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Airborne Express in 2002

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Introduction

Airborne Inc., which operates under the name Airborne Express, is an air-express transportation company that provides express and second-day delivery of small packages (less than seventy pounds) and documents throughout the United States and to and from many foreign countries. The company owns and operates an airline and a fleet of ground-transportation vehicles to provide complete door-to-door service. It is also an air freight forwarder, moving shipments of any size on a worldwide basis. As of 2002, Airborne Express held third place in the U.S. air express industry, with 9 percent of the market for small package deliveries. Its main domestic competitors are Federal Express, which has 26 percent of the market, and United Parcel Service (UPS), which has 53 percent of the market. There are several small players, including DHL Airways, Consolidated Freightways (CF), and the U.S. Postal Service, each of which holds less than 5 percent of the market share.¹

This case was made possible by the generous assistance of Airborne Express. The information given in this case was provided by Airborne Express. Unless otherwise indicated, Airborne Express and the Securities and Exchange Commission's 10-K filings are the sources of all information contained within this case. The case is based on an earlier case, which was prepared with the assistance of Daniel Bodnar, Laurie Martinelli, Brian McMullen, Lisa Mutty, and Stephen Schmidt. The case is intended as a basis for classroom discussion rather than as an illustration of either effective or ineffective handling of an administrative situation. Reprinted by permission of Charles W. L. Hill.

The evolution of the air express industry and the current state of competition in the industry were discussed in a companion case: Case 29, "The Evolution of the Air Express Industry, 1973–2002." The current case (Case 30) focuses on the operating structure, competitive strategy, organizational structure, and cultures of Airborne Express.

History of Airborne Express

Airborne Express was originally known as Pacific Air Freight when it was founded in Seattle at the close of World War II by Holt W. Webster, a former Army Air Corps officer. (See Exhibit 1 for a list of major milestones in the history of Airborne Express.) The company was merged with Airborne Freight Corporation of California in 1968, taking the name of the California company but retaining management direction by the former officers of Pacific Air Freight. Airborne was initially an exclusive air freight forwarder. Freight forwarders such as Airborne arrange for the transportation of air cargo between any two destinations. They purchase cargo space from the airlines and retail this space in small amounts. They deal primarily with small customers, providing pickup and delivery services in most cities, either in their own trucks or through contract agents.

Following the 1977 deregulation of the airline industry, Airborne entered the air express industry by leasing the airplanes and pilots of Midwest Charter, a small airline operating out of its own airport in Wilmington, Ohio.

EXHIBIT 1**Major Milestones at Airborne Express²**

1946: Airborne Flower Traffic Association of California is founded to fly fresh flowers from Hawaii to the mainland.

1968: Airborne of California and Pacific Air Freight of Seattle merge to form Airborne Freight Corporation. Headquarters are in Seattle, Washington.

1979–1981: Airborne Express is born. After purchasing Midwest Air Charter, Airborne buys Clinton County Air Force Base in Wilmington, Ohio, becoming the only carrier to own and operate an airport. The package sort center opens, creating the “hub” for the hub-and-spoke system.

1984–1986: Airborne is first carrier to establish a privately operated foreign trade zone in an air industrial park.

1987: Airborne opens the Airborne Stock Exchange, a third-party inventory management and distribution service. In the same year, service begins to and from more than 8,000 Canadian locations.

1988: Airborne becomes the first air express carrier to provide same-day delivery, through its purchase of Sky Courier.

1990: The International Cargo Forum and Exposition names Airborne the carrier with the most-outstanding integrated cargo system over the previous two years.

1991: Airborne is the first transportation company to receive Volvo-Flyg Motors’ Excellent Performance Award. *Computerworld* ranks Airborne the “most effective user of information systems in the U.S. transportation industry.” In addition, Airborne receives the “Spread the Word!” Electronic Data Interchange (EDI) award for having the largest number of EDI users worldwide in the air express and freight forwarding industry.

1992: Airborne introduces Flight-ReadySM—the first prepaid Express Letters and Packs.

1993: Airborne introduces Airborne Logistics Services (ALS), a new subsidiary providing outsourced warehousing and distribution services. IBM consolidates its international shipping operation with Airborne.

1994: Airborne opens its Ocean Service Division, becoming the first express carrier to introduce ocean shipping services. Airborne Logistics Services (ALS) establishes the first new film distribution program for the movie industry in fifty years. Airborne also becomes the first company to provide online communication to Vietnam.

1995: Airborne Alliance Group, a consortium of transportation, logistics, third-party customer service operations, and high-tech companies providing value-added services, is formed. Airborne opens a second runway at its hub, which is now the United States’s largest privately owned airport. Airborne also expands its fleet, acquiring Boeing 767-200 aircraft.

1996: Airborne Express celebrates fifty years of providing value-added distribution solutions to business.

1997: Airborne Express has its best year ever, with net earnings increasing three-and-a-half-fold over the previous year. Airborne’s stock triples, leading to a two-for-one stock split in February 1998.

1998: Airborne posts record profits and enters the Fortune 500. The first of thirty Boeing 767s is introduced to its fleet. *The Business Consumer Guide* rates Airborne as the Best Air Express Carrier for the fourth consecutive year.

1999: Airborne@home, a unique alliance with the United States Postal Service, is introduced. It enables retailers, catalog companies, and similar businesses to ship quickly and economically to the residential marketplace. Optical Village is created. Part of Airborne Logistics Services, this new division brings together some of the biggest competitors in the optical industry to share many costs and a single location for their assembly, storage, inventory, logistics, and delivery options.

