations.

Last In, First Out (LIFO): Accounting method of valuing inventory that assumes that the latest goods purchased during a given accounting period are also the first goods used.

Lead Logistics Partner (LLP): An organization that organizes other 3rd party logistics partners for outsourcing of logistics functions. An LLP serves as the client's primary supply chain management provider, defining processes and managing the provision and integration of logistics services through its own organization and those of its subcontractors. *Also See: Fourth Party Logistics*

Lead Time: The total time that elapses between an order's placement and its receipt. It includes the time required for order transmittal, order processing, order preparation, and transit.

Lead Time from Complete Manufacture to Customer Receipt: Includes the time from when an order is ready for shipment to customer receipt of order. Time from complete manufacture to customer receipt includes the following elements: pick/pack time, prepare for shipment, total transit time (all components to consolidation point), consolidation, queue time, and additional transit time to customer receipt.

Lead Time from Order Receipt to Complete Manufacture: Includes times from order receipt to order entry complete, from order entry complete to start to build, and from start to build to ready for shipment. Time from order receipt to order entry completion includes the following elements: order revalidation, configuration check, credit check, and scheduling. Time from order entry completion to start to build includes the following elements: customer wait time and engineering and design time. Time from start to build to ready for shipment includes the following elements: release to manufacturing or distribution, order configuration verification, production scheduling, and build or configure time.

Leadership in Energy and Environmental Design (LEED): A building rating system, developed by the U.S. Green Building Council (USGBC), to provide a set of standards for environmentally sustainable construction.

Lean: A business management philosophy that considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful, and thus a target for elimination.

Learning Management System: A software packaging for delivering, tracking and managing training and education within a company or organization.

Least Total Cost: Similar to the Economic Order Quantity method of lot sizing, LTC is based on the idea that total cost will be least when the carrying cost and ordering cost are essentially equal. *Also See: Discrete Order Quantity, Dynamic Lot Sizing*

Least Unit Cost: A lot-sizing method where a specified number of future period requirements are consolidated in an effort to find a quantity where the total of ordering and carrying costs per unit ordered is at its lowest. *Also See: Discrete Order Quantity, Dynamic Lot Sizing*

LEED: *See: Leadership in Energy and Environmental Design*

Leg: A portion of a complete trip that has an origin, destination, and carrier and is composed of all consecutive segments of a route booked through the same carrier; also called a Bookable Leg.

Legacy: A computer term that describes an old computer system or application program that continues to be used because it still meets the user's needs.

Less-Than-Carload (LCL): Shipment that is less than a complete rail car load (lot shipment).

Less-Than-Truckload (LTL) Carriers: Trucking companies that consolidate and transport smaller (less than truckload) shipments of freight by utilizing a network of terminals and relay points.

Lessee: A person or firm to whom a lease is granted.

Lessor: A person or firm that grants a lease.

Letter of Credit (LOC): An international business document that assures the seller that payment will be made by the bank issuing the letter of credit upon fulfillment of the sales agreement.

Leverage: Taking something small and exploding it (can be financial or technological).

License Plate: A pallet tag. Refers to a uniquely numbered bar code sticker placed on a pallet of product. Typically contains information about product on the pallet.

Life Cycle Cost (LCC): In cost accounting, a product's life cycle is the period that starts with the initial product conceptualization and ends with the withdrawal of the product from the marketplace and final disposition. A product life cycle is characterized by certain defined stages, including research, development, introduction, maturity, decline, and abandonment. Life cycle cost is the accumulated costs incurred by a product during these stages.

Lighter: A flat-bottomed boat designed for cross-harbor or inland waterway freight transfer. While the terms barge and lighter are used interchangeably, a barge usually refers to a vessel used for a long haul, while a lighter is used for a short haul.

Lift-On Lift-Off: Vessel of which the loading and discharging operations are carried out by cranes and derricks.

Lift Truck: Vehicles used to lift, move, stack, rack, or otherwise manipulate loads. Material handling people use a lot of terms to describe lift trucks, some terms describe specific types of vehicles, and others are slang terms or trade names that people often mistakenly use to describe trucks. Terms include industrial truck, forklift, reach truck, motorized pallet trucks, turret trucks, counterbalanced forklift, walkie, rider, walkie rider, walkie stacker, straddle lift, side loader, order pickers, high lift, cherry picker, Jeep, Tow motor, Yale, Crown, Hyster, Raymond, Clark, and Drexel.

Line: 1) Area within a production or assembly facility where manufacturing occurs in a linear fashion, passing products through one level of completion on to the next process. 2) A unique item order line on a customer or purchase order.

Line Functions: The decision-making areas associated with daily operations. Logistics line functions include traffic management, inventory control, order processing, warehousing, and packaging.

Line-Haul Shipment: A shipment that moves between cities and distances over 100 to 150 miles.

Line Scrap: Value of raw materials and work-in-process inventory scrapped as a result of improper processing or assembly, as a percentage of total value of production at standard cost.

Liner Service: International water carriers that ply fixed routes on published schedules.

Link: The transportation method used to connect the nodes (plants, warehouses) in a logistics system.

Linked Distributed Systems: Independent computer systems, owned by independent organizations, linked in a manner to allow direct updates to be made to one system by another. For example, a customer's computer system is linked to a supplier's system, and the customer can create orders or releases directly in the supplier's system.

Little Inch: A federally built pipeline constructed during World War II that connected Corpus Christi and Houston, Texas.

Live: A situation in which the equipment operator stays with the trailer or boxcar while it is being loaded or unloaded.

Load Factor: A measure of operating efficiency used by air carriers to determine the percentage of a plane's capacity that is utilized, or the number of passengers divided by the total number of seats.

Load Tender (Pick-Up Request): An offer of cargo for transport by a shipper. Load tender terminology is primarily used in the motor industry.

Load Tendering: The practice of providing a carrier with detailed information and negotiated pricing (the tender) prior to scheduling a pickup. This practice can help assure contract compliance and facilitate automated payments (self-billing).

Loading Allowance: A reduced rate offered to shippers and/or consignees who load and/or unload LTL or AQ shipments.

Load locks: adjustable support bars used inside trailers to prevent movement of the load. A.K.A Load bars, Cargo bars.

Loading Port: The port where the cargo is loaded onto the exporting vessel. This port must be reported on the Shipper's Export Declaration, Schedule D and is used by U.S. companies to determine which tariff is used to freight rate the cargo for carriers with more than one tariff.

Local Area Network (LAN): A data communications network spanning a limited geographical area, usually a few miles at most, providing communications between computers and peripheral devices.

Local Rate: A rate published between two points served by one carrier.

Local Service Carriers: An air carrier classification of carriers that operate between areas of lesser and major population centers. These carriers feed passengers into the major cities.

Location Grid: A layout of the warehouse or storage yard used to enhance the management of efficient put away, pick, and inventory cycle counting. A high level view of warehouse locations or a general template used to map out a storage yard.

Location Tag: A bar coded sign that hangs above or on a warehouse location. The location number can be read from the tag or scanned with an RF gun.

Locational Determinant: The factors that determine the location of a facility. For industrial facilities, the determinants include logistics.

Locator System: Locator systems are inventory-tracking systems that allow you to assign specific physical locations to your inventory to facilitate greater tracking and the ability to store product randomly. Location functionality in software can range from a simple text field attached to an item that notes a single location, to systems that allow multiple locations per item and track inventory quantities by location. Warehouse management systems (WMS) take locator systems to the next level by adding functionality to direct the movement between locations.

Lockbox: A method for receiving payments where customers make their remittance directly to a bank or other financial institution rather than to the invoicing company. The bank then applies the funds received directly to the company's account, and provides the company with a listing (printed or electronic) of all the payments received.

Lockout: The process of disabling (lockout) and identifying (tag out) equipment and energy sources during maintenance or service to prevent injury of personnel from an unexpected startup or power up.

Logbook: A daily record of the hours an interstate driver spends driving, off duty, sleeping in the berth, or on duty but not driving.

Logistics: The process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods including services, and related information from the point of origin to the point of consumption for the purpose of conforming to customer requirements. This definition includes inbound, outbound, internal, and external movements.

Logistics Channel: The network of supply chain participants engaged in the storage, handling, transfer, transportation, and communications functions that contribute to the efficient flow of goods.

Logistics Chain Manager: Plans the appropriation of logistics chain resources to meet logistics chain requirements.

Logistics Data Interchange (LDI): A computerized system to electronically transmit logistics information.

Logistics Management: As defined by the Council of Supply Chain Management Professionals (CSCMP): Logistics management is that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customers' requirements. Logistics management activities typically include inbound and outbound transportation management, fleet management, warehousing, materials handling, order fulfillment, logistics network design, inventory management, supply/demand planning, and management of third party logistics services providers. To varying degrees, the logistics function also includes sourcing and procurement, production planning and scheduling, packaging and assembly, and customer service. It is involved in all levels of planning and execution – strategic, operational, and tactical. Logistics management is an integrating function that coordinates and optimizes all logistics activities, as well as integrates logistics activities with other functions, including marketing, sales, manufacturing, finance, and information technology.

Logistics Service Provider (LSP): Any business that provides logistics services. Includes those businesses typically referred to as 3PL, 4PL, LLP, etc. Services may include provisioning, transport, warehousing, packaging, etc.

Long-Term Planning: An aggregate plan used to ensure the major resources are adequate to meet demand.

Long Ton: Equals 2,240 pounds.

Lost Sale: The simple definition is a potential sale (usually a customer order) that was not completed (usually due to availability). However this is a grey area and very dependent on how the individual enterprise defines it. Many refer to abandoned website shopping cart quantities as lost sales, even though the customer may only have been browsing. This highlights the difficulty in defining the term– if the customer shows a desire for a product but does not purchase it immediately, was the sale really "lost". Did the customer satisfy their desire elsewhere or with a different product from your own store, or did they simply postpone a decision? Were they perhaps simply "kicking tires"? The answer is quite elusive.

