6. Freight claim, Logistics automation and Performance-based logistics

6.1 Freight Claim

A Freight claim is a legal demand by a shipper or consignee to a carrier for financial reimbursement for a loss or damage of a shipment. Freight claims are also known as shipping claims, cargo claims, transportation claims, or loss and damage claims.

The intention of a freight claim is for the carrier to make the shipper or consignee "whole" – that is to say, their position is as good as it would have been if the carrier had carried out their tasks according to the Bill of Lading. For this reason, claimants are generally expected to file a claim to recover their costs, not including profits, although in some rare cases claiming profits may be considered acceptable.

Claimants are also expected to take reasonable measures to mitigate the loss. For example, if the damaged product has retained some value, the carrier would only be required to pay for the difference between the original value and the damaged value. The claimant would then be free to salvage the damaged product by selling it at a reduced cost.

6.1.1 Filing a Freight Claim

Each carrier typically provides a form specifically for filing freight claims. However, by law, no particular form is necessary, as long as the following four details are present:

The shipment must be specified

The loss or damage type must be specified

The total of the amount claimed must be specified

A clear demand for payment must be present

Information to identify the shipment may include the freight bill PRO #, the vehicle number, and the delivery date.

In addition to this basic information, the following documentation should also be provided:

Shipment invoice

Delivery receipt

Bill of lading

Invoice showing the value of the product being claimed

Invoices for costs incurred (i.e. repairs or replacements of the product)

Additional supporting documentation may also be included or required.

6.1.2 Filing Deadlines

Different rules and filing deadlines will apply depending on the shipping mode. This is due to differences in how specific shipping modes are governed.

Rail and motor carriers are governed by the Carmack Amendment. The Carmack Amendment states that claimants have a minimum of 9 months from the date of delivery to file a freight claim.

Conversely, ocean carriers that service the US are governed by the Carriage of Goods by Sea Act (COGSA). This act requires that claimants file a claim within 3 days of delivery.

6.1.3 Consignee and Shipper Responsibilities

At the time of delivery, the consignee should examine the shipment for loss or damage. If there is evidence of loss or damage, the consignee should note it on the delivery receipt; this will be used as evidence to back up the claim.The consignee is still required to accept the shipment, even if there is evidence of loss or damage. If the consignee does not accept the shipment they can no longer be a claimant as they are no longer party to terms of the bill of lading.

If the consignee signs off on the delivery receipt and discovers a claim later, then the burden of proof falls to the shipper or consignee to prove that the damage was in fact caused by the carrier as opposed to the shipper or consignee. When damage is not immediately recognizable, this is known as a concealed damage claim.

The shipper is required to pay the shipment invoice in full, regardless of whether or not the shipment was lost or damaged. The appropriate course of action is for either the shipper or the consignee to then file a freight claim against the carrier for reimbursement.

6.1.4 Carrier Liability

How much the carrier is liable for also depends on the shipping mode and the governing bodies. The Carmack amendment states that motor or rail carriers are liable for the full loss. Conversely, COGSA states that the carrier is liable for no more than $500 per package.

There are four scenarios in which a carrier is not deemed liable for damages to goods:

Act of nature

Act of the public enemy

Fault of the shipper

A defect in the goods themselves

6.2 Logistics automation

Logistics automation is the application of computer software and/or automated machinery to improve the efficiency of logistics operations. Typically this refers to operations within a warehouse or distribution center, with broader tasks undertaken by supply chain management systems and enterprise resource planning systems.

Logistics automation systems can powerfully complement the facilities provided by these higher level computer systems. The focus on an individual node within a wider logistics network allows systems to be highly tailored to the requirements of that node.

6.2.1 Components

Factory automation with KUKA industrial robots for palletizing food products like bread and toast at a bakery in Germany

Logistics automation systems comprise a variety of hardware and software components:

Fixed machinery Automated cranes (also called automated storage and retrieval systems): provide the ability to input and store a container of goods for later retrieval. Typically cranes serve a rack of locations, allowing many levels of stock to be stacked vertically, and allowing far high storage densities and better space utilization than alternatives.

Conveyors: automated conveyors allow the input of containers in one area of the warehouse, and either through hard coded rules or data input allow destination selection. The container will later appear at the selected destination.

Sortation, or sorting systems: similar to conveyors but typically have higher capacity and can divert containers more quickly. Typically used to distribute high volumes of small cartons to a large set of locations.

Industrial Robots: four to six axis industrial robots, e.g. palleting robots, are used for palleting, depalleting, packaging, commissioning and order picking.

Typically all of these will automatically identify and track containers based upon barcodes, or increasingly, RFID tags

AS/RS — Automated Storage and Retrieval Systems. Vertical Carousels based on the paternoster system or with space optimization, these can be thought of as large scale vending machines, giving the same easy access to physical objects as we have become accustomed to with respect to data.

