

**Barcelona European  
Logistics Center**  
BARCELOC



# LOGISTICS SERVICES

Concepts and definitions

## A. General concepts

### A.1 Logistics & Supply Chain

#### **Supply Chain (SC)**

The SC starts with unprocessed raw materials and ends with the final customer using the finished goods. It includes both physical and information flows. All vendors, service providers and customers are links in the supply chain.

#### **Supply Chain Management (SCM)**

Supply Chain Management encompasses the planning and management of all activities 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. In essence, supply chain management integrates supply and demand management within and across companies.

Supply Chain Management is a broad, all-encompassing process that entails many other aspects aside from logistics. It includes all of the logistics management activities noted above, as well as manufacturing operations, and it drives coordination of processes and activities with and across marketing, sales, product design, finance and information technology.”

#### **Logistics**

The process of planning, implementing, and controlling procedures for the efficient and effective transportation and storage of goods. It includes 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 Management**

Logistics Management is that aspect 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.

#### **Differences between Supply Chain and Logistics**

The terms “Supply Chain” and “Logistics” are often used interchangeably within the transportation industry. The main difference between supply chain and logistics is that logistics is merely a specialized part of the entire supply chain process.

## A. General concepts

### A.2 Main parts of the logistics process

#### **Inbound Logistics (IL)**

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

Inbound Logistics is the process of bringing the product to a company for processing. With inbound logistics, people attempt to store as few materials as possible to prevent over-purchasing, and they work to make sure the raw materials arrive on time and at the lowest cost.

Logistics Inbound services are provided between tier 1,2,x suppliers and Original Equipment Manufacturers (OEM).

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#### **In-House Logistics**

In-House Logistics is a particular case of Inbound Logistics, when the services required are rendered within the premises of the customer's storage and production facilities.

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#### **Outbound Logistics (OL)**

The process related to the movement and storage of products from the end of the production line to the end user.

Outbound logistics refers to the processes involved in moving products from the creating firm to the firm's customers. The field is centered on two concepts; storage and transportation. The storage part of the field uses warehousing methods to keep the finished product safe and accessible. The transportation part is generally the more involved and complex part of outbound logistics

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#### **Distribution**

Distribution is a term equivalent to Outbound Logistics. Distribution includes those activities associated with the movement of products, usually finished products or service parts, from the manufacturer to the customer. These activities encompass the functions of transportation, warehousing, inventory control, material handling, order administration, site and location analysis, industrial packaging, data processing, and the communication network necessary for effective management.

Synonyms: **Distribution Logistics, Physical Distribution.**

## B. Logistics definitions

### 1. Freight transport

Services to the transport units (containers, swap bodies, pallets, etc.) using different transport modes: **Maritime transport: Ocean Freight and Short Sea Shipping services | Road Transport | Rail Transport | Air Transport.**

New concepts and services have been developed in the field of freight transport, including:

#### **Intermodal Transport.**

"A characteristic of a transport system whereby at least two different modes are used in an integrated manner in order to complete a door-to-door transport sequence". The resultant global approach enables the available transport capacity to be used more rationally".

(EUROPEAN UNION).

#### **Combined transport.**

"Combined transport is intermodal transport where the major part of the European journey is by rail, inland waterways or sea and any initial and/or final legs carried out by road are as short as possible" (UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE).

#### **Consolidation (or Groupage).**

Consolidation (or Groupage) is the activity of combining several smaller shipments into a container or a large shipment to reduce freight rates.

#### **Express Transport.**

Express transport is a transport system for sending cargo in a short and guaranteed period.

## B. Logistics definitions

### 2. Freight forwarding

Freight forwarding covers the organization and management of the entire transport chain. According to FIATA (acronym of the International Federation of Freight Forwarders Associations): freight forwarding means services of any kind relating to the carriage (performed by single mode or multimodal transport means), consolidation, storage, handling, packing or distribution of the goods as well as ancillary and advisory services in connection therewith, including but not limited to customs and fiscal matters, declaring the goods for official purposes, procuring insurance of the goods and collecting or procuring payment or documents relating to the goods.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.1. WAREHOUSING

The storing (holding) of goods.

