

IMPROVING SALES IN FREIGHT FORWARDING BY USING CONTEMPORARY
TOOLS

by

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A dissertation
submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Transportation Management
State University of New York Maritime College
January, 2000

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Abstract

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OBJECTIVE OF THESIS: This thesis investigates how modern technology can help the Freight Forwarders, Logistics Companies and Shippers to improve their sales while promoting their accuracy and competence.

METHODOLOGY: The writer develops a logical perspective of the various models to the Information Technology in shipping by gathering information from various private, personal, and public sources.

PRELIMINARY CONCLUSION: In shipping and forwarding the most important issue is time and accuracy. Forwarders can improve their sales and revenues while they help importers and exporters decrease the communication and transportation costs by implementing the Information Technology Systems like EDI, Bar Code Scanning, and Web Site Tracking and Tracing.

KEY WORDS: Freight Forwarder, Logistics, Information Technology, Internet, Customer

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CHAPTER 1

Introduction

Over the years, international trade has grown tremendously as the world's economy has developed globally, with particular emphasis upon the trade of the most highly valued cargoes. It can be argued that this aspect of the global economy has been progressively escalating throughout the world, as importers and exporters have become more concerned about individual companies solely responsible for the transportation of these priceless goods.

Since the majority of this merchandise arrives to any given super store on a daily, weekly or seasonally bases, it is not surprising to find that with so many stipulations, making these delicate deadlines has also become significantly more important. In these specialty stores, one can readily find a fancy Turkish towel on one shelf, while on another there may be a pair of fashionable designer garments made in Sri Lanka. Upon the next floor, one may also enjoy the newly arrived high-tech stereos or DVDs from Japan. There is truly no end to the variety of commodities available as a direct result of both international trade and contemporary freight industry.

Indeed, competition and difficulties often reside the ability to transport these goods from the factory to their final destination, inasmuch as it can be an arduous task to coordinate the transportation and logistics companies -- typically known as freight forwarders -- to minimize or even avoid these problems.

The manner by which this can be accomplished is by using not only the traditional and conventional ways of transportation but also new electronic and digital technology of information management systems.

This thesis will endeavor to outline the important connections between the freight forwarding industry and computerized technology, with Management Information Systems (MIS) and simply Information Technology (IT) systems serving as the technological elements. The study, which is based upon the freight forwarding, incorporates many other key role players, such as shippers, trucking and logistics companies, ocean carriers, airlines, warehouses and even the ultimate wholesalers and retailers, many of which are using similar tools in the same field. It is the author's intent to demonstrate these examples throughout this thesis in a case by case format.

The author will then concentrate upon the benefits of the IT systems in freight forwarding industry by investigating how they can effectively save the export and import companies considerable time and money. Also investigated will be the manner by which how the companies successfully implemented their IT systems, as well as how they increase sales and revenues.

Much of the information presented in this thesis comes from the author's personal experience, having been involved approximately four years in the international and domestic shipping and transportation business in a capacity of daily operations, customer service and sales departments.

CHAPTER 2

Freight Forwarders and Their Functions

Rene de Kerchove's International Maritime Dictionary defines a freight forwarder as a person or firm who acts on behalf of a shipper or exporter and attends to all the necessary details of shipping, insuring and documenting of goods. In short, a freight forwarder takes delivery of the goods at the port or point of shipment, arranges customs export clearance, books freight space with the carriers, prepares bills of lading in ocean shipment and airway bills in air shipment, makes out dock receipts, takes care of cartage or lighterage, and composes consular invoices and all other certificates which shipment may require.¹

The freight forwarder is also known as a forwarding agent or a simply a forwarder. Thus, in the following pages these names also will be used for referring to freight forwarder.

Freight forwarders act as agents of the shippers, effectively arranging international transportation with various carriers. Though freight forwarders are often referred

¹ Rene de Kerchove, International Maritime Dictionary, (New York: VNR, 1983), s.v. "freight forwarder"

to as "freight brokers" or "travel agents for international cargo", they can provide services that go far beyond this basic function. These services include coordinating the transportation of goods to the port, preparing documentation, arranging warehouse storage and cargo insurance and handling overseas customs clearance. Because of the wide range of services they offer, freight forwarders can be especially helpful to small shippers who have just started doing business in the international market.²

A. Freight Forwarders in Shipping Industry

From a shipper's point of view, utilizing an international freight forwarder means placing their business at the mercy of an outside company in order to transport product from origin to destination. Indeed, turning over this kind of responsibility should only be done with a clear understanding of the forces faced by the freight forwarders. Recent statistics point continuing expansion in international trade. According to a study compiled by the US Department of Transportation and Volpe National Transportation Systems Center, the value of total US exports and imports in 1996 was

² Mitchell E. Macdonald, "Who Does What in International Shipping," Traffic Management, Sept 1991 v30 n9 p38(3)

\$1.4 trillion, a 45% growth from 1992 levels.³ According to same study, container loads grew from 3.4 million in 1982 to over 8 million in 1996, and growth forecasts for container loads into the next decade are at 6-13% annually. While international trade volume has been on the rise, logistics and transportation costs have declined significantly. Same study indicates that logistics costs ran at 18% of GDP in 1981, and by 1993 logistics accounted for only 11% of GDP, 6% of which was directly attributed to freight bills.⁴ For the international freight forwarder, these statistics are significantly important. The reason is that forwarders occupy a unique position in the transportation market. In general, they act as a liaison between shippers and carriers, advising clients on the most cost-effective and efficient routes for transporting goods. On the one hand, expanding international trade implies an increasing need for forwarding services. Decreasing logistics costs, however, reveal a more refined and efficient marketplace, one that demands value-added services without burgeoning expenses.⁵

³ Beth M. Schwartz, "Competitive Pressures Drive Forwarders to Advance," Transportation & Distribution, Feb 1998 v39 n2 p99(3)

⁴ Ibid.

⁵ Ibid.

International freight forwarding business is currently in a transformational phase, however, there is little agreement concerning what the industry will look like in the future. Forwarders of all sizes are embroiled in a period of expansions, acquisitions and strategic alliances. In order to track the competitiveness of particular forwarders, shippers will need to closely watch the freight forwarding realignment.⁶ Recent months have demonstrated how international freight forwarders of all sizes have been practicing strategic alliances, acquisitions and expansions, making note of how this high level of activity has received close scrutiny from the transportation experts.⁷ Observers may agree to the restructuring points to an industry-wide transformation, there still remain some necessary discussions as to what the exact outcome will be. Some professionals foresee the inevitable extinction of small to mid-sized forwarders, while others anticipate universally expanding profit margins.⁸

Many observers believe that freight forwarders are being forced to abandon traditional services and move into newer,

⁶ Beth M. Schwartz, "Competitive Pressures Drive Forwarders to Advance," Transportation & Distribution, Feb 1998 v39 n2 p99(3)

⁷ Ibid.

⁸ Ibid.

broader roles in logistics operations.⁹ Indeed, many of the big freight forwarders are slowly moving into information and logistics management, warehousing and consultant services; however, the impetus for the transition has meant severe competition from carriers and consolidators, coupled with the highly-attractive new service profits. This is an industry in transition upon which forwarders have already begun struggling with competition among themselves as well as from outside forces, such as carriers, consolidators and even shippers. The study of American Shipper shows the trend of forwarders shifting from their traditional function as transaction-based middlemen to a broader role as managers of information and logistical services. According to the executive vice president and chief operating officer of one of the biggest forwarders, traditional forwarding has no future; in today's market, total supply chain management is the name of the game.¹⁰ Many forwarders remain comfortable doing business the old-fashioned way by handling documentation, smoothing the rough edges of transportation and collecting fees based upon freight percentage. However, a growing number see little choice but to redefine themselves by broadening both services and geographic

⁹ Chris Gillis, "The Changing World Of Freight Forwarding," American Shipper, Oct 1996 v38 n10 p49(9)

¹⁰ Ibid.

coverage. The result finds them moving into warehousing, consolidation and logistics management and consulting as a means by which to remain competitive. This diversification is driven by two forces: Perceived opportunity and fear of being cut out of the transportation loop. Forwarders have increasingly found themselves squeezed out by customer demands, regulatory changes, capital requirements for information systems and competition, not only from other forwarders but also from shippers, carriers and consolidators.¹¹ A current industry catch phrase is one-stop shopping, to which a number of forwarders, especially large ones, are going to become total logistics providers. Even the leading forwarders in the industry, has sought to provide one-stop service by forming partnerships with other service providers of all types and sizes like:

- Large forwarders, which through acquisitions and internal expansion have developed broad, sometimes global coverage and close supply-chain links with customers.
- Mid-sized forwarders with up to a handful of offices, often focusing on a particular region or a few key commodities or customers.
- Small forwarders, typically entrepreneurs or family businesses serving a narrow niche or a specific trade.¹²

¹¹ Ibid.

¹² Ibid.