In an ideal world we would like to see more regarding the reason for the lost sale – product did not meet requirement, price too high, not available when needed, etc. – but this information is generally not available. A lost sale is not a backorder because the backorder will ship when available – unless of course the customer does not accept backorders, or cancels the order before it ships.

Lot Control: A method of tracking production lots used primarily to manage potential recalls. Typically unique lot or batch numbers are assigned to each group of products manufactured and tracking systems are established to monitor the destination of the products when sold.

Lot-for-Lot: A method used in lot-sizing where production orders are created in quantities that match the net requirements for the manufacturing cycle. *Also See: Discrete Order Quantity*

Lot Number: *See: Batch Number*

Lot Size: The set quantity of goods to be purchased or produced at one time in anticipation of use or sale in the future.

Lot Sized System: *See: Fixed Reorder Quantity Inventory Model*

Lumping: A term applied to a person who assists a motor carrier owner-operator in the loading and unloading of property: quite commonly used in the food industry.

Lumpy Demand: *See: Discontinuous Demand*

M

Machine Downtimes: Time during which a machine cannot be utilized. Machine downtimes may occur during breakdowns, maintenance, changeovers, etc.

Machine-to-Machine interface (M2M): A term describing the process whereby machines are remotely monitored for status and problems reported and resolved automatically or maintenance scheduled by the monitoring systems.

Macro Environment: 1) Major external and uncontrollable factors that influence an organization's decision making, and affect its performance and strategies. These factors include the economic, demographics, legal, political, and social conditions, technological changes, and natural forces. 2) Factors that influence a company's or product's development but that are outside of the company's control. For example, the macro environment could include competitors, changes in interest rates, changes in cultural tastes, or government regulations.

Mainframe: A term sometimes generically used to refer to an organization’s central computer system. Specifically the largest class of computer systems manufactured.

Maintenance, Repair, and Operating supplies (MRO): 1) Any activity – such as tests, measurements, replacements, adjustments and repairs — intended to retain or restore a functional unit in or to a specified state in which the unit can perform its required functions. 2) A category of software designed to support asset maintenance and management, also sometimes referred to as Computerized Maintenance Management Systems (CMMS).

Major Carrier: A for-hire certificated air carrier that has annual operating revenues of $1 billion or more: the carrier usually operates between major population centers.

Make-or-Buy Decision: Business decision that compares the costs and benefits of manufacturing a product or product component against purchasing it. If the purchase price is higher than what it would cost the manufacturer to make it, or if the manufacturer has excess capacity that could be used for that product, or the manufacturer's suppliers are unreliable, then the manufacturer may choose to make the product. This assumes the manufacturer has the necessary skills and equipment necessary, access to raw materials, and the ability to meet its own product standards. A Company who chooses to make rather than buy is at risk of losing alternative sources, design flexibility, and access to technological innovations.

Make-to-Order (MTO): Also called “Manufacture-to-order”. A manufacturing process strategy where the trigger to begin manufacture of a product is an actual customer order or release, rather than a market forecast. For Make-to-Order products, more than 20 percent of the value-added takes place after the receipt of the order or release, and all necessary design and process documentation is available at time of order receipt.

Make-to-Stock (MTS): Also called Manufacture-to-stock. A manufacturing process strategy where finished product is continually held in plant or warehouse inventory to fulfill expected incoming orders or releases based on a forecast.

Mail Shop A service provider that specializes in preparing materials for mailing by affixing labels, sorting for bulk rates, preparing bag tags, bagging, etc.

Manifest: A document that describes individual orders contained within a shipment.

Manufacturer’s Representative: An individual or organizations that provides sales and marketing services for one or more other firms who actually manufacture the product. A manufacturer’s representative typically does not take ownership of the products, and in many cases does not even handle them. *See: Drop Ship*

Manufacturing Calendar: A tool used in the production environment to note capacity available by working day. While it may resemble the traditional calendar with a representation of month and days, the unique features are the units of capacity available and the ability to block specific days, shifts or work periods. Calendars are set by work center to allow for differing schedules. Synonyms: M-Day Calendar, Planning Calendar, Production Calendar, Shop Calendar.

Manufacturing Capital Asset Value: The asset value of the "Manufacturing fixed assets" after allowance for depreciation. Examples of equipment are SMT placement machines, conveyors, Auto guided vehicles, robot cells, testers, X-ray solder machines, Burn-in chambers, Logic testers, Auto packing equipment, PLC station controllers, Scanning equipment, and PWB magazines.

Manufacturing Critical-Path Time (MCT): The typical amount of calendar time from when a manufacturing order is created through the critical-path until the first, single piece of that order is delivered to the customer.

Manufacture Cycle Time: The average time between commencement and completion of a manufacturing process, as it applies to make-to-stock or make-to-order products. Typically does not include engineering or testing time.

Calculation: [Average# of units in WIP] / [Average daily output in units]

Manufacturing Execution Systems (MES): A system designed to manage and monitor work-in-process on the factory floor including manual or automatic labor and production reporting, as well as on-line inquiries and links to tasks that take place on the production floor. Manufacturing Execution Systems may include one or more links to work orders, receipt of goods, shipping, quality control, maintenance, scheduling or other related tasks.

Manufacturing Lead Time: The total length of time used to process raw materials and components through all upper levels in the bill of material to an end item. It specifies the total of all individual elements of lead time—such as order preparation, queue, setup, run, inspection, etc.—used for and indicative of a projected availability date for an end item fall lowest level raw material is on hand. *Also See: Lead Time*

Manufacturing Operations: Operations specifically used for making products, including dish soap to automobiles; they make tangible items that can be sold to consumers through stores, shops, and online.

Manufacturing Resource Planning (MRP II): The extension of closed-loop MRP that includes and integrates financial and simulation systems. It includes all organizational functions related to long-term strategic and business planning, demand planning, materials planning, resource planning, and production and vendor scheduling and execution. It assumes the use of a base, integrated system and the sharing of a common database and operating parameters by all functions and departments.

Mapping: A computer term referring to diagramming of data that is to be exchanged electronically, including how it is to be used and what business management systems need it. Preliminary step for developing an applications link. Performed by the functional manager responsible for a business management system.

Margin Analysis: The accounting activity of analyzing the various elements contributing to the margin or difference between revenue and costs.

Marginal Cost: The cost to produce one additional unit of output. The change in total variable cost resulting from a one-unit change in output.

Marine insurance: Insurance to protect against cargo loss and damage when shipping by water transportation.

Maritime Administration: A federal agency that promotes the merchant marine, determines ocean ship routes and services, and awards maritime subsidies.

Maritime Transportation Security Act (MTSA): A law passed in 2002 to create a comprehensive national system of transportation security enhancements. The MTSA designated the U.S. Coast Guard as the lead federal agency for maritime homeland security and requires federal agencies, ports, and vessel owners to take numerous steps to upgrade security. The MTSA requires the Coast Guard to develop national and regional area maritime transportation security plans and requires seaports, waterfront terminals, and vessels to submit security and incident response plans to the Coast Guard for approval. The MTSA also requires the Coast Guard to conduct antiterrorism assessments of certain foreign ports.

Market Demand: An Estimated demand for a product or service within a given market demographic and time period.

Market Discovery Process: An evaluation and determination of attractive markets (by size and entry requirements).

Market Dominance: In transportation rating this refers to the absence of effective competition for railroads from other carriers and modes for the traffic to which the rate applies. The Staggers Act of 1980 stated that market dominance does not exist if the rate is below the revenue-to-variable- cost ratio of 160 percent in 1981 and 170 percent in 1983.

Market Intelligence: The process of gathering and analyzing information about a company's market to better understand customer's wants and needs and to identify possible threats and opportunities to the company.

Market Segment: Market Segment: a group of people or organizations sharing one or more characteristics causing them to have similar product and/or service needs. A true market segment meets all of the following criteria: it is distinct from other segments (different segments have different needs); it is homogeneous within the segment (exhibits common needs); it responds similarly to a market stimulus; and it can be reached by a market intervention. The term is also used when consumers with identical product and/or service needs are divided up into groups so they can be charged different amounts. These can broadly be viewed as 'positive' and 'negative' applications of the same idea, splitting up the market into smaller groups.

Market Share: The portion of the overall market demand for a specific product or service which is provided by any single provider.

Market Strategy: A guide developed for an organization that details how to concentrate its limited resources on the greatest opportunities to increase sales and achieve a sustainable competitive advantage.

Market-Positioned Warehouse: A Warehouse located in a geographic area containing a high population of customers, used to provide a ready source of products available the same day or next day to ordering customers in a manner more economical than overnight package shipments.

Marks and Numbers: Identifying marks and numbers affixed to or placed on goods used to identify a shipment or parts of a shipment.

Marquis Partners: Key strategic relationships. This has emerged as perhaps the key competitive advantage and barrier to entry of e-marketplaces. Get the big players in the fold first, offering equity if necessary.

Marshaller or Marshalling Agent: This is a service unique to international trade and relates to an individual or firm that specializes in one or more of the activities preceding Main Carriage, such as consolidation, packing, marking, sorting of merchandise, inspection, storage, etc. References state that Marshalling Agent, Consolidation Agent and Freight Forwarder all have the same meaning.

Mass Customization: A phrase used in marketing, manufacturing, call centers, and management referring to the use of flexible computer-aided manufacturing systems to produce custom output. Those systems combine the low unit costs of mass production processes with the flexibility of individual customization. At its core is a tremendous increase in variety and customization without a corresponding increase in costs.

Mass Service: Requires lower customization and customer interaction, but labor intensity cost is relatively high. Operations managers are concerned with improving service times and will try to employ automated technologies.

Master Air Waybill (MAWB): The bill of lading issued by air carriers to their customers.

Master Pack: A large box that is used to pack a number of smaller boxes or containers. Aids in protecting the smaller cartons or packages and reduces the number of cartons to be handled during the material handling process.