2000: Airborne announces several changes in senior management, including a new president and chief operating officer, Carl Donaway. Several new business initiatives are announced, most notably a ground service scheduled to begin April 1, 2001. Airborne also wins the Brand Keys Customer Loyalty Award, edging out the competition for the second consecutive year.

2001: Airborne launches ground delivery service and 10:30 A.M. service, giving it a comprehensive, full-service industry competitive capability. Airborne.com launches its Small Business Center, as well as various enhancements to help all business customers speed and simplify the shipping process. Airborne also releases the Corporate Exchange shipping application, simplifying desktop shipping for customers while giving them greater control. Advanced tracking features are added to airborne.com and Airborne eCourier is released, enabling customers to send confidential, signed documents electronically.

Airborne quickly became dissatisfied, however, with the limited amount of control they were able to exercise over Midwest, which made it difficult to achieve the kind of tight coordination and control of logistics that was necessary to become a successful air express operator. Instead of continuing to lease Midwest's planes and facility, Airborne decided in 1980 to buy "the entire bucket of slop: company, planes, pilots, airport and all."

Among other things, the Midwest acquisition put Airborne in the position of being the only industry participant to own an airport. Airborne immediately began the job of developing a hub-and-spoke system capable of supporting a nationwide distribution system. An efficient sorting facility was established at the Wilmington hub. Airborne upgraded Midwest's fleet of prop and propjet aircraft by buying a modern fleet of DC-8s, DC-9s, and YS-11 aircraft. These planes left major cities every evening, flying down the spokes and carrying letters and packages to the central sort facility in Wilmington, Ohio. There, the letters and packages were unloaded, sorted according to their final destination, and then reloaded and flown to their final destination for delivery before noon the next day.

During the late 1970s and early 1980s, dramatic growth in the industry attracted many competitors. As a consequence, competition became intense, despite a high-growth rate price, forcing several companies to the sidelines by the late 1980s. Between 1984 and 1990, average revenues per domestic shipment at Airborne fell from around \$30 to under \$15 (today, they run at just under \$9). Airborne was able to survive this period by pursuing several strategies that increased productivity and drove costs down to the lowest levels in the industry. Airborne's operating costs per shipment fell from \$28 in 1984 to about \$14 by 1990 (they fell to \$9.79 by 2001). As a consequence, by the late 1980s, Airborne had pulled away from a pack of struggling competitors to become one of the top three companies in the industry, a position it still held in 2002.

Air Express Operations

The Domestic Delivery Network

As of 2002, Airborne Express had 305 ground stations within the United States. The stations are essentially the ends of the spokes in Airborne's

hub-and-spoke system. The distribution of stations allows Airborne to reach all major population centers in the country. In each station are about fifty to fifty-five drivers plus staff. About 80 percent of Airborne's 115,300 full-time and 7,200 part-time employees work at this level. The stations are the basic units in Airborne's delivery organization. Their primary task is to ferry packages between clients and the local air terminal. Airborne utilizes approximately 14,900 radio-dispatch delivery vans and trucks to transport packages, of which 6,000 are owned by the company. Independent contractors under contract with the company provide the balance of the company's pickup and delivery services.

Airborne's drivers make their last round of major clients at 5 P.M. The drivers either collect packages directly from clients or from one of the company's more than 15,300 drop boxes. The drop boxes are placed at strategic locations, such as in the lobbies of major commercial buildings. To give clients a little more time, in most major cities there are also a few central drop boxes that are not emptied until 6 P.M. If a client needs still more time, the package can be delivered to the airport by 7 P.M. so it will make the evening flight.

When a driver picks up a package, he or she uses a hand-held scanner to read a bar code that is attached to the package. This information is then fed directly into Airborne's proprietary FOCUS (Freight, On-Line Control and Update System) computer system. FOCUS, which has global coverage, records shipment status at key points in the life cycle of a shipment. Thus, a customer can call Airborne on a twenty-four-hour basis to find out where their package is in Airborne's system. FOCUS also allows a customer direct access to shipment information through the Internet. All a customer needs to do is access Airborne's web site and key the code number assigned to a package, and FOCUS will tell the customer where the package is currently in Airborne's system.

When the driver has completed the pickup route, she or he takes the load to Airborne's loading docks at the local airport. (Airborne serves all ninety-nine major metropolitan airports in the United States.) There, the packages are loaded into C-containers (discussed later in this case study).

Several C-containers are then towed by hand or by tractor to a waiting aircraft, where they are loaded onto a conveyor belt and they pass through the passenger door of the aircraft. Before long, the aircraft is loaded and takes off. It will either fly directly to the company's hub at Wilmington or make one or two stops along the way to pick up more packages.

Sometime between midnight and 2 A.M., most of the aircraft will have landed at Wilmington. An old strategic air command base, Wilmington's location places it within a 600-mile radius (an overnight drive or one-hour flying time) of 60 percent of the U.S. population. Wilmington also has the advantage of good weather. In all the years that Airborne has operated at Wilmington, air operations have been fogged in on only a handful of days. In 1995, Airborne opened a second runway at Wilmington. Developed at a cost of \$60 million, the second runway makes Wilmington the largest privately owned airport in the country. The runway expansion was part of a \$120 million upgrade of the Wilmington sort facility.

After arrival at Wilmington, the plane taxis down the runway and parks alongside a group of aircraft that are already disgorging their load of C-containers. Within minutes the C-containers are unloaded from the plane down a conveyor belt and towed to the sort facility by a tractor. The sort facility has the capacity to handle 1.2 million packages per night. At the end of 2001, the facility handled an average of 1 million packages a night. The bar codes on the packages are read, and then the packages are directed through a labyrinth of conveyor belts and sorted according to final destination. The sorting is partly done by hand and partly automated. At the end of this process, packages are grouped together by final destination and loaded into a C-container. An aircraft bound for the final destination is then loaded with C-containers, and by 5 A.M. most aircraft have taken off.