Within these broad categories exist a variety of subgroups, some of which operate as franchisees, subsidiaries of financial institutions, or independent members of global networks. Indeed, it can be stated that these niches are literally endless, in that there are specialists in airfreight, project shipments, bulk cargoes, break bulk, as well as various combinations of forwarders and consolidators, non-vessel-operating common carriers and trucking companies. According to Peter H. Powell Sr., president of a large custom broker and forwarder, the next five to 10 years will demonstrate the strongest growth among the small to mid-sized forwarders, inasmuch as they will be ready and able to answer the demands of small to mid-sized exporters emerging in the market.¹³

Freight forwarders are definitely the key players within the entire shipping industry, as they have innovated and implemented both smart and useful ways of globally transporting any kind of merchandise. This factor alone makes the forwarder an important element not only the shipping and transportation business, but also in one's daily life. The following section will explain how a forwarder can be an important asset in a consumer's life.

¹³ Ibid.

B. Role of Freight Forwarders in Consumer's Daily Life

As was explained earlier, freight forwarders can be considered as logistics solution providers for any kind of transportation problems, which can include ocean and air transportation, containerization, consolidation, warehousing, distribution, trucking, railroad, inter modal, project and oversized shipments. Hence, whatever the consumer's daily demand is, freight forwarders are always on the scene helping both exporter and importer at both the origin or destination point of shipment.

Toby B. Gooley explains the benefits of containerization, noting that almost the same approach can also be implemented for the forwarders.¹⁴ The competition among freight forwarders has forced prices down and in turn also demanding more consistent application of quality. Manufacturers are permitted to deliver products at lower costs and better service; as a direct result, companies are able to source products from various places, ultimately helping to development large production numbers of consumer goods and electronics. This has resulted in the market's proliferation of discount stores and

¹⁴ Toby B. Gooley, "Container Rules!," Logistics Management, Feb 1997 v36 n2 p60

the accessibility of luxury goods.¹⁵ The following example will demonstrate the manner by which a freight forwarder can be an integral component in the photo film distribution channel.

"As shippers reduce their traffic departments, some larger forwarders put their own staffers at the customer's location to provide hands-on shipping management. These 'in-plant' forwarders are seen as a way for forwarders to tighten their bond with shippers. MSAS Cargo International began offering in-plant forwarding services to Eastman Kodak, which was trying to develop a shipper-controlled air gateway at its Rochester, NY site to avoid trucking to an MSAS station at JFK Airport. 'It's better to work face-to-face with your logistics provider than over the telephone,' said Paul H. Smith, U.S. export/import logistics supervisor for Kodak. 'It's improved cycle time of document turnover and has greatly enhanced our customer service focus.'"¹⁶

It can readily be argued that this presents a real winning situation for anyone involved in such an instance: The forwarder wins by increased sales and having a satisfied client, while the shipper benefits from the fast response to wholesaler or store orders. Most importantly, however, is the fact that the consumer is made happy by having the product at

¹⁵ Ibid.

¹⁶ Chris Gillis, The Changing World Of Freight Forwarding, "American Shipper", Oct 1996 v38 n10 p49(9)

his or her convenience. This transaction also helps the company to keep its own prices down, since the forwarder's method already saves the company money and time.

In the shipping business, most of the target industries are directly consumer related, which can include textile, apparel, footwear, electronics, toys and hardware industries. Therefore, freight forwarders are directly serving import and export customers and consumers alike.

In the next chapter, characteristics of both ocean and air forwarder will be discussed, as well as the expertise required by their respective customers.

CHAPTER 3

Characteristics of Freight Forwarders

The forwarding industry is always subject to new enterprises and severe competition. Indeed, this is a field where only those with a great understanding of customer demand can survive. This chapter will serve to investigate the successful forwarders and their characteristics, as well as address the inquiries and specifications of their successful customer base. Recent and actual industry transactions will be used as examples in order to demonstrate the topic.

Due to various outside factors explained previously, forwarders have been squeezed out, effectively forcing forwarders to renovate the way in which they conduct business as a means by which to gain market strength.

The competitive appeal of large, multinational forwarders has a distinctly different aspect from that of smaller independents, in spite of the fact that they both have the

competitive strong points.¹⁷ This is a definite trend, which is taking place where the big companies are getting bigger through joint ventures and purchases. Many of the large forwarders have undertaken aggressive expansion in recent months. They acquire new business in the foreign countries and try to get into the new lane segments in new places by forming strategic alliance with the overseas counterparts. To tap into specialty markets, they create even new special divisions to attract specialty imports, or exports. In addition to supporting a wide-range of logistics services, they also serve niche markets. One includes specialization in routing and delivering trade show and exhibition materials.

Forwarders with the extensive networks have strong appeal for companies shipping product to a wide variety of locations around the world. They can offer total logistics services and extensive electronic networks, appealing to shippers seeking to shift the majority of transportation responsibilities outside their own walls.

Strategic alliances granted, the big forwarders tend to appeal to the big names in the industry. However, it can be

¹⁷ Beth M. Schwartz, "Competitive Pressures Drive Forwarders to Advance," Transportation & Distribution, Feb 1998 v39 n2 p99(3)

easily argued that there will always be niche players, either by market place or by product size or by size of client. Smaller shippers or special goods shippers may find those smaller forwarders can provide high-quality service without the extensive corporate network. This is the competitive edge of smaller forwarder in this volatile and changing environment.

When it comes to acquisitions, forwarders are looking for specific regional players that have expertise with certain sectors, or in certain markets. With this approach a company can build itself up from a single office to an international transportation service provider.

Their business strategy emphasizes strategic partnerships and growing well-cultivated relationships with agents around the globe versus centrally managed branches. In the realism of international trade, the viability of particular forwarders may depend less on how they are currently defined within the market and more on how these businesses attempt to redefine themselves in a growing marketplace. Shippers using international forwarders need to keep a close eye on reorganization within the business. After all, a forwarder's competitiveness goes a long way to getting the product to the right place at the right time.¹⁸

After these perspectives, it will next be demonstrated how forwarders work overall, as well as the manner by which

¹⁸ Ibid.

they handle the shipments of daily operations. Indeed, the duties of forwarders must be distinguished in order to make such a study, such as the shipment's urgency, special handling instructions, and so on. These situations require a remarkable way of cargo handling and different expertise; because of these numerous factors, the utilization of freight forwarders is based primarily upon their specialties. In general, there are two main modes with some forwarders specializing in air freight forwarding, while others specializing in ocean freight forwarding. More importantly, there are some forwarders who have both air and ocean divisions, fully able to provide global logistics service throughout the world. Furthermore, a forwarder may find that some of his/her competitors are able to offer the same service at considerably lower prices, which can quite easily occur since the competitor is most likely a specialist in this particular service. The key to everything from the customer's point of view is to be familiar with the service and with the providers who conduct it.

A. Characteristics of an Ocean Freight Forwarder

Ocean freight forwarders represent some of the oldest players in the shipping industry, concentrating mostly upon shipments handled by means of ocean transportation. The basic

services of an ocean freight forwarder may include arranging and coordinating transportation of goods to and from port, preparing and securing paper work and documentation, arranging warehouse storage, cargo insurance and in some cases handling customs clearance. These represent the basic functions of an ocean freight forwarder, demonstrating that the difference rests upon handling of these core services.

It is appropriate at this point to demonstrate the other parties with which ocean freight forwarders mostly deal in daily operations, the most important of which are the ocean carriers. Shippers must always be aware that there are actually two types of ocean carriers:

The first type is the direct carrier and generally known as a steamship line that transports freight on its own ships. Many times, the steamship line works from an established system of inland transportation, effectively incorporating motor carriers and railroads. Several steamship lines, for example, operate double-stack container train networks that offer point-to-point service.

The second type of ocean carrier is not a carrier at all in a pure sense, but rather is a Non-Vessel Operating Common Carrier (NVOCC). Essentially an NVOCC will consolidate several shippers' goods into a full container load (FCL), which it

then tenders to a steamship line. NVOCCs are similar to steamship lines in that they issue shippers their own bills of lading, and they ship under their own published tariffs. It can readily be argued that most shippers, in fact, would be hard-pressed to tell the difference between dealing with an NVOCC and a direct carrier steamship line, being that various types of companies offer NVOCC services. In the past couple of years, even domestic Less-than Truck Load (LTL) trucking firms have entered into this business, offering door-to-door Less-than Container Load (LCL) services.¹⁹ Findings have demonstrated that the United States is the only country with a distinction between forwarders and NVOCC; elsewhere, NVOCC is called a forwarder or consolidator.²⁰

Secondly there are ocean-carrier consolidators. With regard to ocean-carrier consolidators, many forwarders are apprehensive about such freight consolidation services as a means by which to deal directly with shippers, contending that such consolidation services are most heavily used in the transpacific, where major carriers -- Orient Overseas Container Line (OOCL), Maersk Line, American President Lines

¹⁹ Mitchell E. Macdonald, "Who Does What in International Shipping", Traffic Management, Sept 1991 v30 n9 p38(3)

²⁰ Chris Gillis, The Changing World Of Freight Forwarding, "American Shipper", Oct 1996 v38 n10 p49(9)

(APL) and Sea-Land Service -- have built sophisticated operations. As they expand their clientele, distribution and information systems, some of those consolidators are beginning to look more like forwarders. One sales tactic of carrier-affiliated consolidators is to promote their services as "independent" from their mother company, which means that these companies will also consolidate cargo to be placed on competitors' vessels.