Motion check weighers may be used to reject cases or individual products by checking them for underweight conditions and rejecting the item. They are often used in kitting conveyor lines to ensure all pieces belonging in the kit are present. Large wholesalers and retail club stores insist on receiving the exact amount of product in each package as specified.

Mobile technology Radio data terminals: these are hand held or truck mounted terminals which connect by wireless to logistics automation software and provide instructions to operators moving throughout the warehouse. Many also have in-built bar code scanners to allow identification of containers. Bar codes allow the automatic capture of data without use of the computer keyboard, which is slow and error prone.

Software Integration software: this provides overall control of the automation machinery and for instance allows cranes to be connected to conveyors for seamless stock movements.

Operational control software: provides low-level decision making, such as where to store incoming containers, and where to retrieve them when requested.

Business Control software: provides higher level functionality, such as identification of incoming deliveries / stock and scheduling order fulfillment, assignment of stock to outgoing trailers.

6.2.2 Benefits of logistics automation

A typical warehouse or distribution center will receive stock of a variety of products from suppliers and store these until the receipt of orders from customers, whether individual buyers (e.g. mail order), retail branches (e.g. chain stores), or other companies (e.g. wholesalers). A logistics automation system may provide the following:

Automated goods in processes: Incoming goods can be marked with barcodes and the automation system notified of the expected stock. On arrival, the goods can be scanned and thereby identified, and taken via conveyors, sortation systems, and automated cranes into an automatically assigned storage location.

Automated Goods Retrieval for Orders: On receipt of orders, the automation system is able to immediately locate goods and retrieve them to a pickface location.

Automated dispatch processing: Combining knowledge of all orders placed at the warehouse the automation system can assign picked goods into despatch units and then into outbound loads. Sortation systems and conveyors can then move these onto the outgoing trailers.

If needed, repackaging to ensure proper protection for further distribution or to change the package format for specific retailers/customers.

A complete warehouse automation system can drastically reduce the workforce required to run a facility, with human input required only for a few tasks, such as picking units of product from a bulk packed case. Even here, assistance can be provided with equipment such as pick-to-light units. Smaller systems may only be required to handle part of the process. Examples include automated storage and retrieval systems, which simply use cranes to store and retrieve identified cases or pallets, typically into a high-bay storage system which would be unfeasible to access using fork-lift trucks or any other means.

6.3 Performance-based logistics

Performance-Based Logistics (PBL), also known as performance based life-cycle product support or Performance Based Contracting is a strategy for cost-effective weapon system support. Rather than contracting for the acquisition of goods and services, the product support manager identifies product support integrator(s) (PSI) to deliver performance outcomes as defined by performance metric(s) for a system or product. The integrator often commits to this performance level at a lower cost,

or increased performance at costs similar to those previously achieved under a non-PBL or transactional portfolio of product support arrangements for goods and services.

PBL is the United States Department of Defense's (DoD) preferred approach to supporting weapon system logistics. It seeks to deliver product support as an integrated, affordable performance package designed to optimize system readiness. PBL meets performance goals for a weapon system through a support structure based on long-term performance agreements with clear lines of authority and responsibility.

DoD program managers are required to develop and implement performance-based life-cycle support strategies for weapon systems. These strategies should optimize total system availability while minimizing cost and logistics footprint. Trade-off decisions involve cost, useful service, and effectiveness. The selection of the specific performance metrics should be carefully considered and supported by an operationally-oriented analysis, taking into account technology maturity, fiscal constraints, and schedule. In implementing performance-based life-cycle product support strategies, the metrics should be appropriate to the scope of product support integrators and providers responsibilities and should be revisited as necessary to ensure they are motivating the desired behaviors across the enterprise.

PBL strategies do not mandate that work be contracted to commercial contractors; integrating the best features of the public and private sectors is a key component of the support strategy. Instead of a pre-ordained course of action, Product Managers are directed to implement "sustainment strategies that include the best use of public and private sector capabilities through government/industry partnering initiatives, in accordance with statutory requirements."

Many times, employing a PBL strategy has resulted in either increased system performance issues or increased costs. Examples include the C-17 PBL, FIRST, and PBtH. Ideally, the provider profits by controlling constituent elements (PSIs) that are used to generate the performance results.

6.3.1 History

Beginning in the early 1990s, emerging trends towards increases in the costs to support fielded systems and decreases in the general reliability and operational readiness of weapon systems were recognized as issues that could continue if unabated. As a result, a performance-based approach, PBL, was advanced by the

U.S. DoD in its annual Quadrennial Defense Review in 2001. Since then, not only has the U.S. DoD adopted the PBL approach, but other countries have adopted this strategy as well. Many programs that have employed it have yielded increased system availability, shorter maintenance cycles, and/or reduced costs.