Upon arrival at the final destination, the plane is unloaded and the packages are sorted according to their delivery points within the surrounding area. Airborne couriers then take the packages on the final leg of their journey. Packages have a 75 percent probability of being delivered to clients by 10:30 A.M., and a 98 percent probability of being delivered by noon.

Regional Trucking Hubs

Although about 71 percent of packages are transported by air and pass through Wilmington, Airborne has also established ten regional trucking hubs that deal with the remaining 29 percent of the company's domestic volume. These hubs sort shipments that originate and have a destination within approximately a 300-mile radius. The first one was opened in Allentown, Pennsylvania, which is centrally located on the East Coast. This hub handles packages that are being transported between points within the Washington, D.C.–Boston area. Instead of transporting packages by air, packages to be transported within this area are sorted by the drivers at pickup and delivered from the driver's home station by scheduled truck runs to the Allentown hub. There, they are sorted according to destination and taken to the appropriate station on another scheduled truck run for final delivery.

One advantage of ground-based transportation through trucking hubs is that operating costs are much lower than for air transportation. The average cost of a package transported by air is more than five times greater than the cost of a package transported on the ground. This cost differential is transparent to the customer, however, who assumes that all packages are flown. Thus, Airborne can charge the same price for ground-transported packages as for air-transported packages, but the former yields a much higher return. The trucking hubs also have the advantage of taking some of the load off the Wilmington sorting facility, which is currently operating at about 90 percent capacity.

International Operations

In addition to its domestic express operations, Airborne is also an international company providing service to more than 200 countries worldwide. International operations accounted for about 11 percent of total revenues in 2001. Airborne offers two international products: freight products and express products. Freight products are commercial-sized, larger-unit shipments. This service provides door-to-airport service. Goods are picked up domestically from the customer and then shipped to the destination airport. A consignee or an agent of the consignee gets the paperwork and must clear the shipment through customs. Express packages are small packages, documents, and

letters. This service is door to door, and all shipments are cleared through customs by Airborne. Most of Airborne's international revenues come from freight products.

Airborne does not fly any of its own aircraft overseas. Instead, it contracts for space on all-cargo airlines or in the cargo holds of passenger airlines. Airborne owns facilities overseas in Japan, Taiwan, Hong Kong, Singapore, Australia, New Zealand, and London. These facilities function in a manner similar to Airborne's domestic stations (that is, they have their own trucks and drivers and are hooked into the FOCUS tracking system). The majority of foreign distribution, however, is carried out by foreign agents. Foreign agents are large, local, well-established surface delivery companies. Recently, Airborne has entered into several exclusive strategic alliances with large foreign agents. Currently it has alliances in Japan, Thailand, Malaysia, and South Africa. (The rationale for entering strategic alliances, along with Airborne's approach to global expansion, is discussed in greater detail later in this case.)

Another aspect of Airborne's international operations has been the creation at its Wilmington hub of the only privately certified foreign trade zone (FTZ) in the United States. While in an FTZ, merchandise is tax free and no customs duty is paid on it until it leaves. Thus, a foreign-based company may store critical inventory in the FTZ and have Airborne deliver it just in time to U.S. customers. This allows the foreign company to hold inventory in the United States without having to pay customs duty on it until the need arises.

Aircraft Purchase and Maintenance

As of 2001, Airborne Express owned a fleet of 118 aircraft, including twenty-four DC-8s, seventy-four DC-9s, and twenty Boeing 767s. In addition, approximately seventy smaller aircraft are chartered nightly to connect smaller cities with company aircraft that then operate to and from the Wilmington hub. To keep capital expenditures down, Airborne has traditionally purchased only used planes. Airborne converts the planes to suit its specifications at a maintenance facility based at its Wilmington hub. Once it gets a plane, Airborne typically guts the interior and installs state-of-the-art electronics and avionics equipment. The company's philosophy is to get all of the upgrades that it can into an aircraft.

Although this kind of overhaul can cost a lot up front, the payback is increased aircraft reliability and a reduction in service downtime. Airborne also standardizes cockpits as much as possible, which makes it easier for crews to switch from one aircraft to another if the need arises. According to the company, the total purchase and modification of a secondhand DC-9 costs about \$10 million, compared with the cost of an equivalent new plane of \$40 million. An additional factor reducing operating costs is that Airborne's DC-9 aircraft require only a two-person cockpit crew, as opposed to the three-person crews required in most Federal Express and UPS aircraft.

After conversion of the aircraft, Airborne strives to keep aircraft maintenance costs down by carrying out almost all of its own fleet repairs. (It is the only all-cargo carrier to do so.) The Wilmington maintenance facility can handle everything except major engine repairs and has the capability to machine critical aircraft parts if needed. The company sees this in-house facility as a major source of cost savings. It estimates that maintenance labor costs are 50 to 60 percent below the costs of having the same work performed outside.

In December 1995, Airborne announced a deal to purchase twelve used Boeing 767-200 aircraft between the years 1997 and 2000, and it announced plans to purchase an additional ten to fifteen used 767-200s between the years 2000 and 2004. These were the first wide-bodied aircraft in Airborne's fleet. The cost of introducing the first twelve aircraft was about \$290 million, and the additional aircraft will cost another \$360 million. The shift to wide-bodied aircraft was promoted by an internal study, which concluded that with growing volume, wide-bodied aircraft would lead to greater operating efficiencies.