Master Production Schedule (MPS): The master level or top level schedule used to set the production plan in a manufacturing facility.

Material Acquisition Costs: One of the elements comprising a company's total supply-chain management costs. These costs consist of the following:

1. Materials (Commodity) Management and Planning: All costs associated with supplier sourcing, contract negotiation and qualification, and the preparation, placement, and tracking of a purchase order, including all costs related to buyer/planners.

2. Supplier Quality Engineering: The costs associated with the determination, development/certification, and monitoring of suppliers' capabilities to fully satisfy the applicable quality and regulatory requirements.

3. Inbound Freight and Duties: Freight costs associated with the movement of material from a vendor to the buyer and the associated administrative tasks. Duties are those fees and taxes levied by government for moving purchased material across international borders. Customs broker fees should also be considered in this category.

4. Receiving and Put Away: All costs associated with taking possession of material and storing it. *Note that carrying costs are not a part of acquisition, and inspection is handled separately.*

5. Incoming Inspection: All costs associated with the inspection and testing of received materials to verify compliance with specifications.

6. Material Process and Component Engineering: Those tasks required to document and communicate component specifications, as well as reviews to improve the manufacturability of the purchased item.

7. Tooling: Those costs associated with the design, development, and depreciation of the tooling required to produce a purchased item. A tooling cost would be incurred by a company if they actually paid for equipment and/or maintenance for a contract manufacturer that makes their product. Sometimes, there is not enough incentive for a contract manufacturer to upgrade plant equipment to a level of quality that a company requires, so the company will pay for the upgrades and maintenance to ensure high quality. May not be common in some industries such as the Chemicals.

Material Index: The ratio of the sum of the localized raw material weights to the weight of the finished product.

Material Safety Data Sheet (MSDS): A form containing data regarding the properties of a particular substance. An important component of product stewardship and workplace safety, it is intended to provide workers and emergency personnel with procedures for handling or working with that substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill handling procedures. The exact format of an MSDS can vary from source to source within a country depending on how specific is the national requirement. *Also See: Hazardous Materials*

Materials Handling: The physical handling of products and materials between procurement and shipping.

Materials Management: Inbound logistics from suppliers through the production process. The movement and management of materials and products from procurement through production.

Materials Planning: The materials management function that attempts to coordinate the supply of materials with the demand for materials.

Materials Requirements Planning (MRP): A decision-making methodology used to determine the timing and quantities of materials to purchase.

Maturity Level: An identifiable stage, defined in terms of process features, towards achieving a mature process. Maturity levels are commonly represented in 5 stages, for example the SEI Capability Maturity Model defines the following levels – Ad Hoc, Repeatable, Definable, Managed, and Optimized.

Measure: A number used to quantify a metric, showing the result of part of a process often resulting from a simple count. Example: number of units shipped.

Metrics: Matrix Organizational Structure: A type of organizational management in which people with similar skills are pooled for work assignments. For example, all engineers may be in one engineering department and report to an engineering manager, but these same engineers may be assigned to different projects and report to a project manager while working on that project. Therefore, each engineer may have to work under several managers to get their job done.

Mid-Term Planning: Outlining what will be produced by period, but not on a highly detailed schedule.

Motor Carriers: Also referred to as common carriers, the most widely used domestic mode of transportation, as most freight is regional in nature.

MAX: The lowest inventory quantity that is desired at a ship to location or selling location. This quantity will over-ride the forecast number if the forecast climbs above the MAX. Maximum stock.

Maximum Inventory: The prescribed maximum level of inventory allowed for a specific item. Set into the item database, it is used in min/max calculations.

Maximum Order Quantity: The maximum quantity allowed when ordering a specific item. Typically a value that is calculated and set into the system for a period of time.

m-Commerce: Mobile commerce applications involve using a mobile phone to carry out financial transactions. This usually means making a payment for goods or transferring funds electronically. Transferring money between accounts and paying for purchases are electronic commerce applications. And emerging application, electronic commerce has been facilitated by developments in other areas in the mobile world, such as dual slot phones and other smarter terminals and more standardized protocols, which allow greater interactivity and therefore more sophisticate services.

N

Negotiation: Term used to describe discussions used to reach a formal agreement as to sale terms.

Net Weight: The weight of the merchandise, unpacked, exclusive of any containers.

Network Optimization: A process or methodology to make a distribution network as fully perfect, functional, effective or efficient as possible. The use of mathematics may be involved to find the best solution.

Network Planning: An inventory distribution or transportation planning strategy that attempts to optimize the time/cost of travel or cost of holding inventory across multiple sites.

Node: A fixed point in a firm's logistics system where goods come to rest; includes plants, warehouses, supply sources, and markets.

No Location (No Loc): A received item for which the warehouse has no previously established storage slot.

O

Obsolete Inventory: Inventory for which there is no forecast demand expected. A condition of being out of date. A loss of value occasioned by new developments that place the older property at a competitive disadvantage.

Occupational Safety and Health Administration (OSHA): A United States Department of Labor Agency whose mission is the prevention of work- related injuries, illnesses, and death.

On Time Delivery: A metric defined as percent of orders received on time by the company (inbound) or its customers (outbound).

One Piece Flow: Moving parts through a process in batches of one.

One Up/One Down: A new International Standards Organization (ISO) Food Traceability Standard that requires each company to know who their immediate supplier is and to whom the product is being shipped. Also, the Bioterrorism Act of 2002 requires One Up/One Down traceability for each link in the supply chain.

On-time, In Full (OTIF): Refers to the service level requirement to ship all products on the order (the entire quantity) and deliver it in the time frame desired by the customer

Operations Management: The management of the transformation process in which inputs are made into products and services.

Order Cycle: The time and process involved from the placement of an order to the receipt of the shipment.

Order Entry and Scheduling: The process of receiving orders from the customer and entering them into a company's order processing system. Orders can be received through phone, fax, or electronic media. Activities may include " technically" examining orders to ensure an orderable configuration and provide accurate price, checking the customer' s credit and accepting payment (optionally), identifying and reserving inventory (both on hand and scheduled), and committing and scheduling a delivery date.

Order Management: The process of fulfilling purchase demand (sales or orders) for companies' products and includes how firms receive orders (by phone, fax, or computer), how firms fill orders (order processing), and how orders are shipped to customers.

Order Picking: The function of gathering the items associated with an order from their storage locations in order to make them available to be included in production processes or to customers. *Also See: Batch Picking, Discrete Order Picking, Zone Picking*

Order Processing: Activities associated with accepting and filling customer orders.

Origin: The place where a shipment begins its movement.

Original Equipment Manufacturer (OEM): The rebranding of equipment and selling it under another name, or as a component of another product. OEM refers to the company that made the products (the "original" manufacturer), but with the growth of outsourcing, eventually became widely used to refer to the organization that buys the products and resells them. This term has two generally acceptable definitions that are actually opposites of each other and may vary by industry: 1) The OEM reseller is often the designer of the equipment (which is made to order). An example would be a computer manufacturer OEM that includes components built by other manufacturers, and 2) Companies that make products for others to repackage and sell, or to incorporate into a final assembly. An example would be an OEM manufacturing tires for use on automobiles.

OSHA: *See: Occupational Safety and Health Administration*

Out of Stock: The state of not having inventory at a location and available for distribution or for sell to the consumer (zero inventory).

Outbound Logistics: The transport, storage, and delivery of goods that are leaving businesses. Outbound logistics deals almost exclusively with end products.

Outsource: To utilize a third-party provider to perform services previously performed in-house. Examples include manufacturing of products and call center/customer support.

Over, Short and Damaged (OS&D): This is typically a report issued at warehouse when goods received are more or less than indicated by the packing slip, or are damaged. Used to file claim with carrier.

Over-the-Road: A motor carrier operation that reflects long-distance, intercity moves; the opposite of local operations.

Owner-Operator (OO): A trucking operation in which the owner of the truck is also the driver.

P

Packing List: List showing merchandise packed and all particulars. Normally prepared by shipper but not required by carriers. Copy is sent to consignee to help verify shipment received, it may be inside of the box or attached to the outside in a clear envelope. The physical equivalent of the electronic Advanced Ship Notice (ASN).

Pallet: The platform on which cartons are stacked and then used for shipment or movement as a group. Pallets may be made of wood or composite materials. Some pallets have electronic tracking tags (RFID) and most are recycled in some manner.

Pallet Jack: Material handling equipment consisting of two broad parallel pallet forks on small wheels used in the warehouse to move pallets of product, but not having the lifting capability of a forklift. It may be a motorized unit guided by an operator who stands on a platform; or it may be a motorized or manual unit guided by an operator who is walking behind or beside it. Comes as a "single" (one pallet) or "double" (two pallets).

Pallet Tag: Also known as "License Plate", the bar coded sticker that is placed on a unit load or partial load, typically at receiving. The pallet tag can be scanned with an RF gun.

Pallet Ticket: A document or label attached to a pallet, showing the description, part number, and quantity of the item contained on the pallet.

Perfect Order: The definition of a perfect order is one which meets all of the following criteria:

- Delivered complete, with all items on the order in the quantity requested.
- Delivered on time to customer's request date, using the customer's definition of on time delivery.
- Delivered with complete and accurate documentation supporting the order, including packing slips, bills of lading, and invoices.
- Delivered in perfect condition with the correct configuration, customer ready, without damage, and faultlessly installed (as applicable).

Phantom Bill of Material: A BOM for a product or group of parts that is not normally built and stocked, but is immediately used in production. MRP processors ignore the phantom and instead include the component parts in production orders and for planning purposes. A phantom BOM is often used for convenience where a set of parts has identical usage across many bills of material. Synonym: Pseudo Bill of Material.

Pick/Pack: Picking of product from inventory and packing into shipment containers.

Pick-by-light: A system in which a computer automatically illuminates a light at the next picking location, with the quantity to be picked is displayed on a screen. The order picker follows the light to the location, makes the pick according to the quantity displayed, and pushes a button to confirm the pick has been made and to turn off the light.