The time has come where consolidators are also moving beyond ocean transport into other modes of transportation. In order to become more involved in customer distribution, a consolidator must forge an alliance with a distribution service in main ports like Los Angeles, or New York to be able to handle domestic freight transport from the port to the customer's door.²¹

The primary services of an ocean freight forwarder include a consolidation service, which allows customer to source from multiple vendors when the vendors' shipments are too small to fill a single container. The core aspect of this particular business is the global consolidation and movement of merchandise, information and documents, where the forwarder receives customer's merchandise at one of several worldwide

²¹ Ibid.

locations, consolidates it into containers destined for the customer's distribution centers or retail stores, and manages the movement of goods from one end of the customer's supply chain to the other. The forwarder then arranges delivery of the required documents and provides the necessary information via electronic or online transfer in order for the customers to manage their inventory.

Another consolidation type is the multi-country consolidation, which allows the buyer to source from multiple origin countries when these countries' shipments are too small to fill a container. Indeed, this is a real cost-saving service, being that there usually exists a monitoring service, which coordinates the collection of LCL shipments from multiple vendors in multiple countries. Freight forwarders then move the LCL containers from their origination sites and consolidates them into Full Container Load (FCL) containers at the following three popular central hubs: Singapore, Kaohsiung and Yokohama. It is at this time that the forwarder transports the FCL containers to their final destination. Forwarder then sends a pre-alert from origination site to the hub that includes all shipment information; the hub then sends the customer a consolidated shipping advice. In addition to preparing a container manifest reflecting cargo details,

forwarder also consolidates all origin documents and dispatches a set to the final consignee from its hub.

Similarly, there is another service an ocean forwarder provides called as groupage, which is the pooling or consolidating of cargo from several vendors, usually in small lot shipments. These small lots are then grouped together by destination and shipped in full container loads. Upon arrival at destination, the container is stripped and cleared through customs, at which point the different consignees can pick up their goods or arrange to have them delivered.²²

The physical transportation of the goods takes place in a variety of ways, allowing a forwarder to facilitate using any mode with any carrier. A forwarder can coordinate the international freight ocean movement via its affiliated steamship line, its NVOCC service, as well as any other ocean carrier.

An ocean forwarder can act as a complete Non-Vessel Operating Common Carrier that specializes in small shipments of less than container as well as full container. These specific services provided by an ocean freight forwarder can

²² Mercantile, Services/Groupage, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/company/services/htm>

include:

- Contact and coordination with vendors, or buying agents,
- Notification of Purchase Orders changes/verifications,
- Monitoring of cargo,
- Pre-Advice Notice for approval to book and to ship,
- Verification and distribution of documentation based on the instructions of customers or Letter of Credit,
- Sailing Advice Message including shipment details and estimated time of arrival,
- Arrival Notice including the exact time of arrival, and freight charges,
- Coordination with the customer's customs house broker,
- Special distribution as necessary.²³

As demonstrated in today's standards, moving ocean freight requires not only the expertise but also new operational skills and options such as:

Intermodal Management Services (IMS): IMS can help to move door-to-door transportation of full truckload shipments throughout the United States, as well as between the United States, Mexico and Canada, effectively serving as the primary domestic transport service for ocean carriers. In this capacity, IMS offers a wide range of rail intermodal and truck brokerage services for customers' full truckload shipments. These global customers, who have both domestic and

²³ ACS Logistics, Services 1999 available from Internet Explorer 5.0@
<http://www.acslogistics.com/services/transportation.html#nvocc>

international transportation requirements, benefit greatly from the entire network of worldwide services available through the carriers. It can readily be stated that the main objective of IMS is to develop flexible and creative solutions for customer supply chain needs. Primary to IMS' duties is the manner in which it coordinates the intermodal shipment from door-to-door, door-to-ramp or ramp-to-ramp with the most competitive marketplace service available. In addition, IMS can service importer's over-the-road needs utilizing a network of over 700 carefully selected partner carriers across the country.²⁴

Transloading: This special service is offered where inbound containers are stripped at a specialized facility and reloaded into either 48 ft or 53 ft road trailers for continued delivery. The 48ft and 53 ft containers can be loaded on domestic double stack trains, what makes them the perfect alternative very the long haulage against low costs. The economics of this operation require careful analysis before implementation as cost benefits will vary depending upon the type of goods involved and their ultimate U.S. destination. This process provides for domestic sourcing as a

²⁴ ACS Logistics, Services 1999 available from Internet Explorer 5.0 @ <http://www.acslogistics.com/content/services/html>

means by which to also combine these with international traffic and thus obtain additional cost benefits.

Management of Documents: Along with the goods themselves and the information process, documents represent a critical element within the conformity of international transport and logistics. Today's ocean forwarder also offer a wide range of document management services between origin and destination points with regard to the logistics process, all designed to ensure that the correct documents are both collected and made available at the right place, at the right time. Indeed, systems employed to closely follow up on the flow of documents are very crucial. Timely availability of documents ensures that the goods can flow without customs delays or other.

The ocean freight forwarder can be directly effective in the client's business. With considerable expertise in the global market, a well established freight forwarder can provide fast turnaround of inquiries which means the shippers or exporters can include the freight cost at time of order placement so it can be covered by the buyer's letter of credit. Getting this information quickly allows shippers to sell the customer even more product.

International shipping is complicated and lack of expertise and miscommunication can easily cause loss of

business. This is the most reason why customers changes service providers. They cannot risk losing a \$50,000 order over some forwarder who is not well organized, and who didn't return the phone calls.²⁵

If the process is not followed of properly by the forwarder, delays will most likely occur to international or domestic shipments, which will in turn result in late payments or penalties for shippers, exporters and/or buyers. This simple yet critical chain reaction clearly demonstrates the importance of freight forwarders in shippers' business activities.

B. Characteristics of an Air Freight Forwarder

Airfreight forwarders, which operate in much the same way as ocean freight forwarders, can be either air consolidators or agents of specific airlines. The consolidator forwarders, like the NVOCC or ocean consolidators publish their own tariffs and issue air waybills, while the agent forwarders, by contrast, market cargo space for specific air carriers. Both types of airfreight forwarders also offer services beyond

²⁵ Helen Richardson, " Freight forwarder basics, " Transportation & Distribution, Jan 1997 v38 n1 pS10(4)

simply coordinating shipments with an airline, including document preparation, inland transportation and warehousing coordinating, shipment tracking, and claims responsibilities. It's important to note that many forwarders work as both airline consolidator and agent. Furthermore, many forwarders handle both ocean and air activities but generally do so in separate departments.²⁶

Just as there are two types of ocean carriers active within the international shipping industry, there are also two types of air carriers. The initial carrier represents the traditional scheduled airline, which either specializes in cargo movement only or carries freight in the passenger aircraft. It can readily be stated that most scheduled airlines rely upon airfreight forwarders (or consolidators) to generate a great portion of their business.

By contrast, integrated carriers market their services directly to shippers, who, for the most part, specialize in small shipments weighing under 70 pounds. However, several integrated carriers have recently started handling larger loads. Integrated air carriers also offer shippers comprehensive service via an established network of surface-

²⁶ Mitchell E. Macdonald, "Who Does What in International Shipping", Traffic Management, Sept 1991 v30 n9 p38(3)

delivery carriers that will pick up goods at the shipper's dock and deliver them to their foreign destination. Whether that ground service is provided by a company-owned fleet or not, the integrated air carrier generally assumes full responsibility for the shipment door to door.²⁷

Air forwarders differ from air cargo agents in that they represent shippers, while air cargo agents represent air carriers. Air forwarder is an indirect air carrier who acts as a carrier to the shipper, issues his or her own airway bill, and assumes responsibility and liability for cargo and transportation. Air forwarder buys transportation and space allocation from commercial carriers. Air forwarders also provide a variety of additional services, such as import/export documentation, warehousing and logistics expertise. In short, air forwarders are carriers to the shippers. To the airline, they have the appearance of a shipper, because they ship both to and from themselves or their agent, and appear on the invoice as shipper based upon their own negotiated rates and contracts.

Cargo agents, on the other hand, represent airline cargo carriers to shippers, with most forwarders are also cargo

²⁷ Ibid.

agents, while most cargo agents are also forwarders. Many of the functions they perform, such as documentation, are identical in nature.²⁸

Air carriers and forwarders are constantly seeking out ways to become more involved in door-to-door cargo handling, as opposed to only traditional airport-to-airport service. In some cases, however, that puts them in direct competition with forwarders.

"'Airline operation costs have gone up tremendously,' said Akihiro Hara, vice president of cargo for the Americas for Japan Airlines (JAL). 'To secure additional revenues, we are pressed to establish services other than airport-to-airport service.' Many carriers will provide airport-to-door delivery when the shipper asks, yet few sell the concept as a standard cargo product. 'It's a touchy subject with our forwarder clients,' Hara said. 'The forwarders don't like it when we approach the shippers with service beyond the airport.'"²⁹ When a shipper wants an import shipment delivered

²⁸ Helen Richardson, " Freight forwarder basics", Transportation & Distribution, Jan 1997 v38 n1 pS10(4)

²⁹ Chris Gillis, "The Changing World Of Freight Forwarding", American Shipper, Oct 1996 v38 n10 p49(9)

by the carrier, air carrier will arrange delivery through connections with warehouse and trucking operations.