During 2001, Airborne was using about 66.6 percent of its lift capacity on a typical business day. This compares with 76.7 percent capacity utilization in 1997, and 70 percent utilization in 2000. In late 2001, Airborne reduced its total lift capacity by approximately 100,000 pounds to about 4 million pounds a day, in an attempt to reduce excess capacity of certain routes and better match supply with demand conditions.

C-Containers

C-containers are uniquely shaped 60-cubic-foot containers developed by Airborne Express in 1985

at a cost of \$3.5 million. They are designed to fit through the passenger doors of DC-8 and DC-9 aircraft. They replaced the much larger A-containers widely used in the air cargo business. At six times the size of a C-container, A-containers can be loaded only through specially built cargo doors and require specialized loading equipment. The loading equipment required for C-containers is a modified belt loader, similar to that used for loading baggage onto a plane, and about 80 percent less expensive than the equipment needed to load A-containers. The use of C-containers also means that Airborne does not have to bear the \$1 million per plane cost required to install cargo doors that will take A-containers. The C-containers are shaped to allow maximum utilization of the planes' interior loading space. Fifty of the containers fit into a converted DC-9, and about eighty-three fit into a DC-8-62. A C-container filled with packages can be moved by a single person, making it easy to load and unload. Airborne Express has taken out a patent on the design of the C-containers.

Information Systems

Airborne utilizes three information systems to help boost productivity and improve customer service. The first of these systems is referred to as the LIBRA II system. LIBRA II equipment, which includes a metering device and PC computer software, is installed in the mailroom of clients. With minimum data entry, the metering device weighs the package, calculates the shipping charges, generates the shipping labels, and provides a daily shipping report. By December 2001, the system was in use at approximately 9,900 domestic customer locations. The use of LIBRA II not only benefits the customers but also lowers Airborne's operating costs because LIBRA II shipment data are transferred into Airborne's FOCUS shipment tracking system automatically, thereby avoiding duplicate data entry.

FOCUS is the second of Airborne's three main information systems. As discussed earlier, FOCUS is essentially a worldwide tracking system. The bar code on each package is read at various points (for example, at pickup, at sorting in Wilmington, at arrival, and so forth) with hand-held scanners, and this information is fed into Airborne's computer system. Using FOCUS, Airborne can track the progress of a shipment through its national and international

logistics system. The major benefit is in terms of customer service. Through an Internet link, Airborne's customers can track their own shipments through Airborne's system on a twenty-four-hour basis.

For its highest-volume corporate customers, Airborne has developed Customer Linkage, an electronic data interchange (EDI) program and the third information system. The EDI system is designed to eliminate the flow of paperwork between Airborne and its major clients. The EDI system allows customers to create shipping documentation at the same time they enter orders for their goods. At the end of each day, shipping activities are transmitted electronically to Airborne's FOCUS, where they are captured for shipment tracking and billing. Customer Linkage benefits the customer by eliminating repetitive data entry and paperwork. It also lowers the company's operating costs by eliminating manual data entry. (In essence, both LIBRA II and Customer Linkage push a lot of the data-entry work into the hands of customers.) The EDI system also includes electronic invoicing and payment remittance processing. Airborne also offers its customers a program known as Quicklink, which significantly reduces the programming time required by customers to take advantage of linkage benefits.

Strategy

Market Positioning

In the early 1980s, Airborne Express tried hard to compete head-to-head with Federal Express with an attempt to establish broad market coverage, including both frequent and infrequent users. Frequent users are shippers that generate more than \$20,000 of business per month, or more than 1,000 shipments per month. Infrequent users generate less than \$20,000 per month, or less than 1,000 shipments per month.

To build broad market coverage, Airborne followed Federal Express's lead of funding a television advertising campaign designed to build consumer awareness. By the mid 1980s, however, Airborne decided that this method of building market share was expensive. The advertising campaign bought recognition but little penetration. One of the principal problems was that it was expensive to serve infrequent users. Infrequent users demanded the same level of service as frequent users, but Airborne would

typically get only one shipment per pickup with an infrequent user compared with ten or more shipments per pickup with a frequent user. Far more pickups were required to generate the same volume of business. Given the extremely competitive nature of the industry at this time, such an inefficient utilization of capacity was of great concern to Airborne.

Consequently, in the mid 1980s, Airborne decided to become a niche player in the industry and focused on serving the needs of high-volume corporate accounts. The company slashed its advertising expenditure, pulling the plug on its television ad campaign, and invested more resources in building a direct sales force, which is now 460. By focusing on high-volume corporate accounts, Airborne could establish scheduled pickup routes and use its ground capacity more efficiently. This enabled the company to achieve significant reductions in its unit cost structure. Partly due to this factor, Airborne executives estimate that their cost structure is as much as \$3 per shipment less than that of FedEx. Another estimate suggests that Airborne's strategy reduced labor costs by 20 percent per unit for pickup and 10 percent for delivery.

Of course, there is a downside to this strategy. High-volume corporate customers have a great deal more bargaining power than infrequent users, so they can and do demand substantial discounts. For example, in March 1987 Airborne achieved a major coup when it won an exclusive three-year contract to handle all of IBM's express packages weighing less than 150 pounds. To win the IBM account, however, Airborne had to offer rates up to 84 percent below Federal Express's list prices. Nevertheless, the strategy seems to have worked. As of 1995, approximately 80 percent of Airborne's revenues come from corporate accounts, most of them secured through competitive bidding. The concentrated volume that this business represents has helped Airborne to drive down costs.