Pick List: A list of items to be picked from stock in order to fill an order; the pick list generation and the picking method can be quite sophisticated.

Picking: The operations involved in pulling products from storage areas to complete a customer order.

Pickup and Delivery: A type of transportation, usually local, where the carrier follows a regular route making deliveries and picking up shipments.

Piece Count: Number of individual cases, packages or bundles in an intermodal trailer or container.

Pipeline: Mode of transportation used for handling inter-city ton-mileage of freight.

Plan-Do-Check-Act (PDCA): A four step quality improvement cycle, based on a process described by Walter Shewhart, that involves continuous improvement based on analysis, design, execution and evaluation. Sometimes referred to as plan/do/study/act, it emphasizes the constant attention and reaction to factors that affect quality. Synonyms: Shewhart Cycle. *Also See: Deming Circle*

Planned Order: An order proposed by an MRP system to cover forecast demand in a future period. Planned orders will change dynamically over time to accommodate changes in forecasts and actual usage until they become ' firm planned orders' either through manual intervention or by virtue of the associated period moving within a planning horizon. The next step in the process would be to create an actual purchase or production order. *Also See: Firm Planned Order*

Planned Receipt: Any line item on an open purchase or production order that has been scheduled but not yet received into stock.

PO: *See: Purchase Order*

Point of Sale (POS): 1) The time and place at which a sale occurs, such as a cash register in a retail operation, or the order confirmation screen in an on-line session. Supply chain partners are interested in capturing data at the POS, because it is a true record of the sale rather than being derived from other information such as inventory movement. 2) Also a national network of merchant terminals, at which customers can use client cards and personal security codes to make purchases. Transactions are directed against client deposit accounts. POS terminals are sophisticated cryptographic devices, with complex key management processes. POS standards draw on activity-based management (ABM) network experiences and possess extremely stringent security requirements.

Pooling: A shipping term for the practice of combining shipment from multiple shippers into a truckload in order to reduce shipping charges.

Port Authority: A state or local government that owns, operates, or otherwise provides wharf, dock, and other terminal investments at ports.

Port of Discharge: Port where vessel is off loaded.

Port of Entry: A port at which foreign goods are admitted into the receiving country.

Price Look-Up (PLU): Used for retail products sold loose, bunched or in bulk (to identify the different types of fruit, say). As opposed to UPC (Universal Product Codes) for packaged, fixed weight retail items. A PLU code contains 4-5 digits in total. The PLU is entered before an item is weighed to determine a price.

Process: Set of activities that produce a product, service, and/or a combination of products and services.

Procurement: The area of supply chain management that controls the buying of materials, equipment, and services. In many corporations, it is also called supply management.

Product Life Cycle: The cycle through which every product goes through, from introduction to withdrawal or eventual demise.

Product-Process Matrix: A way to link marketing decisions and a product's life cycle to an organization's operations capabilities.

Productivity: A measure of efficiency of resource utilization; defined as the sum of the outputs divided by the sum of the inputs.

Production Plan: Determines what type of machinery will need to be purchased and what type of inventory must be built up to meet future demand.

Professional Service: Characterized by high customization and customer interaction and high labor cost. Organizations that fit this model are accountants, consultants, doctors, and lawyers. These types of businesses have highly educated employees and the services they perform are time-consuming and customized.

Pro Number: Any progressive or serialized number applied for identification of freight bills, bills of lading, etc.

Proof of Delivery (POD): Information supplied by the carrier containing the name of the person who signed for the shipment, the time and date of delivery, and other shipment delivery related information. POD is also sometimes used to refer to the process of printing materials just prior to shipment (Print on Demand).

Public Warehouse: A business that provides short or long-term storage to a variety of businesses usually on a month-to-month basis. A public warehouse will generally use their own equipment and staff, however agreements may be made where the client either buys or subsidizes equipment. Public warehouse fees are usually a combination of storage fees (per pallet or actual square footage) and transaction fees (inbound and outbound). Public warehouses are most often used to supplement space requirements of a private warehouse. *Also See: 3PL*

Pup: A 28-foot trailer, used mostly in less than truckload business.

Purchase Order (PO): The purchaser's authorization used to formalize a purchase transaction with a supplier. The physical form or electronic transaction a buyer uses when placing order for merchandise.

Q

Qualitative Forecasting: Using intuition or expert judgment because little to no historical data exists.

Quantitative Forecasting: Forecasting based on numbers or historical data.

R

Radio Frequency (RF): A form of wireless communications that lets users relay information via electromagnetic energy waves from a terminal to a base station, which is linked in turn to a host computer. The terminals can be placed at a fixed station, mounted on a forklift truck, or carried in the worker's hand. The base station contains a transmitter and receiver for communication with the terminals. RF systems use either narrow-band or spread-spectrum transmissions. Narrow-band data transmissions move along a single limited radio frequency, while spread-spectrum transmissions move across several different frequencies. When combined with a bar-code system for identifying inventory items, a radio-frequency system can relay data instantly, thus updating inventory records in so-called "real time."

Radio Frequency Identification (RFID): The use of radio frequency technology including RFID tags and tag readers to identify objects. Objects may include virtually anything physical, such as equipment, pallets of stock, or even individual units of product. RFID tags can be active or passive. Active tags contain a power source and emit a signal constantly. Passive tags receive power from the radio waves sent by the scanner / reader. The inherent advantages of RFID over bar code technology are: 1) the ability to be read over longer distances, 2) the elimination of requirement for "line-of-sight" readability, 3) added capacity to contain information, and 4) RFID tag data can be updated/changed.

Raw materials: Crude or processed material that can be converted by manufacturing, processing, or both, into new and useful products.

Receiving: The function of taking physical receipt of material and performing initial inspection of the incoming shipment for damage and validation with respect to purchase order quantity. Typically includes some initial data recording, but not quality assurance or stocking.

Receiving Dock: Distribution center location where the actual physical receipt of the purchased material from the carrier occurs.

Regional Carrier: A for-hire air carrier, usually certificated, that has annual operating revenues of less than $74 million; the carrier usually operates within a particular region of the country.

Regular-route carrier: A motor carrier that is authorized to provide service over designated routes.

Replenishment: The process of moving or re-supplying inventory from a reserve (or upstream) storage location to a primary (or downstream) storage or picking location, or to another mode of storage in which picking is performed.

Return Material Authorization or Return Merchandise Authorization (RMA): A reference number produced to recognize and give authority for a product to be returned to a distribution center or manufacturer. This form typically needs to be accompanied by a Warranty/Return, which helps the company identify the original product and the reason for the return. The RMA number often acts as an order for the work required in repair situations, or as a reference for credit approval.

Reverse Logistics: The transportation of goods that need to be returned through the supply chain because of defects or because products have reached the end of their usage; parts may be recycled or remanufactured.

Right of eminent domain: A concept that permits the purchase of land needed for transportation right-of-way in a court of law; used by railroads and pipelines.

Risk Exposure Analysis: *See: Risk Management*

Risk Management: The identification, evaluation, and ranking the priority of risks followed by synchronized and cost-effective application of resources to lessen, monitor, and control the probability and/or impact of unfortunate events.

Risk Mitigation: A reduction in the exposure to risk, lessening the impact and/or the probability of its occurrence.

Roll-on-Roll-off (RO-RO): A type of ship designed to permit cargo to be driven on at origin and off at destination; used extensively for the movement of automobiles.

Root Cause Analysis: A class of problem solving methods aimed at identifying the root causes of problems or events. The practice of RCA is predicated on the belief that problems are best solved by attempting to correct or eliminate root causes, as opposed to merely addressing the immediately obvious symptoms.

S

Safety Stock: The inventory a company holds above normal needs as a buffer against delays in receipt of supply or changes in customer demand.

Sales and Operations Planning (S&OP): A strategic planning process that reconciles conflicting business objectives and plans future supply chain actions. S&OP Planning usually requires various business functions such as sales, operations and finance to work together to agree on a single plan/forecast that can be used to drive the entire business. Some organizations include suppliers and customers in their S&OP processes.

Serial Shipping Container Code (SSCC): An 18-character identification number used to identify containers including pallets and boxes primarily for containers that are a part of a shipment covered by an Automated Shipment Notice (ASN).

Service Factory: This sector typically requires low labor costs, low customization, and minimal customer interaction. Examples of service organizations are hotels, trucking companies, and airlines. A key customer trait in this area is low price. The customer is looking for the best deal, defined largely as the lowest price for the service. Operations managers will focus their efforts on facilities and equipment utilization, maximizing output and keeping costs low.

Service Operations: Involve companies that provide intangible products or services directly to consumers, such as having cars washed or providing Internet service.

Service Shop: Requires a high degree of customization and customer interaction but relatively low labor costs.

Shipper: The party that tenders goods for transportation.

Shipping: 1) The act of conveying materials from one point to another. 2) The functional area that prepares the outgoing shipment for transport.

Shipping Lane: A predetermined, mapped route on the ocean that commercial vessels tend to follow between ports. This helps ships avoid hazardous areas. In general transportation, the logical route between the point of shipment and the point of delivery used to analyze the volume of shipment between two points.

Shipping Manifest: A document that is typically presented to the carrier outlining the individual shipping orders included in a shipment. The manifest will show the reference number of each shipping order in the load, the weight and count of boxes or containers, and the destination.

Short-Haul: A short move that is usually under 1000 miles.

Short-Term Planning: Detailed scheduling and control processes to make sure that all resources, including raw materials, will be available when production is scheduled to start.

Short Shipment: Piece of freight missing from shipment as stipulated by documents on hand.

Skills Matrix: A visible means of displaying people's skill level in various tasks. Used in a team environment to identify the skill required by the team and which team members have those skills.

Slip Sheet: Similar to a pallet, the slip sheet, which is made of cardboard or plastic, is used to facilitate movement of unitized loads.