##### Basic warehousing operations

The concept refers to inbound, storage and outbound operations: receipt of product, storage, shipment and order picking.

##### Receiving

This includes the physical unloading of incoming transport, checking, recording of receipts, and deciding where the received goods are to be put away in the warehouse.

##### Storage

The retention of parts or products for future use or shipment.

##### Shipment (also called Consignment)

Cargo transported under the terms of a single transport document (bill of lading, etc.)

##### Order preparation process/Picking

The operations involved in pulling products from storage areas to complete a customer order. Goods are selected from order picking stock in the required quantities and at the agreed time to meet customer orders. Picking often involves break bulk operations, when goods are received from suppliers in, say, whole pallet quantities, but ordered by customers in less than pallet quantity.

##### Distribution Warehouse

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

##### Warehousing. Dedicated operations

To design, implement, operate and improve dedicated warehousing and distribution operations for a single company.

##### Warehousing. Shared operations

To design, implement, operate and improve dedicated warehousing and distribution operations for a single company

##### Specialized warehousing

Bonded warehousing | Free Zone warehousing | Warehousing under controlled temperature | Warehousing for hazardous products

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.2. VALUE ADDED SERVICES

Value Added Warehousing is provided within distribution centers, mostly outbound but occasionally also inbound, between Original Equipment Manufacturer (OEM) and Distributor.

##### 3.2.1. Value Added Logistics

Services more related with physical activities: labeling, packaging, assembly, etc.

##### Quality control service

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##### Testing and quality inspection/ Technical Inspection

Quality control (QC) services ensure that products received from vendors into the warehouse or consolidation centers, and dispatched from it, are free from defects and in a suitable condition to meet our customers' quality requirements.

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##### Regulatory Compliance

Ensure that shipment and logistics operations comply with laws and regulations.

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##### Packing and Packaging

Packing of goods should not be confused with packaging of goods. Packing refers to how individual packages of goods are prepared for shipping. Packaging refers to how goods are packed for distribution to the consumer.

However, Packing and Packaging are often used as a synonym.

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##### Packing

Packing entails placing numerous small boxes containing different lines at the interior of an external box to protect them during the subsequent manipulation. Packing is the first link of the transportation chain and is often a key factor for success.

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##### Pick/Pack

Picking of product from inventory and packing into shipment containers. Pick/Pack service entails breaking a pallet of cases and shipping individual cases to fulfill individual orders. This can also entail picking individual items (packs or inner packs) from cases for orders and build new cartons, packs, or pallets to meet customer requirements.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

**Repacking** Refers to activities to repack and resize a product on behalf of a customer to achieve more efficient consolidation, storing, shipping and potentially re-branding, with the goal of improving quality and reducing costs.

**Co-Packing**  
(also called  
**Polybagging**  
& **Shrink**  
**Wrapping**) Packaging operation that is often performed by the Logistics Service Provider in a dedicated zone of the warehouse. It consists of wrapping together different products (for example, bundle a sample of a new product with an old product) or identical products (in the case of promotional offers, for example).

**Packaging (and Repackaging)** Goods should be packaged in a manner that facilitates consumption by end users. As an example, vegetable oil, to be consumed by an individual, may be packaged in a 1 liter container. This same product would be more efficiently packaged in a 5 liters container when targeted for family consumption.

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**Packaging desing** The process of design, evaluation, and production of packages.

#### **Labeling and Tagging**

The application of labels either to the product or its packing - including swing tags, kimball/security tags, Radio Frequency Identification (RFID) tags, price stickers and other promotional labeling - ready for retail display.

Labeling and Tagging are often used as a synonymous terms.



## B. Logistics definitions

### 3. Logistics Services / Contract logistics

**Labeling** Display of information about a product on its container, packaging, or the product itself. Labeling provides the consumer with information on the product, such as brand and price.

**Tagging/Price tagging** Label stuck to the goods in a store that includes small capable chips to keep prominent information on the product. These data are read thanks to radio frequency (RF) guns. More advanced activities involve the tagging of units using Radio Frequency Identification (RFID) for distribution or retail purposes.

**Shipping label** An identification label affixed to a container, which specifies contents of the shipping container.

**Location Tag** A bar coded sign, applied to shelves or racking, that indicates where the product is located within the warehouse. The location number can be read from the tag or scanned with an RF gun.