Delivery Time, Reliability, and Flexibility

Another feature of Airborne's strategy was the decision not to try to compete with Federal Express on delivery time. Federal Express and UPS have long guaranteed delivery by 10:30 A.M. Airborne guarantees delivery by midday, although it offers a 10:30 guarantee to some very large corporate customers. Guaranteeing delivery by 10:30 A.M. would mean

stretching Airborne's already tight scheduling system to the limit. To meet its 10:30 A.M. deadline, FedEx has to operate with a deadline for the previous day's pickups of 6:30 P.M. Airborne can afford to be a little more flexible and can arrange pickups as late as 7:00 P.M. if that suits a corporate client's particular needs. Later pickups clearly benefit the shipper, who is, after all, the paying party.

In addition, Airborne executives feel that a guaranteed 10:30 A.M. delivery is unnecessary. The extra hour and a half does not make a great deal of difference to most clients, and they are willing to accept the extra time in exchange for lower prices. In addition, Airborne stresses the reliability of its delivery schedules. As one executive put it, "A package delivered consistently at 11:15 A.M. is as good as delivery at 10:30 A.M." This reliability is enhanced by Airborne's ability to provide shipment tracking through its FOCUS.

Deferred Services

With a slowdown in the growth rate of the express mail market toward the end of the 1980s, Airborne decided in 1990 to enter the deferred-delivery business with its Select Delivery Service (SDS) product. SDS provides for next-afternoon or second-day delivery. Packages weighing 5 pounds or less are generally delivered on a next-afternoon basis, with packages of more than 5 pounds being delivered on a second-day basis. SDS shipments comprised approximately 42 percent of total domestic shipments in 1995. They are priced lower than overnight express products, reflecting the less time-sensitive nature of these deliveries. The company will utilize any spare capacity on its express flights to carry SDS shipments. In addition, Airborne will use other carriers, such as passenger carriers with spare cargo capacity in their planes, to carry less urgent SDS shipments.

Early in 1996, Airborne began to phase in two new services to replace SDS. Next Afternoon Service is available for shipments weighing 5 pounds or less, and Second Day Service is offered for shipments of all weights. By 2001, deferred shipments accounted for 46 percent of total domestic shipments.

Ground Delivery Service

In April 2001, Airborne launched a ground delivery service (GDS) in response to similar offerings from

FedEx and UPS. Airborne concluded that it was important to offer this service to retain parity with its principal competitors and to be able to offer bundled services to its principal customers (that is, to offer them air, ground, and logistics services for a single bundled price). Airborne also felt that they could add the service with a relatively minor initial investment, \$30 million, because it leveraged existing assets, including trucks, tracking systems, and regional ground hubs and sorting facilities.

The new service has initially been introduced on a limited basis and is targeted at large corporate customers. GDS is priced less than deferred services, reflecting the less time-sensitive nature of the GDS offering. GDS accounted for 1.5 percent of domestic shipments in 2001, and 4 percent in the fourth quarter of 2001.

Logistics Services

Although small-package express mail remains Airborne's main business, the company is increasingly promoting a range of third-party logistics services through its Advanced Logistics Services Corp. (ALS) subsidiary. These services provide customers with the ability to maintain inventories in a 1-million-square-foot "stock exchange" facility located at Airborne's Wilmington hub or at sixty smaller stock exchange facilities located around the country. The inventory can be managed either by Airborne or by customer's personnel. Inventory stored at Wilmington can be delivered utilizing either Airborne's airline system or, if required, commercial airlines on a next-flight-out basis. ALS's central print computer program allows information on inventories to be sent electronically to customers' computers located at Wilmington, where Airborne's personnel monitor prints output and ships inventories according to customers' instructions.

For example, consider the case of Data Products Corp., a producer of computer printers. Data Products takes advantage of low labor costs to carry out significant assembly operations in Hong Kong. Many of the primary component parts for its printers, such as microprocessors, are manufactured in the United States and have to be shipped to Hong Kong. The finished product is then shipped back to the United States for sale. In setting up a global manufacturing system, Data Products had a decision to make: either consolidate the parts from its

hundreds of suppliers in-house and then arrange for shipment to Hong Kong, or contract someone to handle the whole logistics process. Data Products decided to contract, and they picked Airborne Express to consolidate the component parts and arrange for shipments.

Airborne controls the consolidation and movement of component parts from the component part suppliers to the Hong Kong assembly operation so that inventory-holding costs are minimized. The key feature of Airborne's service is that all of Data Products's materials are collected at Airborne's facility at Los Angeles International Airport. Data Products's Hong Kong assembly plants can then tell Airborne what parts to ship by air as they are needed. Thus, Airborne can provide inventory control for Data Products. In addition, by scheduling deliveries so that year-round traffic between Los Angeles and Hong Kong can be guaranteed, Airborne can negotiate a better air rate from Japan Air Lines (JAL) for the transportation of component parts.

International Strategy

One of the major strategic challenges currently facing Airborne (along with the other express mail carriers) is how best to establish an international service that is comparable to their domestic service. Many of Airborne's major corporate clients are becoming more global in their strategic orientation. They are increasingly demanding a compatible express mail service. In addition, the rise of companies with globally dispersed manufacturing operations that rely on just-in-time delivery systems to keep their inventory holding costs down has created a demand for a global air express service that can transport critical inventory between operations located in different areas of the globe (consider the example of Data Products discussed earlier in this case study).

The initial response of FedEx and UPS to this challenge was to undertake massive capital investments to establish international airlift capability and international ground operations based on the U.S. model. Their rationale was that a wholly owned global delivery network was necessary to establish the tight control, coordination, and scheduling required for a successful air express operation. More recently, however, FedEx pulled out of its European ground operations while continuing to fly its own aircraft overseas.