Slotting: Inventory slotting or profiling is the process of identifying the most efficient placement for each item in a distribution center. Since each warehouse is different, proper slotting depends on a facility's unique product, movement, and storage characteristics. An optimal profile allows workers to pick items more quickly and accurately while reducing the risk of injuries.

Spot: To move a trailer or boxcar into place for loading or unloading.

Staging: The practice of picking material for a production or sales order and moving to a separate area for purposes of consolidation or identifying shortages. Staging may also refer to the placement of equipment in preparation of being used.

Stakeholders: An individual or group who will be impacted in some way by a change. They have an interest (positive or negative) in how a project, initiative, or transformation will resolve itself.

Stand Up Fork Lift: A forklift where the operator stands rather than sits. This type of forklift is most commonly used in case picking operations where the operator must get on and off the lift frequently.

Standard Carrier Alpha Code (SCAC/SCAC Code): A unique 2 to 4-letter code assigned to transportation companies for identification purposes. SCAC codes are required for EDI and are printed on bills of lading and other transportation documents.

Statement of Work (SOW): A document that captures and acknowledges mutual agreement on the work activities, deliverables, and timeline that a vendor will execute against in performance of work for a customer. Detailed requirements and pricing are usually specified in a Statement of Work, along with various other terms and conditions. *Synonym: Scope of Work*

Stickering: Placing customer-specific stickers on boxes of product. An example would be where Wal-Mart has a request for their own product codes to be applied to retail boxes prior to shipment.

Stock Keeping Unit (SKU): A category of unit with unique combination of form, fit, and function (i.e. unique components held in stock). For example, if two items are indistinguishable to the customer, or if any distinguishing characteristics visible to the customer are not important to the customer, so that the customer believes the two items to be the same, these two items are part of the same SKU. As a further illustration consider a computer company that allows customers to configure a product from a standard catalogue components, choosing from three keyboards, three monitors, and three CPUs. Customers may also individually buy keyboards, monitors, and CPUs. If the stock were held at the configuration component level, the company would have nine SKUs. If the company stocks at the component level, as well as at the configured product level, the company would have 36 SKUs. (9 component SKUs + 3*3*3 configured product SKUs. If as part of a promotional campaign the company also specially packaged the products, the company would have a total of 72 SKUs.

Stock Out: A term referring to a situation where no stock was available to fill a customer or production order during a pick operation. Stock outs can be costly, including the profit lost for not having the item available for sale, lost goodwill, substitutions, or lost customer. This can also be referred to as out of stock (OOS).

Stop Sequence: A load building technique where the first stop is loaded last.

Straight Truck: A truck that has the driver's cab and the trailer combined onto a single frame. Straight trucks do not have a separate tractor and trailer. The driving compartment, engine and trailer are one unit.

Strategic Sourcing: Focuses on developing the most effective relationships with the right suppliers, to ensure that the right price is paid and that lifetime product costs are minimized. It also implies that the supply relationship will continue to improve and develop.

Strategic Supply Plan: Includes decisions about major capital expenditures and how to rationalize various assets.

Stretch Wrap: Clear plastic film that is wrapped around a unit load or partial load of product to secure it. The wrap is elastic.

Supplier: An individual or an organization who supplies goods or services to the company. This is also sometimes referred to as a 'vendor." In some settings where a company provides goods through a distribution network, network members may be referred to as suppliers even though they are the immediate customers of the company.

Supply Chain: 1) Starting with unprocessed raw materials and ending with the final customer using the finished goods, the supply chain links many companies together. 2) The material and informational interchanges in the logistical process stretching from acquisition of raw materials to delivery of finished products to the end user. All vendors, service providers and customers are links in the supply chain.

Supply Chain Management: The design and management of all functions involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers.

Supplier Relationship Management: Building, maintaining, and developing relationships with suppliers to aid the future of both companies.

Surcharge: An add-on charge to the applicable charges; motor carriers have a fuel surcharge and railroads can apply a surcharge to any joint rate that does not yield 110 percent of variable cost.

T

Tally Sheet: A printed form on which company's record, by making an appropriate mark, the number of items they receive or ship. In many operations, tally sheets become a part of the permanent inventory records.

Tare Weight: Tare weight, sometimes called unladen weight, is the weight of an empty vehicle or container. By subtracting it from the gross weight (laden weight), the weight of the goods carried (the net weight) may be determined.

Tariff: A tax assessed by a government on goods entering or leaving a country. The term is also used in transportation in reference to the fees and rules applied by a carrier for its services.

Terms and Conditions (T & C): All the provisions and agreements of a contract.

Third-Party Logistics (3PL): Outsourcing all or much of a company's logistics operations to a specialized company. The term 3PL was first used in the early 1970s to identify intermodal marketing companies (IMCs) in transportation contracts. Up to that point, contracts for transportation had featured only two parties, the shipper and the carrier. When IMCs entered the picture – as intermediaries that accepted shipments from the shippers and tendered them to the rail carriers – they became the third party to the contract, the 3PL. But over the years that definition has broadened to the point where every company that offers some kind of logistics service for hire calls itself a 3PL. Preferably, these services are integrated, or "bundled," together by the provider. Among the services that they provide are transportation, warehousing, cross-docking, inventory management, packaging, and freight forwarding. In 2008 the U.S. Congress passed legislation declaring that the legal definition of a 3PL is "A person who solely receives, holds, or otherwise transports a consumer product in the ordinary course of business but who does not take title to the product."

Third-Party Logistics Provider: A firm that provides multiple logistics services for use by customers. Preferably, these services are integrated, or "bundled" together by the provider. These firms facilitate the movement of parts and materials from suppliers to manufacturers, and finished products from manufacturers to distributors and retailers. Among the services that they provide are transportation, warehousing, cross-docking, inventory management, packaging, and freight forwarding.

Third-Party Warehousing: The act of using a contractor to provide warehousing services, and the name of the industry that is involved in providing contract warehousing operations for hire.

Throughput: A measure of volume through a process such as warehousing output volume (weight, number of units). Also, the total amount of units received plus the total amount of units shipped, divided by two.

Total Quality Management (TQM): Sometimes shortened to TQM, designing processes to produce consistent quality.

Traceability: 1) The ability to track the location of a shipment as it moves through the shipping process to the customer. 2) The ability to determine the source of individual lot numbered or serial numbered products.

Tracing: 1) Determining where a shipment is during the course of a move. 2) The practice of relating resources, activities and cost objects using the drivers underlying their cost causal relationships. The purpose of tracing is to observe and understand how costs are arising in the normal course of business operations. *Synonym: Assignment*

Tracking and Tracing: Monitoring and recording shipment movements from origin to destination.

Tractor: The tractor is the driver compartment and engine of the truck. It has two or three axles.

Trading Partner: Companies that do business with each other via EDI (e.g. send and receive business documents, such as purchase orders).

Traffic: A department responsible for the process of determining timely and economic delivery methods, arranging internal or external transportation, and tracking shipment status and logistics network issues.

Traffic Management: The management and controlling of transportation modes, carriers and services.

Trailer: The part of the truck that carries the goods.

Trailer Drops: When a driver drops off a full truck at a warehouse and picks up an empty one.

Transaction: A single completed transmission – for example, a transmission of an invoice over an EDI network. Analogous to usage of the term in data processing, in which a transaction can be an inquiry or a range of updates and trading transactions. The definition is important for EDI service operators, who must interpret invoices and other documents.

Transaction Set: Commonly used business transactions (e.g. purchase order, invoice, etc.) organized in a formal, structured manner, consisting of a Transaction Set header control segment, one or more Data Segments, and a Transaction Set trailer Control Data Segment.

Transaction Set ID: A three digit numerical representation that identifies a transaction set.

Transactional Acknowledgement: Specific Transaction Sets, such as the Purchase Order Acknowledgement (855), that both acknowledges receipt of an order and provides special status information such as reschedules, price changes, back order situation, etc.

Transit Time: The total time that elapses between a shipment's pickup and delivery.

Transload Facility: A Facility used for transferring shipments from truck to rail and vice versa. Operations where inbound ocean containers (or other cargo) are unloaded, palletized and then reloaded (typically into 53-foot over-the-road trailers), for railway or road transport to a final destination.

Transportation Management System (TMS): A computer system designed to provide optimized transportation management in various modes along with associated activities, including managing shipping units, labor planning and building, shipment scheduling through inbound, outbound, intra-company shipments, documentation management (especially when international shipping is involved), and third party logistics management.

Transportation Mode: The method of transportation: land, sea, or air shipment.

Transit Time: The total time that elapses from pickup to delivery of a shipment.

Truckload Carriers (TL): Trucking companies, which move full truckloads of freight directly from the point of origin to destination.

Turnover: 1) A calculation of the number of times the inventory of an item would be consumed during a period given average inventory levels and consumption. 2) A calculation of the rate that the employee base of a company or department would change during a period due to hiring and termination. *Also See: Inventory Turns*

U

Uniform Code Council (UCC): *See: GS1*

Uniform Product Code (UPC): A standard product numbering and bar coding system used by the retail industry. UPC codes are administered by the Uniform Code Council; they identify the manufacturer as well as the item, and are included on virtually all retail packaging. *Also See: Uniform Code Council*

Unit of Measure (UOM): The unit in which the quantity of an item is managed – e.g. pounds, each, box of 12, package of 20, or case of 144. Various UOMs may exist for a single item. For example, a product may be purchased in cases, stocked in boxes and issued in single units.

Unit-of-Measure Conversion: A conversion ratio used whenever multiple units-of-measure are used with the same item. For example, if you purchased an item in cases (meaning that your purchase order stated a number of cases rather than a number of pieces) and then stocked the item in pieces, you would require a conversion to allow your system to calculate how many pieces are represented by a quantity of cases. This way, when you received the cases, your system would automatically convert the case quantity into an each quantity.