As in ocean freight forwarding, virtually all the same requirements force air freight forwarders to advance their capabilities of handling cargo to higher levels. Most of the biggest ocean freight forwarders have established their air forwarding division in accordance with the same requirements. A modern air forwarders' service should include the following:

Airfreight Logistics Management Services (ALMS): ALMS helps customers develop an airfreight program that best meets their needs for capacity, frequency and transit time at a price that meets their budget. ALMS can widen airfreight options and provide objective solutions by way of increasing opportunities for better service and cost-effective rates. At the same time, it manages purchase order (PO) information so that the customers can more effectively manage their inventory. In details ALMS can help the customers in the following ways:

- Airfreight Brokerage: ALMS can procure and manage cost-effective air transportation for non-routine shipments.
- Airfreight Management: ALMS professionals as the customers own airfreight managers at origin and manage all airfreight from the origins to the destinations.
- Information Management: ALMS coordinates the communication between the customers, vendors and forwarders, brokers and air carriers via: Electronic Data Interchange (EDI), Internet and World Wide Web,

and any other way that the customer need the information

- Airfreight Consulting: ALMS will assist the customer in evaluating their airfreight needs, setting the goals of their production program, identifying potential airfreight service providers, and evaluating rates and service levels proposed by airfreight vendors.³⁰

The primary difference that exists in air freight forwarding is what takes place on the ground. In fact, after take-off, most airfreight travels at about the same speed; it is what occurs prior to and after a shipment has become airborne that becomes the most important aspect. A Combination of poor ground coordination, incomplete paperwork, inadequate communication, untrained personnel and any number of other problems can significantly slow jet speed. Therefore, forwarders are broadening the focus of their activities to include a greater professional airfreight orientation where it is most needed.

Comprehensive Airfreight Services: There exist a number of already established requirements with regard to the manner of shipper and receiver operation, which follow in the form of special services:

- Direct Airfreight
- Consolidated Airfreight
- Sea + Air Combined Service

³⁰ ACS Logistics, Transportation Services, 1999 available from Internet Explorer 5.0 @ <http://www.acslogistics.com/services/transportation.html#alms>

- Air + Sea Combined Service
- Truck + Air Combined Service
- Air + Truck Combined Service
- Air + Air Transshipment
- Door-to-Door Service
- Courier Service
- Pick-up and Deliveries
- Trucking
- Distribution
- Warehousing
- Customs Clearance
- Documentation
- Special Handling (e.g. Pick and Pack Operations, Sorting and Garment-On-Hangers)
- EDI
- Bar Coding
- Track and Trace Information³¹

Customers in airfreight business have also become as demanding as those in ocean freight. In order to survive in the market, freight forwarders need to comply with all the requirements with the highest level of service.

In addition to the standard operations of air forwarders, there exist several unique examples in which a particular forwarder can achieve remarkable service for both existing and target clients.

International freight forwarding is diversified in two areas: Air and ocean. However, changing and improving

³¹ Mercantile, Services/Air Freight, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/services/air-freight.htm>

worldwide business environment and intensive business transactions have allowed for a new type of service provider to emerge: Global logistics provider.

C. Characteristics of A Forwarder As A Global Logistics

Provider: What is logistics? According to The Council of Logistics Management, logistics is part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point of origin to the point of consumption in order to meet customers' requirements.³²

Regardless of size, few organizations are prepared to divert funds from their core business to establish a global system of supply chain management. Yet for companies heavily dependent on the timely movement of merchandise and other items from one part of the world to another, there is a critically important need for orderly logistics and transportation system. In order to offer their clients the maximum flexibility in the solutions, forwarders are forced to establish a strong service network with some of the major

³² Council of Logistics Management, Logistics Research Group at Ohio State University, "CLM-Logistics Definition", 1999, available from Internet Explorer 5.0 @ <http://www.clm1.org/mission/logistics.asp>

carriers and partners. These close working relationships complete an already comprehensive service demand chain management portfolio. This way forwarders can offer the size, the resources, the personnel, the market presence and the experience to meet this need. It is very obvious that today's modern forwarder must have a globally interconnected data processing and communication systems which enable them to monitor the status of the shipments at every step along the way. This gives the customer full transparency as well. Moreover, in today's global shipping environment, uncertainty and guesswork about the status of any given shipment is absolutely not acceptable.³³

Labeled global connection or globally visible forwarding, any forwarder who desires a good share in the market must first succeed at this task. Because the world's economy improves with each passing year, and the moving of products from point A to point B has become a standard way of doing business for many companies, globalization and its requirements have gained greater importance, as well.

Some of the largest forwarders have already come to understand the critical function of global logistics by

³³ Mercantile, Services/Air Freight, 1999, on-line available from Internet Explorer 5.0 @ <http://www.mercantile.dk/services/air-freight.htm>

establishing their own individual, independent divisions. In addition to the conventional air and ocean operations departments, these forwarders have also implemented a new department or division in connection with the other departments and offices both locally and globally.

Being a global logistics provider requires more than being just a standard forwarder. Forwarder will need to be affiliated with different assets such as trucks and planes and have to utilize and operate them efficiently. Also, acting as an integrator of material, transportation management services and information is required in order to provide best-of-breed solutions for the clients. Only those who manage large-scale logistics operations can easily secure more business with the major clients such as automotive manufacturers, leading aerospace firms, and telecommunication enterprises. The focus brings practical industrial experience and hands-on management of the customers' global supply-chain requirements. Moreover to this, information-based supply-chain tracking system helps to increase the service level of the forwarder. Integrating customized transportation, distribution, inventory control and logistics management services are very critical as well. They must be also designed to meet the growing demand for broad customer solutions in the global marketplace. These services

always add value and give the customer a greater competitive edge by acting as an integral partner to facilitate outsourced operations and to assist their business objectives. Combining the flexibility to create customized programs with the financial means and operational expertise can also help a forwarder to be a good global logistics provider. Main services of a standard global logistics provider should include the following:

- Finished Goods Inventory (FGI) distribution
- Just-In-Time (JIT) manufacturing
- Bonded warehousing/storage
- Customs clearance
- Import/export documentation
- Inventory management/scheduling
- Technical services
- Supplier interface management
- EDI links
- Product assembly/reconfiguration
- Order processing³⁴

These logistics services undertake detailed specific evaluation of entire segments or specified links of the customer's supply network, which is modeled to follow:

- Analyzing the physical flow of material through the supply chain under evaluation;
- Flowing the critical information elements moving through the supply chain;
- Using baseline information to compare supply chain performance against industry benchmarks;

³⁴ BAX Global, November 1999, on-line available from Internet Explorer 5.0 @ <http://www.baxglobal.com/services/global.html>

- Performing operational audits to identify potential performance improvements;
- Recommending alternate operating solutions to achieve identified cost savings and cycle time reductions;
- Implementing and managing partial or full physical distribution networks and related management information systems necessary to optimize logistics costs.³⁵

In order to solicit the global service, freight forwarder needs a highly reliable worldwide office network. Forwarders must tend to serve the large multinational companies that are also being global in manufacturing and distribution. Companies with a global system along with a mix of services are always needed. The main reason to this development is that having too much of one type of growth, and service is not enough today. Forwarders must be capable of being integrated quickly into the client's network, and secondly, in some cases, they are also expected to provide some opportunity for growth in a new market for their clients. Business segments such as handling of automotive parts has become truly global in nature, which is why the forwarders enjoy having such clients.³⁶ Companies with good management, a stable customer base and a strong market niche represent precisely what global forwarders need; by blending the best of these companies into their existing

³⁵ Ibid.

³⁶ Chris Gillis, The Changing World Of Freight Forwarding, "American Shipper", Oct 1996 v38 n10 p49(9)

network, global forwarders can strengthen their leadership position in one-stop, integrated global logistics services. Combining a selective acquisition with well-managed internal growth is critical to staying ahead of the pack in this increasingly competitive business.³⁷

Global logistics does not necessarily mean global integration, even though the whole idea behind this formation is to be able to serve global customers; indeed, it requires a variety of services and more expertise than the regular daily operation. With company-owned warehouses that focus upon distribution, consolidation and order fulfillment, forwarders must manage to maintain a client in Canada, for example, that produces a product in East Europe. With this global approach, the forwarder can arrange for the factory pickup in production site in Romania and bring it to its East Coast facility for picking and packing, at which point the order is then delivered to the client's customers in the United States.³⁸ This way the forwarder can meet all service requirements of the customer by adding extra value to its service.

In global logistics, the operation has two places of action: Origin and destination. In addition to services in

³⁷ Ibid.