Airborne has decided on a quite different strategy. In part born of financial necessity (Airborne lacks the capital necessary to imitate FedEx and UPS), Airborne has decided to pursue what they refer to as a "variable cost strategy." This strategy involves two main elements: (1) the utilization of international airlift on existing air cargo operators and passenger aircraft to get their packages overseas, and (2) entry into strategic alliances with foreign companies that already have established ground delivery networks. With this strategy, Airborne hopes to be able to establish global coverage without having to undertake the kind of capital investments that Federal Express and UPS have.

Airborne executives defend their decision to continue to purchase space on international flights rather than fly their own aircraft overseas by making several points. First, Airborne's international business is currently 70 percent outbound and 30 percent inbound. If Airborne were to fly its own aircraft overseas, some would have to fly back half-empty. Second, on many routes, Airborne simply doesn't yet have the volume necessary to justify flying its own planes. Third, national air carriers are currently giving Airborne good prices. If Airborne began to fly directly overseas, the company would be seen as a competitor and might no longer be given price breaks. Fourth, getting international airlift space is currently not a problem. While space can be limited in the third and fourth quarters of the year, Airborne is such a big customer that it usually has few problems getting lift. On the other hand, the long-term viability of this strategy is questionable given the rapid evolution in the international air express business. Flying Tiger was once one of Airborne's major providers of international lift. Following the purchase of Flying Tiger by FedEx, however, Airborne has reduced its business with Flying Tiger. Apart from concerns about giving business to a competitor, Airborne fears that its packages will be pushed to the back of the plane whenever Flying Tiger has problems of capacity overload.

With regard to strategic alliances, Airborne currently has joint venture operations in Japan, Thailand, Malaysia, and South Africa. The alliance with Mitsui was announced in December 1989. Mitsui is one of the world's leading trading companies. Together with Tonami Transportation Co., Mitsui

owns Panther Express, one of the top five express carriers in Japan and a company with a substantial ground network. The deal called for the establishment of a joint venture among Airborne, Mitsui, and Tonami. Known as Airborne Express Japan, the joint venture combined Airborne's existing Japanese operations with Panther Express. Airborne handles all the shipments to and from Japan. The joint venture is 40 percent owned by Airborne, 40 percent owned by Mitsui, and 20 percent owned by Tonami. The agreement specifies that board decisions must be made by consensus among the three partners. A majority of two cannot outvote the third. In addition, the deal called for Mitsui to invest \$40 million in Airborne Express through the purchase of a new issue of nonvoting, 6.9 percent cumulative, convertible preferred stock and a commitment to Airborne from Mitsui of up to \$100 million for aircraft financing. Airborne executives saw the Mitsui deal as a major coup, both financially and in terms of market penetration into the Japanese market. The primary advantage claimed by Airborne executives for expanding via strategic alliances is that the company gets an established ground-based delivery network overseas without having to make capital investments.

Organization

In 2001, Carl Donaway became CEO, replacing the longtime top management team of Robert Cline, the CEO, and Robert Brazier, the president and COO. Both had been with the company since the early 1960s. Prior to becoming CEO, Donaway was responsible for airline operations, including managing the Wilmington hub, the package sorting facility, and all aircraft and flight maintenance operations. The philosophy at Airborne is to keep the organizational structure as flat as possible, shorten the lines of communication, and allow for a free flow of ideas within the managerial hierarchy. The top managers generally feel that they are open to ideas suggested by lower-level managers. At the same time, the decision-making process is fairly centralized. The view is that interdependence between functions makes centralized decision making necessary. To quote one executive, "Coordination is the essence of this business. We need centralized decision making in order to achieve this."

Control at Airborne Express is geared toward boosting productivity, lowering costs, and maintaining a reliable high-quality service. These goals are achieved through a combination of budgetary controls, pay-for-performance incentive systems, and a corporate culture that continually stresses key values. For example, consider the procedure used to control stations (where about 80 percent of all employees work). Station operations are reviewed on a quarterly basis using a budgetary process. Control and evaluation of station effectiveness stress four categories. The first is service, measured by the time between pickup and delivery. The goal is to achieve 95 to 97 percent of all deliveries before noon. The second category is productivity, measured by total shipments per employee hour. The third category is controllable cost, and the fourth is station profitability. Goals for each of these categories are determined each quarter in a bottom-up procedure that involves station managers in the goal-setting process. These goals are then linked to an incentive pay system whereby station managers can earn up to 10 percent of their quarterly salary just by meeting their goals with no maximum on the upside if they go over the goals.

The direct sales force also has an incentive pay system. The target pay structure for the sales organization is 70 percent base pay and a 30 percent commission. There is no cap, however, on the commissions for salespeople. So in theory, there is no limit to what a salesperson can earn. There are also contests designed to boost performance. For example, there is a so-called top gun competition for the sales force in which the top salesperson for each quarter wins a \$20,000 prize.

Incentive pay systems apart, however, Airborne is not known as a high payer. The company's approach is not to be the compensation leader. Rather, the company tries to set its salary structure to position it in the middle of the labor market. Thus, according to a senior human resources executive, "We target our pay philosophy [total package—compensation plus benefits] to be right at the 50th percentile plus or minus 5 percent."

A degree of self-control is also achieved by trying to establish a corporate culture that focuses employees' attention on the key values required to maintain a competitive edge in the air express industry. The values continually stressed by top managers at Air-

borne, and communicated throughout the organization by the company's newspaper and a quarterly video, emphasize serving customers' needs, maintaining quality, doing it right the first time around, and excellent service. There is also a companywide emphasis on productivity and cost control. One executive, when describing the company's attitude to expenditures, said, "We challenge everything. . . . We're the toughest sons of bitches on the block." Another noted, "Among managers I feel that there is a universal agreement on the need to control costs. This is a very tough business, and our people are aware of that. Airborne has an underdog mentality—a desire to be a survivor."