Upcharges: Charges added to a bill, particularly a freight bill, to cover additional costs that were not envisioned when a contract was written. These might include costs related to rapidly increasing fuel charges or costs related to government mandates. *Also See: Accessorial Charges*

V

Validation: To check whether a document is the correct type for a particular EDI system, as agreed upon by the trading partners, in order to determine whether the document is going to or coming from an authorized EDI user.

Value Added: Increased or improved value, worth, functionality or usefulness.

Value-Added Network (VAN): A company that acts as a clearing-house for electronic transactions between trading partners. A third-party supplier that receives EDI transmissions from sending trading partners and holds the min a "mailbox" until retrieved by the receiving partners.

Value-Added Productivity Per Employee: Contribution made by employees to total product revenue minus the material purchases divided by total employment. Total employment is total employment for the entity being surveyed. This is the average full-time equivalent employee in all functions, including sales and marketing, distribution, manufacturing, engineering, customer service, finance, general and administrative, and other. Total employment should include contract and temporary employees on a full-time equivalent (FTE) basis.

Calculation: Total Product Revenue-External Direct Material/ [FTE's]

Value-Adding/Nonvalue-Adding: Assessing the relative value of activities according to how they contribute to customer value or to meeting an organization's needs. The degree of contribution reflects the influence of an activity's cost driver(s).

Value Analysis: A method to determine how features of a product or service relate to cost, functionality, appeal and utility to a customer (i.e. engineering value analysis).

Value Based Return (VBR): A measure of the creation of value. It is the difference between economic profit and capital charge.

Value Chain: A series of activities, which combined, define a business process; the series of activities from manufacturers to the retail stores that define the industry supply chain.

Value Chain Analysis: A method to identify all the elements in the linkage of activities a firm relies on to secure the necessary materials and services, starting from their point of origin, to manufacture, and to distribute their products and services to an end user.

Value-Engineering: A systematic method to improve the value of products or services by examining the function of the product or service.

Value Engineering Change Proposal (VECP): A change proposal resulting from an organized effort directed at analyzing the function of Department of Defense systems, equipment, facilities, procedures, and supplies for the purpose of achieving the required function at the lowest total cost of effective ownership, consistent with requirements for performance, reliability, quality, and maintainability

Value-of-Service Pricing: Pricing according to the value of the product being transported; third-degree price discrimination; demand-oriented pricing; charging what the traffic will bear.

Value of Transfers: The total dollar value (for the calendar year) associated with movement of inventory from one "bucket" into another, such as raw material to work-in-process, work-in-process to finished goods, plant finished goods to field finished goods or customers, and field finished goods to customers. Value of Transfers is based on the value of inventory withdrawn from a certain category and is often approached from a costing perspective, using cost accounts. For example, Raw Materials Value of Transfers is the value of transfers out of the raw material cost accounts (you may have cost centers associated with inventory locations, but all "raw ingredients" usually share common cost accounts or can be rolled up into one financial view). The same goes for WIP. Take the manufacturing cost centers and look at the total value of withdrawals from those cost centers. While Average Gross Inventory represents the value of the inventory in the cost center at any given time, the Value of Transfers is the total value of inventory leaving the cost center during the year. The value of transfers for Finished Goods is, in theory, equivalent to COGS.

Value Proposition: What the supply chain member offers to other members. To be truly effective, the value proposition has to be two-sided – a benefit to both buyers and sellers.

Value Stream: All activities, both value added and non-value added, required to bring a product from raw material state into the hands of the customer, bring a customer requirement from order to delivery and bring a design from concept to launch.

Value Stream Mapping: A pencil and paper tool used in two stages: 1.) Follow a product's production path from beginning to end and draw a visual representation of every process in the material and information flows. 2.) Then draw a future state map of how value should flow. The most important map is the future state map.

Variable Cost: A cost that fluctuates with the volume or activity level of business.

Vehicle Telemetric Systems: A system comprised of vehicle interface units (VIUs), wireless gateways, and a central host that monitors and tracks a driver and his vehicle performance in an effort to provide a higher level of security.

Velocity: Rate of product movement through a warehouse.

Vendor: The manufacturer or distributor of an item or product line. *Also See: Supplier*

Vendor Code: A unique identifier – usually a number and sometimes the company's data universal numbering system (DUNS) number – assigned by a customer for the vendor it buys from. For example, a grocery store chain buys Oreos from Nabisco. The grocery store chain, for accounting purposes, identifies Nabisco as Vendor #76091. One company can have multiple vendor codes. For example, Welch's Foods sells many different products: frozen grape juice concentrate, chilled grape juice, bottled grape juice, and grape jelly. Because each of these items is a different type of product (frozen food, chilled food, beverages, and dry food) it may have a different buyer at the grocery store chain requiring a different vendor code for each product line.

Vendor-Managed Inventory (VMI): The practice of retailers allowing their suppliers to take responsibility for determining supply order size and timing, usually based on receipt of retail POS and inventory data from the retailer. The goal is to increase retail inventory turns and reduce stock outs. It may or may not involve consignment of inventory (supplier ownership of the inventory located at the customer location).

Vendor Owned Inventory (VOI): *See: Consignment Inventory*

Vertical Hub/Vertical Portal: Serving one specific industry. Vertical portal websites that cater to consumers within a particular industry. Similar to the term "vertical industry", these websites are industry specific, and like a portal, they make use of Internet technology by using the same kind of personalization technology. In addition to industry specific vertical portals that cater to consumers, another definition of a vertical portal is one that caters solely to other businesses.

Vertical Integration: A style of management control. Vertically integrated companies are united through a hierarchy with a common owner. Usually each member of the hierarchy produces a different product or (market-specific) service, and the products combine to satisfy a common need. Vertical integration defines the degree to which a firm owns its upstream suppliers and its downstream buyers it is typified by one firm engaged in different parts of production (e.g. growing raw materials, manufacturing, transporting, marketing, and/or retailing).

Vessel: A floating structure designed for transport.

Vested Outsourcing (VO): An outsourcing relationship where companies and their suppliers become vested in each other's success, creating a true win-win solution. An agreement based on desired outcomes, measurable objectives that focus on what will be accomplished as a result of the work performed.

Viral Marketing: The concept of embedding advertising into web portals, pop-ups and as e-mail attachments to spread the word about products or services that the target audience may not otherwise have been interested in.

Virtual Corporation: 1) A business that has few employees and outsources nearly all its work. 2) .A consortium of businesses that pursue a common goal. For example, several companies work together to produce a technologically advanced product.

Visible Skills Matrices: *See Skills Matrix*

Visibility: The ability to access or view pertinent data or information as it relates to logistics and the supply chain, regardless of the point in the chain where the data exists.

Vision: The vision of the business is a statement that reflects the aspirations of its management and specifies its intended direction or future destination.

Voice Activated Voice Directed: Systems that guide users such as warehouse personnel via voice commands.

Voice of The Customer: A business term to describe the process of capturing a customer's requirements using market research to determine a customer's wants and needs. This is then organized into a hierarchical structure and prioritized by importance and satisfaction with current alternatives.

Voluntary Inter-industry Commerce Standards (VICS): The retail industry standards body responsible for the CPFR standard, among other things. VICS is a not-for-profit association whose mission is to take a global leadership role in the development of business guidelines and specifications, facilitating implementation through education and measurement, resulting in the improvement of the retail supply chain efficiency and effectiveness that meet or exceed customer and consumer expectations.

W

Wagner-Whitin Algorithm: A dynamic programming lot sizing model that evaluates multiple alternatives that consider period demand and production, holding, and setup costs to produce an optimal lot size that varies for each period as required. *Also See: Discrete Order Quantity, Dynamic Lot Sizing*

Wall-to-Wall Inventory: An inventory control technique where all inventory locations within the warehouse are counted at one time as opposed to doing a cycle count of smaller groups.

Warehouse: Storage place for products. Principal warehouse activities include receipt of product, storage, shipment, and order picking.

Warehousing: The storing (holding) of goods.

Warehouse Management System (WMS): The systems used in effectively managing warehouse business processes and direct warehouse activities, including receiving, put-away, picking, shipping, and inventory cycle counts. Also includes support of radio-frequency communications, allowing real-time data transfer between the system and warehouse personnel. They also maximize space and minimize material handling by automating put-away processes.

Warranty: An obligation or guarantee that a product or service sold is as factually stated or legally implied by the seller. Oftentimes, warranties provide a specific remedy, such as repair or replacement, in the event the product or service fails to meet the warrant

Warranty Costs: Includes materials, labor, and problem diagnosis for products returned for repair or refurbishment.

Waste: Any activity or process that does not add value to the goods or services required by the customer. Examples of waste include move time, counting inventory, inspection, the production of defective material, rework, etc. Waste is considered to cause increased cost, lead time and quality problems while not adding value, and may be created by vendors, personnel, equipment, incorrect process parameters and many other factors.

Waste Electrical and Electronic Equipment (WEEE): Waste Electrical and Electronic Equipment is a loose category of surplus, obsolete, broken, or discarded electrical or electronic devices. The processing of electronic waste in developing countries causes serious health and pollution problems due to lack of containment, as do unprotected landfills (due to leaching) and incineration. The Basel Convention and regulation by the European Union and individual United States aim to reduce these problems. Reuse and computer recycling are promoted as alternatives to disposal as trash.

Waterway Use Tax: A per-gallon tax assessed barge carriers for use of the waterways.

Wave Picking: A variation on zone picking where rather than orders moving from one zone to the next for picking, all zones are picked at the same time and the items are later sorted and consolidated into individual orders/shipments. Wave picking is the quickest method for picking multi item orders; however, the sorting and consolidation process can be tricky. Picking waves are often designed to isolate shipments to specific carriers, routes, etc. *See:* Batch picking, zone picking a more general definition of wave picking would simply be a method where a group of orders is released to the warehouse for picking and the next group (wave) is not released until the first wave has processed through the pick area.