³⁸ Ibid.

origin country, today's demanding multinational importers have also forced the forwarders and global logistics providers to establish and strengthen their services at the destination, inasmuch as the main idea of forwarding is to be able to securely move the product to its final destination. Indeed, this is where the expertise of destination based global logistics companies' starts, which may include the following:

Stripping / Deconsolidation: This service provides destination distribution services by stripping/deconsolidating container loads of product and distributing them throughout the destination country by way of truck or rail, based upon the importer's specific instruction. The benefits importers may experience from this type of service are considerable:

- Increased flexibility, postpones the distribution decisions to a point further along the customer's supply chain and closer the distribution center or retail stores.
- Improved cycle times, integrate the workflows, and reduce handling time while minimizing the points of distribution.
- Reduced costs, lower the cost of carrying excess inventory while increasing the customer's retail space.
- Increased visibility to the merchandise, continuously monitors the merchandise in inventory and in route through global information network.³⁹

³⁹ ACS Logistics, Destination Services, 1999 available from Internet Explorer 5.0
@<http://www.acslogistics.com/services/destination.html>

This service can be enhanced through bar code scanning, purchase order (PO) information, real time Electronic Data Interchange (EDI) or through Internet tracking tools, all of which will be explained in the following chapter.

These destination services have developed in such a way that the global logistics provider can receive the customer's full container load (FCL) of merchandise, discharge the container, store the products and then replenish the customer's inventories throughout the destination country.

As companies re-engineer their global enterprises, they are taking a long, hard look at their warehousing and distribution expenses. For many, outsourcing these non-core activities to a third-party specialist makes good strategic sense.

Assembling an extensive distribution center network, which consists of dedicated facilities in addition to existing warehouse capabilities must be forwarders new objectives. This idea truly improves global warehouse and inventory management system, which can take full advantage of bar code and radio frequency data input. Implementing this system is not easy. However, this distribution centers can be supported by its computer systems and professionals trained in all areas ranging from picking and packing to light assembly. It will

move aggressively to add new capabilities as the following demand warrants.

- Cross docking
- Bar-code and labeling
- Bonded facilities
- Duty deferment
- Inventory Control
- Accounting activities
- Storage
- Pick and Pack
- Documentation
- Commercial invoice
- Packing list
- Light manufacturing
- Assembly
- Customizing orders
- Localization
- Order Processing
- Reverse logistics
- Return and repair
- Environmental issues
- Radio frequency connect
- Stock location and productivity
- Management reporting
- EDI
- Flexibility⁴⁰

Many kind of freight forwarders have been presented, along with the way in which they specialize. It is now up to the importer or exporter to chose one for the security of their international shipments. However, this does not mean that a company must use only one freight forwarder, being that

⁴⁰ AEI "Warehousing&Distribution", 1999 on-line available from Internet Explorer 5.0 @ <http://www.aeilogistics.com/wd.html>

the company's demand and how any particular forwarder can meet these requirements help to determine the utilization of any single freight forwarder. There exist many market options in addition to a number of companies that make these options available. Therefore, before selecting the freight forwarder, it is always imperative for both exporters and importers to predict the most efficient way of shipping their goods.

Failure to choose the proper mode and service provider can most likely cause the buyer to initiate an order cancellation.

CHAPTER 4

Contemporary Tools of a Competitive Freight Forwarder

The most important issues in today's shipping and forwarding industry are time and accuracy, and example of which would be how the ocean and air carriers have already replaced the older ships and aircrafts with newer and faster models. On the other hand, the logistics solution providers -- like freight forwarders -- have only one thing to improve: Service.

Today's highly sophisticated and competitive market makes it as important to move the information as it is to move the cargo.⁴¹

This chapter will focus upon information technology as it becomes one of the most important and crucial elements of the industry, as well as other relating developments.

A. Information Technology

Since forwarding is a very competitive business with so

⁴¹ Scanwell Freight Express, EDI Capabilities/Scantrac, 1999, available from Internet Explorer 5.0 @ <http://www.scanwellintl.com/edi.htm>

much competition, customers have also been very demanding by asking for the following: Cheaper rates; credit terms of 30 or 60 days, global coverage, improved, quicker, and more reliable routing, 100% complete shipments, 100% error free service level in documentation, Saturday service and Information Technology. Since the term logistics represents the management quotient of any operation's details, it is important to consider the fact that the components of logistics information systems for freight forwarders are such to require constant and regular revision.⁴²

Information visibility and availability pertaining to their shipments is the first priority to almost all exporters and importers; because of this, any forwarder who fails to provide customers with technological and electronic service cannot survive in this volatile business.

According to Ted Scherck, the successful forwarder should be able to change colors when necessary. A really good forwarder is a chameleon. It has the flexibility to react to whatever a shipper needs.⁴³

⁴² Andrew A. Greenstein, E-mail to author, Jan 2000

⁴³ Marcia Jedd, "Taking a Stand. (popularity of freight forwarding)", Distribution, July 1996 v95 n8 p68(2)

Pure freight forwarders - those without their own aircraft - or any other extra services are losing to their aircraft-owning counterparts, the integrated express carriers, in terms of actual numbers of shipments, volumes and revenues. Analysis by the Colography Group reveals that non-integrated forwarders have lost considerable market share to integrators over the years.⁴⁴ Domestically, forwarders have all but relinquished command to integrators and are slowly but steadily losing share in the international arena as well.

According to a survey by Ohio State University's Logistics Research Group, the advantage of combining information technologies with logistics is most felt when corporations such as the Limited, FedEx, and Wal-Mart move large volumes of merchandise with great efficiency.⁴⁵ Future advances in information systems, software and databases, as well as the expanded use of EDI, bar-coding and tracking promise even greater efficiencies.⁴⁶ Information technology remains the most important factor in the growth of corporate

⁴⁴ Ibid.

⁴⁵ Council of Logistics Management, Logistics Research Group at Ohio State University, "CLM-1998 Career Patterns", 1998, available from Internet Explorer 5.0 @ <http://www.clml.org/survey/1998/1998.asp>

⁴⁶ Ibid.

logistics. Though much of the benefit from the union of logistics and information technology is yet unrealized, information technology will be a key technology in the growth of supply chain management and logistics. Logistics career patterns are stable and the functional responsibilities of logistics executives are unchanged. Both the distributions of respondents by industry group and by manufacturing or merchandising capabilities remain the same.⁴⁷

For the most part, the majority of information technology systems take place at the stations, where receipt of goods is made at the origin warehouses or terminals. Systems operate with the purchase order (PO) and stock keeping unit (SKU), which are received from customers via electronic data interchange (EDI).⁴⁸

1. EDI:

According to Trade Compass, EDI, Electronic Data Interchange, is the term used for the exchange of structured data between the computer systems of trading partners and it

⁴⁷ Ibid.

⁴⁸ Mercantile, The Technology/MODS, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/technology/mods.htm>

is frequently used as an electronic replacement for traditional trading documents such as the order of invoice, or packing list but as EDI applications are developed in finance, administration, and health care, a wider view must be taken as to what constitutes trading relationships and trading documents.⁴⁹ In essence EDI is being considered for the exchange of most structured data between originators and recipients of such information. The use of 'structured data' refers to a precise, recognized and accepted method of assembling data. Such data itemizes as item code, customer reference, delivery point and unit price and all come together to form a purchase order or invoice for example. EDI should not be confused with electronic mail where data may be transmitted in the form of an ad-hoc enquiry, containing no recognized form. EDI helps business to send or gather information between trading partners. For instance, standardization can be made for quote, purchase orders invoices, and specific industry specific documents.⁵⁰

Following is another good example of how EDI is used in the shipping industry:

⁴⁹ Trade Compass, 1999, available from Internet Explorer 5.0 @ <http://www.tradecompass.com/cgi-bin/search/searchone?query=dei%>

⁵⁰ Ibid.

With its exchange of business documentation in a standard, machine-processable format, EDI bypasses the time-consuming, manual processing of international data. Integration of systems by EDI opens the door to other new applications, including bar code scanning and supply chain management systems. The operational systems send information by EDI directly to the shipper or receiver. They also receive information such as bookings from vendors, shipping instructions and arrival notices directly via EDI. EDI offers management an unprecedented visibility.⁵¹

2. Internet Web Site Tracking and Tracing:

The technological revolution has brought with it a great deal of beneficial advancements for mankind; the most important developments of all have been that of the computer, and Internet.⁵²

This new state-of-art tool is considered to be one of the most powerful features of the modern freight forwarder, users and customers are able to view shipment status through various stages by using Internet Web sites tracking and tracing system. This effective process includes initial and final trucking as well as intermediate carrier stages; timestamps

⁵¹ Mercantile, The Technology/EDI, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/technology/EDI.htm>

⁵² Andrew A. Greenstein, E-mail to author, Jan 2000.

and personal identifications ensure the data integrity and compliance with quality management standards.⁵³

FedEx assumed leadership status with regard to package shipments, taking the level of service one step further. The company's Web site offers a good example of how to turn the Web's power to one's advantage. In the past, one had to track a FedEx package by phone with a company operator. Today, however, customers are able to accomplish the same task by themselves from the company's Web site, which now boasts an impressive global tracking feature accessible with nothing more than the package's airway bill number, date and destination. The site quickly returns a running chronology of where the package is and where it's been, including information regarding when the package left its origin, if and when it was received, and who has signed for it. In short, the site provides customers with all the information they need to confirm that their package has safely reached its destination or that a delivery is on the way to them. The newest component of the FedEx system allows one to tap into this powerful business tool without even utilizing the Web. In that all one has to do is send an e-mail note to track@fedex.com that