#### Configuration and customization

**Configuration** The arrangement of components as specified to produce an assembly. Configuration of hardware includes printers, computers, mobile telephones, internet routers and TV sets according to customer and/or country-specific requirements, including firmware flashing.

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

**Assortment** Assortment allows companies to stock a variety of the same type of item and select different pieces for an assorted order. Example: Pen assortment (red, blue, green...pens).

**Bundling (and Unbundling)** A group of products that are shipped together as an unassembled unit. An occurrence where two or more products are combined into one transaction for a single price.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### Assembly and Kitting

**Assembly** An assembly is a product that you create as a mix of other products. The old products are removed from inventory to make the new one. Example: Stapler Assembly=1 stapler+2 boxes of staples. An assembly may be an end item or a component of a higher-level assembly.

**Assemble-to-order** 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**

**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. Synonym: **Assemble to Order**.

**Light Assembly** Managing activities within a warehouse on behalf of customers where final assembly activities are done closer to end customers in order to offer a more flexible and reactive supply chain with a higher level of customization.

**Kitting** A kit is a product in inventory that is stocked as several different products and pulled as the kit when it is ordered. Kitting reduces the need to maintain an inventory of pre-built completed products, but increases the time and labor consumed at shipment.

The kitting process is used where finished goods for a client are grouped, packaged and supplied together as a single unit creating a new product. For instance, adding items such as accessories and batteries into the product pack, would fall under the kitting process

**Configure/Package to Order** A process where the trigger to begin to 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% 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 receipt of the order.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.2.2. Others Value Added Services

More related with administrative services: Order management, Inventory management, fiscal representation, etc.

#### **Order Management**

The process of managing activities involved in customer orders, manufacturing orders, and purchase orders. For customer orders this includes order entry, picking, packing, shipping, and billing. For manufacturing it includes order release, routing, production monitoring, and receipt to inventory. For purchase orders (POs) the activities are order placement, monitoring, receiving, and acceptance.

#### **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.

#### **Stock Keeping Unit (SKU)**

Warehousing item that is unique because of some characteristics (such as brand, size, color and model) and must be stored and accounted for separate from other items. Every SKU is assigned a unique identification number (inventory or stock number) which is often the same as, or is tied to, the item's EAN (International Article Number) or Universal Product Code (UPC).

#### **Inventory control**

Complete system of inventory that includes existence levels, reorder points, hand balance, physical description of articles and rotation, among others.

#### **Inventory Management**

The process of ensuring the availability of products through inventory administration

#### **Vendor Managed Inventory (VMI) and Co-Managed Inventory (CMI)**

Procurement management mode in which the distributor agrees to transmit warehouse issues and stock levels to the producer in real time (generally by EDI) so that the producer can make a replenishment proposal according to the rules previously established in the specifications. This proposal is considered either as firm (Vendor Managed Inventory or VMI) or submitted for validation by the distributor (Co- Managed Inventory or CMI). Its goal is to increase retail inventory turnover and reduce stock-outs.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### **Inventory Planning (IP)**

IP is management of inventory planning activities on behalf of a customer, to determine the right quantities and timing of inventory to meet production or sales demands, with the goal of improving efficiency and minimizing inventory holding costs.

#### **Replenishing**

Replenishing refers to relocating material from a bulk storage area to an order pick storage area, and documenting this relocation. The process entails moving or re-supplying inventory from a reserve (or upstream) storage location to a primary (or downstream) storage/picking location, or to another mode of storage in which picking is performed.

This is the movement of goods in larger order quantities, for example a whole pallet at a time, from reserve storage to order picking, to ensure that order picking locations do not become empty. Maintaining stock availability for order picking is important for achieving high levels of order fill.

#### **Fiscal Representation**

Companies that are not established in the EU and have to carry out transactions which are subject to local VAT (as import operations) are required to appoint a fiscal representative in the state in question and be registered for VAT in that state with a local VAT number.

Functions of the Fiscal Representative (FR):

The FR makes sure that you comply with the tax legislation and ensures that you fulfill your local VAT obligations.