Waybill: Document containing description of goods that are part of common carrier freight shipment. Show origin, destination, consignee/consignor, and amount charged. Copies travel with goods and are retained by originating/delivering agents. Used by carrier for internal record and control, especially during transit. Not a transportation contract. *See: Bill of lading*

Web: A computer term used to describe the global Internet. *Synonym: World Wide Web*

Web 2.0: These technologies, which rely on user collaboration, include Web services, peer-to-peer networking, blogs, podcasts, and online social networks

Web Browser: A client application that fetches and displays web pages and other World Wide Web resources to the user.

Web Services: A computer term for information processing services that are delivered by third parties using internet portals. Standardized technology communications protocols; network services as collections of communication formats or endpoints capable of exchanging messages.

Web Site: A location on the Internet that maintains one or more pages on the World Wide Web.

Weight Break: The shipment volume at which the LTL charges equal the TL charges at the minimum weight.

Weight Confirmation: The practice of confirming or validating receipts or shipments based on the weight.

Weight-Losing Raw Material: A raw material that loses weight in processing.

Weighted-Point Plan: A method of analyzing a group of candidates (employees, suppliers, etc.) using a rating approach that gathers data and assigns weights to each evaluation category. A weighted sum for each candidate is obtained and a comparison made. The weights used should sum to 100 percent for all. *Also See: Categorical Plan*

What If Scenarios: A method to determine the effect different costs or investments have on profit and other financial indicators. Examples of cost or investments that would be evaluated are financial effects of different pricing models, warehousing options, number of employees or raw materials options.

What You See Is What You Get (WYSIWYG): An editing interface in which a file created is displayed as it will appear to an end-user.

Wholesaler: *See: Distributor*

Wide Area Network (WAN): A computer network that covers a broad area (i.e., any network whose communications links cross metropolitan, regional, or national boundaries). The largest and most well-known example of a WAN is the Internet.

Wikis: Web based services such as those found in Wikipedia. Wikis are systems for collaborative publishing that allow many authors to contribute to an online document or discussion.

Will Call: The practice of taking orders that will be picked up at the selling facility by the buyer. An area where buyers can pick up an order at the selling facility. This practice is widely used in the service parts business.

Windows Meta File (WMF): A vector graphics format for Windows-compatible computers used mostly or word processing clip art.

Work Breakdown Structure (WBS): A complete line by line breakdown of the products, services, and activities that will be required to fulfill a contractual obligation.

Work-in-Process (WIP): Parts and subassemblies in the process of becoming completed finished goods. Work in process generally includes all of the material, labor and overhead charged against a production order that has not been absorbed back into inventory through receipt of completed products.

Work Sequence: The defined steps and activities that must be performed in order for the work to be accomplished.

World Trade Organization (WTO): An organization established on January 1, 1995 replacing the previous General Agreement on Tariffs and Trade (GATT) that forms the cornerstone of the world trading system.

World Wide Web (WWW): A "multimedia hyper linked database that spans the globe" and lets you browse through lots of interesting information. Unlike earlier Internet services, the 'Web' combines text, pictures, sounds, and even animations, and it lets you move around with a click of your computer mouse. User can search for information by moving from one document to another.

X

X12: The ANSI standard for inter-industry electronic interchange of business transactions.

XDK: *See: Crossdock*

XML: *See: Extensible Markup Language*

Y

Yard Management System (YMS): A system that is designed to facilitate and organize the coming, going and staging of trucks and trucks with trailers in the parking "yard" that serves a warehouse, distribution or manufacturing facility.

Yield: The ratio of usable output from a process to its input.

Yokoten: A term Toyota adopted to capture the idea of horizontal transfer of information and knowledge across an organization. Yokoten is a two-way street, requiring proactive effort from both those acquiring and developing the knowledge and those who could benefit from greater understanding of the requirements for success.

Z

Zero Inventory: A Just-In-Time Inventory Control term where emphasis is placed on reducing inventory to minimal levels to reduce costs and promote organizational effectiveness.

Zone Jumping: *See: Zone Skipping*

Zone of rate flexibility: Railroads are permitted to raise rates by a percentage increase in the railroad cost index determined by the ICC; rates may be raised by 6 percent per year through 1984 and 4 percent thereafter.

Zone of Rate Freedom: Motor carriers are permitted to raise or lower rates by 10 percent in one year without ICC interference; if the rate change is within the zone of freedom, the rate is presumed to be reasonable.

Zone of Reasonableness: A zone or limit within which air carriers are permitted to change rates without regulatory scrutiny; if the rate change is within the zone, the new rate is presumed to be reasonable.

Zone Picking: A method of picking orders where a warehouse is divided into several pick zones with order pickers assigned to a specific zone and only picking the items in that zone, orders are moved from one zone to the next (usually on conveyor systems) as they are picked (also known as pick-and-pass). *Also See: Batch Picking, Wave Picking*

Zone Price: The constant price of a product at all geographic locations within the zone.

Zone Skipping: For shipments via the U.S. Postal Service, depositing mail at a facility one or more zones closer to the destination. This option would benefit customers operating in close proximity to a zone border or shipping sufficient volumes to offset additional transportation costs. Can also be used with UP S/FedEx but these companies tend to work with carriers to do a truckload shipment into a zone and use UPS to do the last mile delivery, reduced lead time and cost.

NUMERIC

3D Loading: 3D loading is a method of space optimizing designed to help quickly and easily plan the best compact arrangement of any 3D rectangular object set (boxes) within one or more larger rectangular enclosures (containers). It's based on three dimensional, most-dense packing algorithms

3PL: *See: Third-Party Logistics*

3PSP: ***See:*** *Third-Party Service Provider*

4PL: *See: Fourth-Party Logistics*

5 Point Annual Average: Method frequently used in PMG studies to establish a representative average for a one year period.

Calculation*:* [12/31/98 + 3/31/98 + 6/30/99 + 9/30/99 + 12/31/99]/5

5-S Program: A program for organizing work areas. Sometimes referred to as elements, each of the five components of the program begins with the letter "S." They include sort, systemize, shine or sweep, standardize, and sustain. In the UK, the concept is converted to the 5-C program comprising five comparable components: clear out, configure, clean and check, conformity, and custom and practice.

- Sort – get rid of clutter; separate out what is needed for the operations.
- Systemize/Set in Order – organize the work area; make it easy to find what is needed.
- Shine – clean the work area; make it shine.
- Standardize – establish schedules and methods of performing the cleaning and sorting.
- Sustain – implement mechanisms to sustain the gains through involvement of people, integration into the performance measurement system, discipline, and recognition.

The 5-S program is frequently combined with precepts of the Lean Manufacturing Initiative. Even when used separately, however, the 5-S (or 5-C) program is said to yield excellent results. Implementation of the program involves introducing each of the five elements in order, which reportedly generates multiple benefits, including product diversification, higher quality, lower costs, reliable deliveries, improved safety, and higher availability rate.

5 Whys: The five whys is a question asking method that is used to explore the cause/effect relationships underlying a particular problem or process. When an answer is given to a question continue by asking why the answer is appropriate. This allows for a drill down to determine a root cause of a defect or problem, or rationale for the process.

6-S: An expanded definition of 5-S that includes safety.

7 Wastes: One of the basic concepts of Lean management, **t**he seven 'deadly wastes' are best remembered by the acronym TIM WOOD:

- Transportation - moving products that is not actually required to perform the processing.
- Inventory - all components, work-in-progress and finished product not being processed.
- Motion - people or equipment moving or walking more than is required to perform the processing.
- Waiting - waiting for the next production step.
- Overproduction - too much production or ahead of demand.
- Over Processing – due to poor tool or product design creating activity.
- Defects - the effort involved in inspecting for and fixing defects.

10+2: A new rule instituted by the United States Customs and Border Protections (US CBP). 10+2 requires cargo information, for security purposes, to be transmitted to the US CBP at least 24 hours before goods are added onto an ocean vessel for shipment into the U.S. 10+2 is pursuant to section 203 of the SAFE Port Act, and requires importers to provide 10 data elements to the US CBP as well as 2 more data elements from the carrier.

The following 10 data elements are required from the importer:

1. Manufacturer (or supplier) name and address
2. Seller (or owner) name and address
3. Buyer (or owner) name and address
4. Ship-to name and address
5. Container stuffing location
6. Consolidator (stuffer) name and address
7. Importer of record number/foreign trade zone applicant identification number
8. Consignee number(s)
9. Country of origin
10. Commodity Harmonized Tariff Schedule number from the carrier, 2 data elements are required:
    - Vessel stow plan
    - Container status messages

14 Points: From W. Edwards Deming's Deming book "Out of the Crisis" in 1982. In this book, Deming set out 14 points that, if applied to U.S. manufacturing industry, would he believed, save the United States from industrial doom at the hands of the Japanese.

1. Create constancy of purpose towards improvement,
2. Adopt the new philosophy,
3. Cease dependence on inspection,
4. Move towards a single supplier for any one item,
5. Improve constantly and forever,
6. Institute training on the job,
7. Institute leadership,

8. Drive out fear,
9. Break down barriers between departments,
10. Eliminate slogans,
11. Eliminate management by objectives,
12. Remove barriers to pride of workmanship,
13. Institute education and self-improvement.
14. Create a culture where transformation is everyone's job.

24-hour Manifest Rule (24-hour Rule): U.S. Customs rule requiring carriers to submit a cargo declaration 24 hours before cargo is laden aboard a vessel at a foreign port.

24/7: Referring to operations that are conducted 24 hours a day, 7 days a week

24/7/365: Referring to operations that are conducted 24 hours a day, 7 days a week, 365 days per year, with no breaks for holidays, etc.

80-20 Rule: Also known as the Pareto principle the law of the vital few, and the principle of factor sparsity, states that, for many events, roughly 80 percent of the effects come from 20 percent of the causes. Business management thinker Joseph M. Juran suggested the principle and named it after Italian economist Vilfredo Pareto, who observed in 1906 that 80 percent of the land in Italy was owned by 20 percent of the population; he developed the principle by observing that 20 percent of the pea pods in his garden contained 80 percent of the peas.