⁵³ AEI Logistics Information Systems: Global Track & Trace, 1999, available from Internet Explorer 5.0 @ http://www.aeilogistics.com/ls_3.html

includes the word airbill, followed by a space and the tracking number (i.e. airway bill number). When the package reaches its destination, the customer is sent a return e-mail message with delivery details. Therefore, whether sending almonds to Albania or zithers to Zimbabwe, the customer will know that the shipment arrived on schedule.⁵⁴

The power of Internet is not only being used by most forwarders but also by the Less-than Truck Load (LTL) carriers, who offer a variety of Internet services designed to save shippers time and money. Inasmuch as the Internet has opened up an entirely new marketing tactic, in many cases, shippers can simply go to a carrier's Web site and do the following:

- Receive generic or customer-specific rate quotes.
- Request shipment pick-up; send origin, destination, and other shipment information; or schedule a pick-up time.
- Complete and transmit bills of lading.
- Trace and track shipments. Shippers also can retrieve delivery information and shipment status by a variety of reference numbers, including carrier pro number, shipper bill-of-lading number, or purchase order number.

⁵⁴ Brian Nadel, " Where is that FedEx package? (Federal Express has Web page for tracking packages) PC Magazine, Nov 19, 1996 v15 n20 p73(1)

- Receive automatic e-mail notices of critical events, including delivery confirmation or notification of possible delays.
- Communicate electronically with all parties connected to a shipment, from sales through to accounts receivable.
- Retrieve information on the status of loss-and-damage claims.
- Make electronic freight payments. When triggered by a delivery confirmation, the payment process bypasses the need for invoicing.
- Retrieve documents. Shippers can view and retrieve delivery receipts, signed bills of lading, packing lists, and other documents connected to shipments.
- Produce carrier report cards. Shippers also can download and manipulate batches of shipment information based on price, on-time percentage, claims, or other measurements used to track carrier performance.⁵⁵

The benefits and capabilities of the Internet Web sites based communications are endless; therefore, almost all major steamship lines, ocean carriers, trucking companies, NVOCC, airliner and -- more importantly -- both air and ocean freight

⁵⁵ Jim Thomas, "Cyber carriers," Logistics Management & Distribution Report, 04/01/1999 Transportation Spotlight

forwarders have been using these features to better serve their customers. Best of all, this service is free of charge.

B. Supply Chain Management:

Supply chain management is simply the planning, execution and management of goods and information flow from the point of development and purchasing, production and distribution, and finally to the customer.⁵⁶ The objectives are to ensure that the right product reaches the right place at the right time with the lowest possible overall cost. This particular method is utilized as a means by which to manage each individual order throughout the supply chain process, as well as to ensure minimized inventory and on-time delivery reliability at the client's destination.

One can be relatively confident using this type of service when transporting important, high value cargo for very demanding customers. Supply chain management allows buyers to be very proactive and have full control over the freight, as the visibility of goods is considerably higher than the conventional shipping methods. Customers will be paying a little more for this kind of value-added service; however, they will receive hassle free, virtually visible transactions

⁵⁶ Mercantile, Services/SCM, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/services/scm.htm>

that is tamper-resistant. The system provides the flexibility to respond quickly to product demand changes, to substantially reduce inventory in the supply chain process and to shorten the replenishment cycle by reduced lead times.⁵⁷ Moreover, the importers and buyers can also benefit by having total order costs visible from the time the order is placed until delivery and sale. Research has shown that total logistics costs can represent up to 36% of a product's retail price, and that major economic gain can be achieved through efficient supply chain management.⁵⁸

1. Bar Code Scanning:

Buyers or the ultimate consignees usually experience a number of problems with regard to bar code scanning, including the fact that they do not have supply chain visibility upon merchandise which was loaded directly by the factory, because the cartons were not bar code labeled and not scanned. Similarly, there is also no visibility through either EDI or general communication tools, which presents the buyer with a

⁵⁷ Mercantile, Services/Services, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/services/services.htm>

⁵⁸ Ibid.

significant handicap when it comes to last minute supply-chain distribution decisions.⁵⁹

In order to find a solution, bar code scanning must occur at the vendors' factories. Forwarders have been using bar coding and bar code scanning to provide the customers with the kind of inventory information they need to make decisions even before products arrive at their distribution centers. Until now, those products passed through the same forwarder's warehouse docks in order to be scanned; today, however, these systems allow vendors to create, apply and scan bar-coded labels containing packing list information, which is then electronically uploaded to forwarder's database where consignees can view it either in their own merchandising and inventory systems, via EDI or via forwarder's Internet-based shipment and purchase-order tracking systems.

Generally, bar code scanning systems work as follows:

- Through the forwarder's global information network, the vendors receive the Purchase Orders electronically.
- Individual products' labels are scanned as the merchandise is packed into cartons.
- Carton labels are printed right at the factory and applied to the cartons.
- The cartons are scanned and the data passed to forwarder. A factory "On-hand" report transmitted to the buyer so that they can monitor production progress

⁵⁹ ACS Logistics, ScanFact, 1999, available from Internet Explorer 5.0 @ <http://www.acslogistics.com/scanfact.html>

on a specific purchase order, via EDI, or the they can access the same information through Internet web site of the forwarder.

- Cartons are loaded into containers and the container numbers are linked to the cartons to provide the key information required for shipment and purchase order monitoring.
- Once the vendor delivers the containers to the ocean carriers terminal, and the ship sails, the forwarder will send a final notice.
- Once all the documents are collected, the forwarder will distribute them according to customer's specific requirements.⁶⁰

Clearly, bar code scanning helps customers manage their information and inventory in an error free way.

C. Other Special Services:

1- There exist a number of special services offered by modern freight forwarders, which aid in the overall process of transporting products from point A to point B. Some of those include export and import customs clearance; supplier management; pick and pack operations; hanging garments; shrink wrapping; slip-sheeting; warehousing; demand chain management; container pickup and delivery; complete insurance coverage; and consolidated invoicing.⁶¹

⁶⁰ Ibid.

⁶¹ Mercantile, Services/Groupage, 1999, available from Internet Explorer 5.0 @ <http://www.mercantile.dk/company/services/htm>

2- Business Logistics Services (BLS): It provides unique integrated logistics management services that, based upon client needs, can span multiple transportation and distribution functions, with the company's being to design and implement innovative solutions that meet the clients' logistics requirements. BLS accomplishes this through use of advanced analytical tools, quality practices, process management techniques, global distribution expertise, information technology, and affiliated service providers. In this role, BLS adds strategic and economic value to clients' supply chains. BLS provides contract logistics services for both domestic and international shippers including:

- Transportation management,
- Order management,
- Rail car fleet management,
- Less Than Truckload (LTL) consolidation,
- Trailer routing,
- Distribution management,
- Carrier performance management, and
- Tracking and tracing.

BLS works to identify supply chain improvement opportunities and then designs tailored solutions that effectively address:

- Network optimization,
- Process design and re-engineering,
- Global supply chain modeling,
- Optimal mode analysis,
- Transportation routing and private fleet analysis,
- Consolidation and de-consolidation studies, and

- Equipment utilization.

These efficiencies include matching truck/rail movements in order to maximize round trips and/or continuous moves for carriers resulting in lower transportation costs for all clients, a concept that has been successfully applied to truckload, LTL and box car shipments. BLS serves a broad range of logistics clients, ranging from Fortune 100 companies to small and medium-sized companies, where the client represents a variety of industries such as chemicals, automotive, food and beverage, electronics and retail.⁶²

3- Vendor consolidation service: This is another unique service implemented by forwarders as a means by which to strengthen their customer portfolio and sales activities. As the world's economy develops globally, companies and individuals can now transmit information around the world using the latest technological equipment. However, it is still difficult to determine exactly when an overseas order will be ready to ship to the United States.⁶³ As companies have begun

⁶² ACS "Logistics, Transportation Services," 1999 available from Internet Explorer 5.0 @ <http://www.acslogistics.com/services/transportation.html#bls>

⁶³ Toby B. Gooley, Vendor Consolidation Services Bridge the Gaps, Traffic Management, Nov 1995 v34 n11 p59A(3)

to treat importing as one segment of the supply chain -- rather than merely an isolated activity -- a continuous flow of information has become absolutely vital. Hence, some importers have found a way to satisfy their need for information, as well as help them take control of shipments before they even leave the factory and according to the director of sales in an international company, the key to success for those companies is to tie the import process into their domestic logistics system.⁶⁴ Without that capability, companies end up making domestic distribution decisions after merchandise has arrived. That almost guarantees inefficient use of warehouse space, order backlogs, late deliveries, and plenty of last-minute crises. To make that connection between international and domestic distribution, more importers have teamed up with logistics-management companies that track, expedite, consolidate, and ship merchandise at both origin and destination, providing detailed information all along the way. These companies -- known as vendor consolidation services -- may be affiliated with ocean carriers, freight forwarders, or customs brokers or they may be separate, independent firms. They generally are referred to as consolidators, and although they do consolidate freight on behalf of importers, today they

⁶⁴ Ibid.

offer their customers many other services. In the vendor consolidation service concept consolidators work on behalf of a buyer in the United States, consolidating shipments from multiple vendors, packing them in containers, and shipping them to the buyer's distribution centers or even to the buyer's customer.⁶⁵

One of the revolutionary aspects of vendor consolidation services is that they perform many of the tasks associated with transportation-service providers, but they provide information in a way that is relevant to importing rather than to transportation. Importers want to be able to track their order and shipment in every case; because of that feature, this system allows importers to follow purchase orders from A to Z just like in supply chain management.