The FR takes care of all your VAT returns including your refund claims and the Intrastats.

The FR takes care of setting up your account with the tax authorities, your VAT situation and monitoring your VAT payments.

The FR handles all your correspondence with the local tax authority including in the event of a tax audit.

If appropriate, the FR can also appoint a VAT respondent.

The FR is liable to the authority for the companies that it represents.

#### **Billing**

Process of generating an invoice to recover sales price from customer. Also called Invoicing.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.2.3. Complex Value Added Services

It includes services packages that are a mix of basic, value added warehousing and transport services.

**Fulfillment** The act of fulfilling a customer order. Fulfillment includes order management, picking, valued added services (packing & packaging, etc.) and shipping.

**E-Fulfillment** E-Fulfillment entails technology solutions to support e-Commerce models for customers, including extensive value-added service requirements to support these types of models usually focused on business to consumers.

**Merge In Transit** This concept refers to the process of combining or "merging" shipments from multiple suppliers, which are going directly to the buyer or to the store, bypassing the seller. Effectively, merge in transit refers to a "drop shipment" from several vendors to one buyer, which is being combined at an intermediary point, prior to delivery. Some of the products will be held in inventory until all components of the order have been received and consolidated.

**Cross-Dock / Cross Docking (XD)** Cross-dock operations in a warehouse involve moving goods between different trucks to consolidate loads without intermediate storage.

A distribution system in which merchandise, received at the warehouse or distribution center, is not put away, but instead is prepared 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.

**Transformational Cross Docking (TXD)** TXD is a delicate logistics service with an additional charge, where shipments from multiple providers are immediately received, broken, and staged for one or multiple outbound shipments to end customers based on specified order details. It includes performing additional value added services such as repackaging, labeling, etc.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### **Postponement (PP)**

Postponement is a business strategy that maximizes possible benefit and minimizes risk by delaying differentiation of a product until the last possible moment. It implies the delay of final activities (i.e., assembly, packaging, etc.) until the latest possible time. As such it is a strategy used to eliminate excess inventory in the form of finished goods that may be packaged in a variety of configurations and to maximize the opportunity to provide a customized end product to the customer.

When the product differentiation operations are assigned to a Logistics Service Provider it can be called Post-Manufacturing.

#### **Technical Services**

Finished goods are customized just before they are shipped to the final address and returned goods are recovered and repaired, just after collection from the end-user.

#### **Direct Store Delivery (DSD)**

DSD is the 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.  
Synonym: Direct-to-Store Delivery

#### **Consultancy**

Advise in logistics distributions issues rendered by the logistics service provider.

#### **E-commerce logistics services**

Applying logistics concepts and services to the e-commerce business.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.3. AFTERMARKET/AFTER-SALES SERVICES

Services provided to the customer after products have been delivered.

##### **Reverse Logistics**

Reverse logistics refers to a specialized segment of logistics, focusing on the movement and management of products and resources after the sale and after delivery to the customer. It includes product returns for repair and/or credit, returning empty packing, the recycling of used goods back into the commodity chain or the cleaning of containers to be reused.

##### **Spare Parts Management (SSPM)**

SSPM are solutions to support the management of critical or time sensitive aftermarket parts on behalf of customers including the network of forward stocking locations and centralized replenishment warehouses. Return and repair, product exchange, replacement, and spare parts distribution can be included.

##### **Progressive Dispositioning (PD)**

PD is managing the return flow and warehousing of used or end of life products for distribution and resale into alternate markets or economies, including value added services such as re-work, labeling, and repacking.

##### **Maintenance and Repair**

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.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.4. CUSTOMS SERVICES

Services to plan, to prepare and to manage the customs procedures in order to import (or export) products.

##### **AEO (Authorized Economic Operator) Certified**

An Authorized Economic Operator can be defined as an economic operator who is reliable throughout the European Community in the context of his customs related operations, and, therefore, is entitled to enjoy benefits throughout the Community.

An AEO certificate provides either easier admittance to customs simplifications, or it entitles the holder to facilities concerning security and safety controls. In addition, there are benefits which are open to all categories of AEO, such as, amongst others, fewer physical and document based customs controls (unless other Community legislation prescribes a fixed amount).