Acronyms

ACAC/SCAC Code: Standard Carrier Alpha Code

ADR: Alternate Dispute Resolution

AI: Artificial Intelligence **A/P:** Accounts Payable

A/R: Accounts Receivable

ASN: Advanced Shipping Notice

AS/RS: Automated Storage and Retrieval System

B2B: Business-to-Business

B2C: Business-to-Consumer

BAM: Business Activity Monitoring

BCP: Business Continuity Plan

BFAST: Fast and Secure Trade

BI: Business Intelligence

BOL Bill of Lading

BOM: Bill of Material

BPM: Business Performance Measurement

BPO: Business Process Outsourcing

BPR: Business Process Reengineering

BRA: Blanket Purchasing Agreement

BRs: Business Reviews

CAD: Computer-Aided Design

CAE: Computer Aided Engineering

CAF: Currency Adjustment Factor

CAM: Computer-Aided Manufacturing

CAPP: Computer-Aided Process Planning

CAR: Corrective Action Review

CBP: Customs and Border Protection, U.S.

CBT: Computer-Based Training

CFD: Continuous Flow Distribution

CGMP: Current Good Manufacturing Practice

CI: Catalog Item

CI: Continuous Improvement

CIC: Customer Interaction Center

CIF: Cost, Insurance, Freight

CIM: Computer-Integrated Manufacturing

CLCA: Closed-Loop Corrective Action

CLS: Contractor Logistics Support

CM: Credit Memo

CMI: Co-Managed Inventory

CMM: Capability Maturity Model

CMMS: Computerized Maintenance Management Systems

COGS: Cost of Goods Sold

COO: Country of Origin

CONOPS: Concept of Operations

COPC: Customer Operations Performance Center

COTD: Complete and On-Time Delivery

COTS: Commercial Off-the-Shelf

CPAF: Cost Recovery Rate

CPFR®: Collaborative Planning, Forecasting and Replenishment

CPG: Consumer Packaged Goods

CPI: Continuous Process Improvement

CPIF: Cost Plus Incentive-Free

CRP: Capacity Requirements Planning

CRP Continuous Replenishment Planning

CRM: Customer Relationship Management

CSF: Critical Success Factor

CSCMP: Council of Supply Chain Management Professionals

CSI: Container Security Initiative

CSR: Customer Service Representative

CTP: Capable to Promise

C-TPAT: Customs-Trade Partnership against Terrorism

CWT: Customer Wait Time

DBR: Drum-Buffer-Rope

DC: Distribution Center

DD: Direct Debit

DDSN: Demand-Driven Supply Network

DFMA: Design for Manufacture/Assembly

DFZ: Duty Free Zone

DGI: Defective Goods Inventory

DHS: Department of Homeland Security

DMAIC: Define, Measure, Analyze, Improve, Control

DMZ: Demilitarize zones

DOA: Dead on Arrival

DOD: Distribution On Demand

DOE: Department of Energy

DoE: Design of Experiments

DPC: Dynamic Process Control

DPL: Denied Party List

DPO: Days Payable Outstanding

DPP: Direct Product Profitability

DRP: Disaster Recovery Planning

DRP: Distribution Requirements Planning

DRP II: Distribution Resource Planning

DSD: Direct Store Delivery

DSS: Decision Support System

DSO: Days Sales Outstanding

DTF: Demand Time Fence

DWCF: Defense Working Capital Fund

DWT: Deadweight Tons

EAI: Enterprise Application Integration

EAN: European Article Number

EAN.UUC: European Article Numbering' Uniform Code Council

EBIT: Earnings Before Interest and Taxes

EBITDA: Earnings Before Interest, Taxes, Depreciation, and Amortization

EC: e-Commerce

ECR: Efficient Consumer Response

ECO: Engineering Change Order

ECP: Engineering Change Proposal

EDI: Electronic Data Interchange

EDIA: Electronic Data Interchange Association

EFT: Electronic Funds Transfer

EH&S: Environmental Health and Safety

EIN: Exporter Identification Number

EIN: Ean.UCC Information Network

E&O: Excess and Obsolescence

EOL: End-of-Life

EOQ: Economic Order Quantity

EPA: Environmental Protection Agency

EPC or ePC: Electronic Product Code

EPM: Employee Performance Management

ERO: Enterprise Resource Planning

ERS: Evaluated Receipts Settlement

ESI: Early Supplier Involvement

EVA: Economic Value Added

EXW: Ex Works

FA: Functional Acknowledgment

FAA: Federal Aviation Administration

FAK: Freight-All-Kinds

FAR: Federal Acquisition Regulation

FARS: Federal Acquisition Regulation Supplement

FAS: Final Assembly Schedule

FAS: Free Alongside Ship

FCL: Full Container Load

FDA: Federal Drug Administration

FEFO: First Expired, First Out

FEMA: Federal Emergency Management Agency

FEU: Forty-Foot Equivalent Unit

FFG: Fully-finished Goods

FG or FG I: Finished Goods Inventory

FIFO: First In, First Out

FLSA: Fair Labor Standards Act

FMEA: Failure Modes Effects Analysis

FMCG: Fast Moving Consumer Goods

FMC: Full Mission-Capable

FOB: Free On Board

FP: Fixed Price

FRM: Floor-Ready Merchandise

FTE: Full-Time Equivalents

FTL: Full Truckload

FTP: File Transfer Protocol

FTZ: Foreign Trade Zone

GATT: General Agreement on Tariffs and Trade

GCI: Global Commerce Initiative

GO: General Order

GDSN: Global Data Synchronization Network

GIF: Graphics Interchange Format

GLN: Global Location Number

GMP: Good Manufacturing Practices

GNP: Gross National Product

GOH: Garments on Hangers

GPS: Global Positioning System

GRN: Good Received Note

GS1: new name of EAN International

GSMP: Global Standards Management Process

GTIN: Global Trade Item Number

HACCP: Hazard Analysis Critical Control Point

HAWB: House Air Waybill

HR: Human Resources

IATA: International Air Transport Association

ICC: Interstate Commerce Commission

IMB: International Maritime Bureau

IMC: Intermodal Marketing Company

IMO: International Maritime Organization

IPT: Integrated Product Teams

IRR: Internal Rate of Return

ISI: In-store Implementation

ISPS: International Ship and Port Facility Security Code

ISO: International Standards Organization

ISTPA: International Security, Trust, and Privacy Alliance

JDMAG: Joint Depot Maintenance Activities Group

JG-DM: Joint Group on Depot Maintenance

JIT: Just-in-Time

JPEG: Joint Photographic Expert Group

JSA: Joint Supplier Agreement

KD: Knock-Down

KPI: Key Performance Indicator

LAN: Local Area Network

LCC: Life Cycle Cost

LCL: Less-Than-Carload

LDI: Logistics Data Interchange

LEED: Leadership in Energy and Environmental Design

LIFO: Last In, First Out

LLP: Lead Logistics Partner

LMS: Labor Management System

LOC: Letter of Credit

LSP: Logistics Service Provider

LTL: Less-Than-Truckload

M2M: Machine-to-Machine interface

MAWB: Master Air Waybill

MCT: Manufacturing Critical-Path Time

MES: Manufacturing Execution Systems

MRO: Maintenance, Repair, and Operating supplies

MRP: Materials Requirements Planning

MRP II: Manufacturing Resource Planning

MPS: Master Production Schedule

MTO: Make-to-Order

MTS: Make-to-Stock

MSDS: Material Safety Data Sheet

OEM: Original Equipment Manufacturer

OO: Owner-Operator

OS&D: Over, Short, and Damaged

OSHA: Occupational Safety and Health Administration

OTIF: Order Entry and Scheduling

P&D: Pickup and delivery

PDCA: Plan-Do-Check-Act

PFG: Partially Finished Goods

PO: Purchase Order

POD: Proof of Delivery

POS: Point of Sale

RF: Radio Frequency

RFID: Radio Frequency Identification

RM: Raw Materials

RMA: Return Material Authorization or Return Merchandise Authorization

RO-RO: Roll-on-Roll

S&OP: Sales and Operations Planning

SSCC: Serial Shipping Container Code

SOW: Statement of Work

SKU: Stock Keeping Unit

T&C: Terms and Conditions

TL: Truckload Carriers

TMS: Transportation Management System

UCC: Uniform Code Council

UOM: Unit of Measure

UPC: Uniform Product Code

VAN: Value-Added Network

VBR: Value Based Return

VECP: Value Engineering Change Proposal

VICS: Voluntary Inter-industry Commerce Standards

VMI: Vendor-Manage Inventory

VO: Vested Outsourcing

VOI: Vendor Owned Inventory

WAN: Wide Area Network

WBS: Work Breakdown Structure

WEEE: Waste Electrical and Electronic Equipment

WIP: Work Process

WIP: Work-in-Process

WMF: Windows Meta File

WMS: Warehouse Management System

WTO: World Trade Organization

WWW: World Wide Web

WYSIWYG: What You See Is What You Get

XDK: Cross Dock/Cross Docking

YMS: Yard Management System

Acknowledgements

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Some terms used in the Supply Chain Visions Logistics Glossary are based on the following sources:

- The Supply-Chain Council's Supply-Chain Operations Reference-model (SCOR). For more information on the Supply-Chain Council and SCOR, visit www.supply-chain.org .
- Information Access's Glossary of Data Integration Terminology. For more information on Information Access, visit www.infoaccess.net.
- Inbound Logistics Magazine Glossary. For more information visit www.inboundlogistics.com.
- Manufacturing System's Glossary of Special Terms used in Client/Server Computing, Production Management and Process Automation. For more information on MSI, visit www.manufacturingsystems.com.
- The Performance Measurement Group's Supply Chain Metrics Definitions and Calculations. For more information on PMG, visit www.pmbenchmarking.com.
- The ABC/M Glossary, Consortium for Advanced Manufacturing-International. For more information on Activity Based Costing and advanced manufacturing practices, visit www.cam-i.org.

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