4- Third Party Logistics Solutions and Cost Savings Services: These services provide a commitment to help clients minimize freight costs, with many of their fees being tied directly to the substantiated client savings that they generate. In essence, they make money by saving the customers money by providing the following services:

I- Reduction of Transportation Costs:

1. Discount Negotiations

⁶⁵ Ibid.

2. Mode Selection
3. Consolidation/Distribution Studies
4. Shipping/Receiving
5. Department Studies
6. Private Fleet Studies
7. Overcharge Claims Handling
8. Loss and Damage Claim
9. Handling

II- Traffic Monitoring Systems:

1. Gathering and Correlation of Shipment Data
2. Computer Generated Traffic Reports and Recap
3. Analysis of Traffic Patterns
4. Carrier Surveillance of Service Performance Reports

III- Preliminary Traffic Studies:

1. Interviews with Selected Management Personnel
2. Quantitative Recap of Traffic Data
3. Qualitative Analysis of Traffic Patterns
4. Analysis of Cost Reductions
5. Shipping/Receiving
6. Department Studies
7. Formal Reporting of Observations
8. Recommendations⁶⁶

In today's business environment one can readily observe how new technology has advanced along with the economic and social trends. As a result to this, now companies and individuals can transfer information around the world using the latest computer and telecommunications equipment. Among

⁶⁶ Traffic Management Services, "Profile", on-line available from Internet Explorer 5.0 @ <http://www.tms-alma-mi.com/profile.htm>

others, shipping and forwarding industry has started taking advantage of these advanced technology and new tools.

Significantly, the power of computers and Internet as well as other advanced tools have already taken their places even in the freight forwarding and shipping business. These new tools also have proved that they are here to stay as long as the business runs.

CHAPTER 5

Contemporary Applications of Information Technology Systems
and Their Proven Positive Effects

Information Technology Systems (IT) and Management

Information Systems (MIS) have become gradually more important as electronics business and computerization continues to develop. Indeed, consumers have come to appreciate the speed of technology along with the convenience of having the computers work for them. When shipping -- one of the oldest businesses -- is combined with the newest technology -- IT -- what transpires is the most advanced applications ever experienced in the transportation business. Shipping activities are experiencing millions of important data being exchanged and transmitted at the speed of seconds because of the coupling. Although it might sound a bit complicated, the result is extraordinary. Being able to send and receive crucial shipment information is now as easy as a key stroke or mouse click. Moreover, this great convenience has created so many benefits to both exporters and importers, as well as retailers and consumers. It makes good business sense, then, that shippers want their domestic and international forwarders

and logistics companies to have their own IT departments workable, reliable and profitable.

This chapter will demonstrate the benefits of MIS and IT Systems in the shipping and forwarding business by showing how these systems help the logistics community to increase their sales. Since these modern techniques are being used by the whole shipping industry, demonstration is going to be within the following sub categories. (A) freight forwarders, (B) general logistics companies and carriers, (C) retailers.

A. Freight Forwarders

Freight forwarders have already started using the advanced technology in their industry. It did not happen only voluntarily but also they have been forced by their customers to do so. Maintaining one's competitive edge through timely shipping, while at the same time being immersed within the local and global marketplace while using new technology not only takes substance and endurance but also an inherent ability to see beyond tomorrow.⁶⁷ Establishing a company's firm grip upon the many shipping variables which are associated with competitiveness is a challenge that forwarders will likely encounter with a mixture of eagerness, anxiety and

⁶⁷ Andrew A. Greenstein, E-mail to author, Jan 2000.

anticipation.⁶⁸ For instance, once any given customer asks to any forwarder to develop an advanced shipment notification system for cargo, which arrives at client's distribution facility, the forwarder must create a system complying with this requirement at once. With only that kind of understanding, system, and commitment can demonstrate that the real partnership between forwarder and customer is established. As in the example, given system can let customers check shipment/delivery status and container contents down to the SKU, color and style level, and then easily download reports into popular spreadsheet applications such as Microsoft Excel.⁶⁹ In close collaboration with the forwarder, customer can begin creating its computerized shipping system, which can provide a near-seamless electronic data interchange (EDI) link between the customer's import-information systems and its production systems. The main goal is to obtain all information pertaining to manufacturing and distribution in one format and location. Particularly important with regard to logistics information technology systems is the issue of

⁶⁸ Heather Todd, E-mail to author, Jan 2000

⁶⁹ ACS Logistics, MCC, 1999, on-line available from Internet Explorer 5.0 @ <http://www.acslogistics.com/MCC.html>

timeliness, a notion that is perhaps one of the most fundamental drawbacks of businesses that rely upon IT systems and MIS technology. In order to stay current with the ever-changing consumer market, forwarder's, and customer's logistics information system must be implemented and manned by those who are on the cutting edge of all industry objectives.⁷⁰

On the other hand, forwarders can seriously help their clients to streamline the movement of freight from the origin country to final destination by implementing some innovative programs, which may attribute a great amount of savings in time and money especially in just a few months. This can be easily stated that saving of \$150,000.00 in seven months is not impossible.⁷¹ Saving customers time and money is not always the case. In some cases, intentionally delaying shipments in order to maximize the efficiency of the customers domestic facilities also means great help to a forwarder's client. Similarly, by using the modern techniques, freight forwarders can also help their clients to save the total cost of shipping as much as 12% by helping their client's lead time

⁷⁰ Heather Todd, E-mail to author, Jan 2000

⁷¹ ACS Logistics, MCC, 1999, on-line available from Internet Explorer 5.0 @ <http://www.acslogistics.com/MCC.html>

to significantly drop as much as 50% as well.⁷²

Third, as the need for third party logistics companies has been accelerated their expertise in consultancy and technology has become crucial to their customers. Their study and research help the companies in both domestic and international business. Conducting a preliminary traffic study requires a great understanding of customer's barriers, and problems. The objective of this kind of fact-finding study is to provide an independent evaluation of the company's physical distribution segment of their supply chain. With correct approach and by using the right tools, traffic policy can be developed and the excessive number of carriers can be reduced to a more appropriate level. By adding some specific monitoring systems in place; the companies can easily began exercising control over all warehouse traffic; systematic cost reductions can be in effect. In general, by using the right solutions, the companies can take control of their physical distribution systems, which suffer when they are neglected. Hiring these independent logistics solution providers on an as

⁷² Ibid.

needed" basis, can give the companies the expertise, which they seek while at the same time reducing the expenditures.⁷³

Most of the import, export companies are concerned about the rising cost of their logistics and they always desire to design a cost reduction program for their traffic. In these complicated logistics problems, only the specialist logistics companies can effectively route this traffic by negotiating a suitable cost reduction program on customer's behalf. In some cases, based on the situations and variables, reducing the number of carriers can increase the efficiency of the warehouse receiving activities. By this method, the personnel can dedicate more time to their main responsibilities, and less time to waiting for unnecessary carriers throughout the day.⁷⁴

An international shipper may be lack of logistics strategies to determine whether or not a shipment is urgent and worth extra freight charges. This happens when transportation mode is selected wrongfully. To avoid such problems, it can be helpful to increase (rather than decrease) the number of carriers and this can lead to increased

⁷³ Traffic Management Services, "History", on-line available from Internet Explorer 5.0 @ <http://www.tms-almami.com/history.htm>

⁷⁴ Ibid.

efficiency, better transportation service, and overall cost reductions. In general, applications of all these methods and theories can easily result in a reduction of net freight costs of over millions of dollars.⁷⁵

Delivery time has become one of the biggest problems of the forwarders, and their clients. However, to manage the delivery time is not as difficult as it seems. It can be achieved when the proper methods and theories are used. For instance, in order to reduce delivery time from one week to three days, there is only one theory, which stays on efficient operations and services such as:

- Replenishing the central warehouse from factories to more proper locations.
- Proper receiving, identifying and handling of incoming palletized products.
- Storage, stock control, co-packing of displays and promotional items.
- Order handling, preparing pick route planning.
- Dispatching goods for distribution within the network or direct delivery.
- Long-distance trucking.
- Final delivery via transshipment point.
- Accepting returned goods or customer rejections.⁷⁶

⁷⁵ Ibid.

⁷⁶ Danzas-Logistics. Consumer Solution, 1999, on-line available from Internet Explorer 5.0 @ www.danzas.com/units/cons.cfm

One can readily observe that once these services are established, reduction on the delivery time becomes a normal result which is really priceless for the forwarders and their customers.