##### **Customs Clearance**

The act of obtaining permission to import merchandise from another country into the importing nation.

##### **Bonded Warehouse**

Building or parts of buildings designated for storing imported merchandise, operated under customs-supervision. Used for storing goods until duty is paid or the goods are released in some other proper manner.

##### **Consultation on customs topics**

Advise on customs procedures rendered by the logistics service provider.



## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### 3.5. DISTRIBUTION TRANSPORT.

##### **Milk run**

Milk run refers to a delivery method for mixed loads from different suppliers. Instead of each of several (say 5) suppliers sending a vehicle every week to meet the weekly needs of a customer, one vehicle visits each supplier on a daily basis and picks up deliveries for that customer. This way, while still five vehicle loads are shipped every week, each vehicle load delivers the full daily requirements of the customer from each supplier. This method gets its name from the dairy industry practice where one tanker collects milk every day from several dairy farmers for delivery to a milk processing firm.

##### **Supply Chain Services**

This concept entails services to the entire chain, from sourcing to final distribution, including after sales services.

##### **Fourth-Party Logistics (4PL)**

An organization that organizes other 3rd party logistics partners for outsourcing of logistics functions. A 4LP 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.

Synonyms: Lead Logistics Partner/Lead Logistics Provider (LLP)

##### **Supply Chain Consulting**

Design the best warehouse network and transportation solution based on customer service levels, flexibility requirements and cost optimization requirements. The analysis is based on the logistics operator's knowledge about local transport, labor, and real-estate markets as well as the experience in optimizing supply networks, including the use of software packages.

##### **International Supply Chain Management**

International Supply Chain Management implies:

- International supply chain consultancy and solution design
- Control tower services, managing the operation and providing supply chain visibility
- Origin management including consolidation, vendor management and value added services
- Freight management across all modes: road, sea, air and rail
- Destination management: De-consolidation, port to destination center, and destination center by-pass services.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### Industry Solutions

Services packages for specific industries

- Automotive
- Chemical Industry
- Industrial Goods
- Consumer Products
- Fashion/Textile Industry
- Shoes Industry
- Electronics/Hi-Tech Industry

#### Special Products

Heavy, oversize or complex cargo

#### Technical Distribution

The concept refers to the management of special products, from order to point of use and subsequent de-installation, including specialist final mile delivery and on-site installation, as well as configuration, reverse logistics and waste disposal.

#### Tailored Project Transport

Tailored solutions for unique outsized cargoes and heavy lifts. It is the completed solution from feasibility studies and risk management, packaging design, document process management, to the safe transportation of heavy lifts and out-of-gauge cargo.

#### ICT Services

Services to improve efficiency and transparency of the transport and supply chain

- Inventory Management System
- Warehouse management System
- Transportation Management System
- E-Commerce platform

#### Software as a Service (SaaS)

A term that describes the use of computer systems provided by a remote third party, similar to what has traditionally been called a "Service Bureau" or "Application Service Provider (ASP)". In this setting the service provider maintains all of the computer hardware and software at their location, while the user accesses the systems via an Internet connection and is charged a rate based on access time. It is also sometimes referred to as "On Demand" services.

## B. Logistics definitions

### 3. Logistics Services / Contract logistics

#### Tracking and Tracing

Monitoring and recording shipment movements from origin to destination.

#### Tracking

Real-time location of the entity in the Logistics Chain.

#### Tracing

Possibility of obtaining information in non-real time from data recorded about the flow (flow memory).

#### Portic

Portic is the e-commerce platform of the Logistic Community of the Port of Barcelona. Portic offers the electronic commerce tools necessary for simplifying, speeding up and bringing down the costs of exchanges of documents, invoices and payments associated to the transport of goods.

#### Quality Certification Services

External certifications:

Quality Certification ISO

- ISO 9001 Certification (Quality)
- ISO 14001 Certification (Environment)
- ISO 16949 (automotive production and service parts industry)

Other Quality Certifications

- SAE member (System Alliance Europe)
- SQAS Certification (Safety and Quality Assessment System)
- Efficiency Network Certification (Port of Barcelona)

#### Environmental services

Services to protect diminish and measure the environmental impact.