Airborne in 2002

The late 1990s and early 2000s were very difficult years for Airborne Express. A combination of weak volume growth (and an absolute decline in 2001); high fuel costs; a switch from premium overnight service to lower-margin deferred services; and strong competition from FedEx and UPS, both of whom had a superior capability to bundle products, pounded the company. After recording record earnings of \$137 million in 1997, Airborne saw its profits slide over the next four years (see Exhibits 2–5 for details on Airborne's financial performance). In 2001, the company lost \$19 million on revenues of \$3.2 billion, even though this number represented an increase from the \$2.9 billion revenues generated in 1997. For years, Airborne's niche strategy had served the company well and allowed it to make a return in a very competitive industry, but now analysts questioned whether Airborne could survive as an independent entity. The company, they said, simply lacked the global scale and scope of its larger rivals.

There was persistent speculation that Airborne would ultimately be acquired by DHL, which is 51 percent owned by Germany's Deutsche Post. DHL had a small position inside the United States but was the largest global shipper of express packages. Acquiring Airborne would give Deutsche Post the U.S. delivery network that it currently lacked to round out the global delivery and logistics business it is building. However, U.S. law currently prevents a foreign entity from owning more than 25 percent of a U.S. airline. Deutsche Post may be able to get around this restriction by using DHL Airways, a U.S.

EXHIBIT 2**Airborne Express Income Statement, 1997–2001 (in \$ millions)**

	Year Ended December 31				
	2001	2000	1999	1998	1997
Revenues:					
Domestic	\$2,850,798	\$2,895,818	\$2,772,782	\$2,712,344	\$2,514,737
International	360,291	380,132	366,342	361,440	397,672
	<u>3,211,089</u>	<u>3,275,950</u>	<u>3,139,124</u>	<u>3,073,784</u>	<u>2,912,409</u>
Operating Expenses:					
Transportation purchased	1,046,954	1,042,541	965,722	944,357	922,885
Station and ground operations	1,067,764	1,055,142	975,669	914,919	858,238
Flight operations and maintenance	557,412	588,582	513,337	477,799	431,474
General and administrative	265,545	258,149	240,089	248,497	234,366
Sales and marketing	90,390	82,512	77,196	71,354	70,346
Depreciation and amortization	208,355	206,406	209,390	184,526	169,845
Federal legislation compensation	(13,000)	—	—	—	—
	<u>3,223,420</u>	<u>3,233,332</u>	<u>2,981,403</u>	<u>2,841,452</u>	<u>2,687,154</u>
Earnings (Loss) from Operations	(12,331)	42,618	157,721	232,332	225,255
Other Income (Expense):					
Interest, net	(19,868)	(23,425)	(17,262)	(12,882)	(27,790)
Discount on sales of receivables	(9,293)	(96)	—	—	—
Other	12,588	4,129	6,929	2,135	—
Earnings (Loss) Before Income Taxes	(28,904)	23,226	147,388	221,585	197,465
Income Taxes	(9,446)	8,940	56,187	84,300	77,393
Net Earnings (Loss) Before Change in Accounting	(19,458)	14,286	91,201	137,285	120,072
Cumulative Effect of Change in Accounting	—	14,206	—	—	—
Net Earnings (Loss)	<u>(\$19,458)</u>	<u>\$28,492</u>	<u>\$91,201</u>	<u>\$137,285</u>	<u>\$120,072</u>
Net Earnings (Loss) per Share:					
Basic					
Before change in accounting	(\$0.40)	\$0.30	\$1.88	\$2.77	\$2.68
Cumulative effect of change in accounting	—	0.29	—	—	—
Net earnings (loss)	<u>(\$0.40)</u>	<u>\$0.59</u>	<u>\$1.88</u>	<u>\$2.77</u>	<u>\$2.68</u>
Diluted					
Before change in accounting	(\$0.40)	\$0.30	\$1.85	\$2.72	\$2.44
Cumulative effect of change in accounting	—	0.29	—	—	—
Net earnings (loss)	<u>(\$0.40)</u>	<u>\$0.59</u>	<u>\$1.85</u>	<u>\$2.72</u>	<u>\$2.44</u>
Dividends per Share:	<u>\$0.16</u>	<u>\$0.16</u>	<u>\$0.16</u>	<u>\$0.16</u>	<u>\$0.15</u>
Performance as a Percentage of Revenues:					
Operating margin	−0.4%	1.4%	5.0%	7.6%	7.8%
Pretax margin	−0.9%	0.7%	4.7%	7.2%	6.8%
Effective tax rate	32.7%	38.5%	38.1%	38.0%	39.2%
Net margin before change in accounting	−0.6%	0.4%	2.9%	4.5%	4.1%