B. General Logistics Companies and Carriers

It is clearly realized that information technology can reduce operating costs for both shippers and carriers. With paper-based systems, for example, a carrier may spend \$1.25 to generate and send an invoice.⁷⁷ The shipper then incurs administrative costs in processing and storing copies of the documents. If the carrier sends the invoice via EDI, by contrast, the cost drops below 10 cents per transaction.⁷⁸ The Internet could offer even greater savings by reducing reliance on the third-party value-added networks required for traditional EDI transactions.

Of all the electronic services being offered, shipment tracking is the most-frequently requested function. Visibility of freight is extremely important to the customers of the carriers. The tremendous increase of new users to the World

⁷⁷ Jim Thomas, "Cyber carriers," Logistics Management & Distribution Report, 04/01/1999 Transportation Spotlight

⁷⁸ Ibid.

Wide Web in the past few years has contributed to improving demand for electronic services. According to a survey conducted by USF Holland of over 1,400 customers, it is made very clear that over the couple of years, the Internet would begin to replace the human interface between shipper and carrier.⁷⁹ Mostly smaller customers take advantage of our Web sites. Customers who use the tracking capabilities, in many cases get information quicker than some of the larger customers that use traditional EDI. Internet messaging also may supplant some of the services provided by third-party value-added network providers for EDI transactions, further reducing transaction costs. It is now being planned to send EDI transmissions over the Internet. Customers do not want to pay a provider for every EDI transaction when it can be sent over the Web for free. In addition, Web sites have become an effective means to advertise to smaller customers that would traditionally use small-package carriers. Internet is another medium that gives customers more choices and reasons to do business with the carriers who provide this service. Customers may request information based on a pro number, shipment number, bill-of-lading number, a shipment date, or other information.

⁷⁹ Ibid.

Internet is the most visible technology employed by motor carriers. But carriers are using advanced technology for other aspects of their operations as well; for example carriers use the information system to build databases that identify customers and their practices in a number of industry segments. Then they must be able look at an industry, identify its characteristics, and then develop services to match that industry's needs. The program may determine, for example, that two or more shippers are delivering loads to a single consignee. By consolidating the shipments into one trailer, instead of making separate deliveries, carrier reduces its costs and passes savings along to the customer as well.⁸⁰

C. Retailers

Retailers who are growing rather quickly, by adding new products to their line must use their superior logistics capabilities as a key part of their growth strategy. Then, they must develop the kind of logistics capabilities that make it easy for their customers to do business with them. A steady, reliable supplier means that their customers can bring

⁸⁰ Jim Thomas, "Cyber carriers," Logistics Management & Distribution Report, 04/01/1999 Transportation Spotlight

inventories way down, and spend much less time and energy on managing supply.

Recently, the computerization has moved from the restriction of industry well into the mainstream of society, providing a vast array of resources just a mouse click away and one of the most promising of all -- for both vendor and customer -- is the concept of online retailing by way of Information Technology Systems (IT).⁸¹ There is virtually nothing that consumers cannot purchase from the Internet which includes numerous services and products such as online banking, airline tickets, automobiles, electronics, jewelry, and even perishables like food, and flowers.

As in any business, there are some criteria which applies to this newly emerged business as well:

"The protection of a business reliant on e-commerce depends upon three elements: 1) access to the Internet, with the ability to reliably reroute traffic, (2) an alternate site with the proper configuration of peripherals, and (3) access to backed up data with the ability to retrieve and restore it rapidly. When any element is missing, the business is at risk."⁸²

⁸¹ Andrew A. Greenstein, E-mail to author, Jan 2000.

⁸² Diane Laux, "Lack of preparedness raising enterprise-wide vulnerability (of computer networks)," Enterprise Systems Journal, vol. 13, (1998): June, pp. 38(3).

The most important advantage of the online retailing with IT system is the convenience with which the merchant can reach out to the consumers 24 hours a day, and 7 days a week, where the retailer set up a shop in a location that everyone worldwide can easily access, moreover no longer is time or location a barrier when it comes to finding one's niche market.

Establishing themselves in the logistics business, retailers must recognize the critical importance of each and every detail associated with the company's product distribution. If the process of distribution works well, it also helps keep costs down for the company, which in turn is passed along to the consumer. In order to make the most profitable business decisions, today's modern companies must be able to respond to their customers' needs in real-time, changing their processes and service delivery mechanisms as the market and their customers' needs change.

It can then be argued that even though the initial economic outlay might be a bit overwhelming, the fact that logistics information systems will effectively serve to launch the retailers even further into the nucleus of their industry.

Fundamentally, the basis of such retail distribution system will be such that customers will require the logistics

information system. Then logistics information system becomes an even more integral component with regard to the company's overall ability to meet the extensive demands.

Visualizing and then implementing the various elements of logistics information system may be the most challenging aspect of the entire procedure for the simple reason that there will be a significantly much more competition to deal with than ever before. Moreover, only the contemporary tools and information systems can be helpful to survive.

Please refer to Appendix for more proven positive effects of Information Technology systems on page 79.

CHAPTER 6

Conclusion

The purpose of this thesis was to explore the new transactions involved in modern freight forwarding industry, effectively exploring the various types of contemporary services available for a freight forwarder.

Many observers believe freight forwarders are being forced to abandon their traditional and conventional services in exchange for more contemporary and newer roles in global logistics operations. In order to be competitive and to survive, freight forwarders have no other choice but to follow this trend. In fact, many freight forwarders have already moved into new information and logistics management, warehousing and consultant services. Clearly, the shipping industry's objective is not to merely move cargo but to also move its information, as well. In essence, the components of the logistics information system are important to the forwarder's overall success, inasmuch as they will help to construct a new vision that will, thereby, enable the company to handle the future demand of its customers.

Furthermore, with the new millennium upon us, computers and digital technology have already assumed their important roles in both the communication and electronic industries, as well as in the shipping and forwarding business. Also proven is the fact that such new and contemporary applications can save the companies significant time and money.

Computers and Internet have been the part of one's daily life. Being that literally hundreds of possible customers are no more than a mouse click away, even some of the larger companies might find it difficult to keep up with consumer demand. Additionally, electronic commerce allows business transactions to occur around the clock. This empowers customers to conduct business with the forwarder's convenience. Even myriad companies have taken the opportunity to display their wares upon the Internet as a means by which to boost sales and reach otherwise unattainable markets. However, this could not be so readily accomplished without the cooperation of shippers and forwarders who transport the products to consumers.

There's a growing recognition in the shipping business that an improved flow of information and the ability to react to a changing supply and demand situation is necessary in order to be a leading forwarder. This naturally requires close

coordination with other service providers and carriers in the fulfillment of a customer's urgent order.

In short, the suggested goal must be electronically linking the entire sales, production, and delivery process into one seamless flow of information across national borders and time zones. Having a global view of logistic movements enables better decision making, reduces costs while providing the means for sharing information among trading partners. This type of visibility and collaboration provides bottom line benefits along with an improved ability to react to customer requirements.⁸³

Moreover, much of the Internet's appeal is its accessibility to large and small shippers alike. For the price of a personal computer, a modem, and an Internet connection, the smallest shipper may schedule pickups, trace and track shipments, and take advantage of other electronic services. Therefore any entity involved with the international or domestic shipping and forwarding is highly suggested to use the power of Internet as much as possible.

However, in this new cycle, one should not turnover full

⁸³ Steven Rabin, "Logistics in the 21st Century", Electronic Commerce World, June 17, 1999 p41-42

control to new digital technology and that the systems have to be controlled in a daily manner. The human element can very well prove to be the one singular drawback to the entire operation, inasmuch as there will be that much more potential for things to go wrong. For instance, a shipper who use generic bills of lading located on any given carriers' Web site must be extremely careful. Indeed, it must be taken into consideration that, the bills or other documents on carrier Web sites are created by carriers and may contain information that may differ from what the shipper expects. This is the main reason why it is strictly suggested that one must review electronic documents as carefully as reviewing regular paper documents.

In conclusion, computerization and Information Technology have now become a crucial part of the freight forwarding industry. Hence, only by coupling information technology and forwarding can the modern freight forwarder progress to new achievements in the market. Thus, companies who are able to take advantage of the potential of computerization will definitely thrive in the near future.

Appendix

"S&S Worldwide decided to implement a bar code based radio frequency warehouse management system. With the wireless warehouse system, inventory accuracy has reached 95% and instead of a four-day turnaround under the old system, S&S ships orders complete in 48 hours. Phoenix Big & Tall had an objective to eliminate erroneous shipments. They automated the order verification process. By bar coding they reduced their pick/pack time by 35%. The RF scanners have cut the time and work force required for inventories by 50%. The Perfect Fit company has developed a showcase of automated warehouse management technologies that includes bar code-based receiving, put away inventory application, shipment verification and labeling, and finally EDI used for receiving purchase orders as well as transmitting advance ship notices."⁸⁴

⁸⁴ Debra Navas, "Technology In The Warehouse", Operations & Fulfillment November/December 1996 p44-46

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