6.3.2 Awards

Since the inception of the PBL concept, there have been numerous examples of DoD systems that have yielded the anticipated results, and many that have exceeded – some extremely so – the performance expectations. Annual PBL awards highlight achievement in three areas:

component-level performance

sub-systemperformance

system-level performance

6.3.3 Criticism

In 2009, partially in response to some who believed that PBL concepts were inadequate, and to assess the current state of DoD systems sustainment, DoD's Office of the Assistant Deputy Secretary of Defense for Materiel Readiness (OADUSD(MR)) initiated a Weapon System Acquisition Reform Product Support Assessment. Its final report, signed by Ashton B. Carter, Under Secretary of Defense for Acquisition, Technology and Logistics, affirms the essence of the PBL concept by stating, "there remains a strong consensus that an outcome-based, performance-oriented product support strategy is a worthy objective…" It further identified eight areas that would make product support even more effective, if developed and improved:

1.Product Support Business Model

2.Industrial Integration Strategy

3.Supply Chain Operational Strategy

4.Governance

5.Metrics

6.Operating and Support (O&S) Costs

7.Analytical Tools

8.Human Capital

In 2013 the USAF found that CLS contracts were more expensive that doing the operations in house through their organic depot system.

6.4 Sales territory

A sales territory is the customer group or geographic district for which an individual salesperson or sales team holds responsibility. Territories can be defined on the basis of geography, sales potential, history, or a combination of factors. Companies strive to balance their territories because this can reduce costs and increase sales.

6.4.1 Purpose

The purpose of a sales force coverage (or sales territory) metric is to create balanced sales territories. There are a number of ways to analyze territories. "Most commonly, territories are compared on the basis of their potential or size. This is an important exercise. If territories differ sharply or slip out of balance, sales personnel may be given too much or too little work. This can lead to under- or over-servicing of customers."

"When sales personnel are stretched too thin, the result can be an under-servicing of customers. This can cost a firm business because over-taxed salespeople engage in sub-optimal levels of activity in a number of areas. They seek out too few leads, identify too few prospects, and spend too little time with current customers. Those customers, in turn, may take their business to alternate providers."

"Over-servicing, by contrast, may raise costs and prices and therefore indirectly reduce sales. Over-servicing in some territories may also lead to under-servicing in others."

"Unbalanced territories also raise the problem of unfair distribution of sales potential among members of a sales force. This may result in distorted compensation and cause talented salespeople to leave a company, seeking superior balance and compensation."

"Achieving an appropriate balance among territories is an important factor in maintaining satisfaction among customers, salespeople, and the company as a whole."

"Sales potential forecast" can be used to determine sales targets and to help identify territories worthy of an allocation of limited resources. A sales potential forecast is a forecast of the number of prospects and their buying power. It does not assess the likelihood of converting "potential" accounts. Sales potential can be represented in a number of ways. Of these, the most basic is population, i.e., the number of potential accounts in a territory. In a survey of nearly 200 senior marketing managers, 62 percent responded that they found the "sales potential forecast" metric very useful.

6.4.2 Construction

"In defining or redefining territories, companies strive to balance workloads, balance sales potential, develop compact territories, and minimize disruptions during the redesigns. These goals can have different effects on different stakeholders. . . . Before designing new territories, a sales force manager should evaluate the workloads of all members of the sales team."

The workload for a territory can be calculated as follows:

Workload (#) = [Current accounts (#) * Average time to service an active account (#)] + [Prospects (#) * Time spent trying to convert a prospect into an active account (#)]

The sales potential in a territory can be determined as follows:

Sales potential ($) = Number of possible accounts (#) x Buying power ($)

"Buying power is a dollar figure based on such factors as average income levels, number of businesses in a territory, average sales of those businesses, and population demographics. Buying power indices are generally specific to individual industries," but on a whole, definitions of buying power tend to be more an art than a science.

"In addition to workload and sales potential, a third key metric is needed to compare territories. This is size or, more specifically, travel time. In this context, travel time is more useful than size because it more accurately represents the factor that size implies – that is, the amount of time needed to reach customers and potential customers."

"As a manager’s goal is to balance workload and potential among sales personnel, it can be beneficial to calculate combined metrics – such as sales potential travel time – in order to make comparisons between territories."

"Sales potential can be represented in a number of ways. Of these, the most basic is population – the number of potential accounts in a territory. . . . Estimating the size of a territory might involve simply calculating the geographic area that it covers. It is likely, however, that average travel time will also be important. Depending on the quality of roads, density of traffic, or distance between businesses, one may find that territories of equal area entail very different travel time requirements. In evaluating such distinctions, sales force records of the time needed to travel from call to call can be useful. Specialized computer software programs are available for these purposes."

"Redefining territories is a famously difficult process. To perform it well, in addition to the metrics cited earlier, disruption of customer relationships and feelings of ownership among sales personnel must also be considered."