EXHIBIT 3

Airborne Express, Shipment Revenue Statistics, 1997-2001

	Year Ended December 31				
	2001	2000	1999	1998	1997
Average Revenue per Pound:					
Domestic					
Overnight	\$ 2.58	\$ 2.45	\$ 2.42	\$ 2.36	\$ 2.26
Next-afternoon service	3.65	3.61	3.34	3.05	3.03
Second-day service	1.26	1.23	1.24	1.19	1.18
Ground delivery service	0.57	—	—	—	—
100 lbs. and over	0.94	0.94	0.90	0.79	0.81
Total domestic	<u>\$ 2.02</u>	<u>\$ 2.03</u>	<u>\$ 2.03</u>	<u>\$ 1.96</u>	<u>\$ 1.89</u>
International					
Express	\$ 3.78	\$ 3.83	\$ 3.97	\$ 4.02	\$ 4.47
Freight	0.77	0.79	0.82	0.96	1.05
Total international	<u>\$ 1.03</u>	<u>\$ 1.10</u>	<u>\$ 1.17</u>	<u>\$ 1.31</u>	<u>\$ 1.35</u>
Total shipments	<u>\$ 1.82</u>	<u>\$ 1.89</u>	<u>\$ 1.90</u>	<u>\$ 1.85</u>	<u>\$ 1.79</u>
Average Revenue per Shipment:					
Domestic					
Overnight	\$ 9.83	\$ 9.74	\$ 9.44	\$ 9.26	\$ 9.33
Next-afternoon service	6.99	6.63	6.43	6.27	5.86
Second-day service	7.03	7.45	7.49	7.22	7.15
Ground delivery service	5.60	—	—	—	—
100 lbs. and over	176.63	198.24	189.82	163.47	184.74
Total domestic	<u>\$ 8.76</u>	<u>\$ 8.92</u>	<u>\$ 8.76</u>	<u>\$ 8.56</u>	<u>\$ 8.45</u>
International					
Express	\$ 18.48	\$ 19.00	\$ 20.34	\$ 20.72	\$ 21.26
Freight	622.47	607.08	571.04	540.07	592.41
Total international	<u>\$ 57.33</u>	<u>\$ 57.96</u>	<u>\$ 52.05</u>	<u>\$ 56.03</u>	<u>\$ 69.78</u>

EXHIBIT 4**Airborne Express Shipment Volume Statistics, 1997–2001**

	Year Ended December 31				
	2001	2000	1999	1998	1997
Annual Growth Rates:					
Domestic					
Overnight	−8.1%	−0.5%	0.0%	7.8%	18.0%
Next-afternoon service	−4.1%	−3.5%	−3.4%	8.2%	92.5%
Second-day service	15.4%	12.3%	2.6%	2.3%	−11.8%
Ground delivery service	—	—	—	—	—
100 lbs. and over	−15.5%	−3.4%	−19.8%	5.9%	13.8%
Total domestic	0.1%	1.9%	−0.1%	6.6%	16.8%
International					
Express	−4.3%	−7.3%	10.3%	15.2%	16.1%
Freight	−2.5%	0.5%	−8.1%	−8.8%	−11.2%
Total international	−4.2%	−6.8%	9.1%	13.2%	13.2%
Total shipments	0.1%	1.7%	0.1%	6.7%	16.8%
Shipments by Category as a Percentage of Total Shipments:					
Domestic					
Overnight	51.7%	56.3%	57.6%	57.7%	57.1%
Next-afternoon service	15.8%	16.5%	17.4%	18.0%	17.8%
Second-day service	29.0%	25.1%	22.7%	22.2%	23.2%
Ground delivery service	1.5%	—	—	—	—
100 lbs. and over	0.1%	0.1%	0.1%	0.1%	0.1%
Total domestic	98.1%	98.0%	97.8%	98.0%	98.1%
International					
Express	1.8%	1.9%	2.1%	1.9%	1.7%
Freight	0.1%	0.1%	0.1%	0.1%	0.2%
Total international	1.9%	2.0%	2.2%	2.0%	1.9%
Total shipments	100.0%	100.0%	100.0%	100.0%	100.0%

EXHIBIT 5**Work Force and Productivity Statistics**

	Year Ended December 31				
	2001	2000	1999	1998	1997
Labor:					
Number of employees					
Full-time	15,300	16,000	15,200	14,300	13,500
Part-time	7,200	8,100	8,300	8,700	9,000
Total employees	<u>22,500</u>	<u>24,100</u>	<u>23,500</u>	<u>23,000</u>	<u>22,500</u>
Labor Productivity:					
Total salaries, wages, and benefits (in thousands)	\$1,212,122	\$1,189,051	\$1,098,557	\$1,029,180	\$945,562
Labor cost as a percentage of total revenues	37.7%	36.3%	35.0%	33.5%	32.5%
Labor cost as a percentage of operating expenses	37.6%	36.8%	36.8%	36.2%	35.2%
Labor cost per shipment	\$3.68	\$3.61	\$3.40	\$3.19	\$3.12
Labor cost per FTE *	\$ 60,354	\$ 56,781	\$ 53,963	\$ 51,796	\$ 50,100
Shipments per employee hour *	7.9	7.6	7.6	7.8	7.7
Shipments per FTE *	16,394	15,713	15,887	16,258	16,040
Full-time equivalents	20,084	20,941	20,358	19,870	18,874

*Computed on the basis of paid full-time equivalents and employee hours.

airline that is 23 percent owned by DHL, to acquire Airborne Express.

Meanwhile, Airborne went about its business, and in the first quarter of 2002 showed that it may be down but is not yet out. The company surprised analysts by earning a \$5.3 million profit in the quarter (analysts had expected a \$5 million loss). This profit was achieved despite a decline in the volume of overnight deliveries. The key to the performance was the new ground delivery service (GDS), which averaged 92,000 shipments a day, well above the company's own forecasts of 60,000 shipments a day.

Commenting on this performance, one analyst noted that the GDS is the key "to stopping the market share declines in the overnight express business, and it's the key to [Airborne] being more competitive in the bundling of freight services to fight back against FedEx and UPS."³

ENDNOTES

1. Standard and Poor's Industry Survey, Airlines, March, 2002.
2. Source: <http://www.airborne.com/Company/History.asp?nav5AboutAirborne/CompanyInfo/History>.
3. M. Schlangenhein, "Unexpected Delivery from Airborne," *Seattle Times*, April 30, 2002, p. C2.