Case (Field)

Federal Express (B)

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It was one o'clock in the morning at Memphis International Airport. The lights of an approaching aircraft grew brighter as it descended toward the runway, while more aircraft lights appeared in the distant sky. "They'll be landing every few minutes from now on," said Heinz J. Adam to the visitor he was showing around the Federal Express distribution "hub." Adam, Federal's director of marketing administration, was referring to his company's fleet of 32 Falcon jet "minifreighters" that flew into Memphis, Tennessee, every weeknight from all over the country.

Moments later, a small twin-engined jet taxied noisily up to the huge shed housing Federal's distribution center. Painted a brilliant purple, red, and white, the jet rolled to a stop under the arc lights, parallel to a half dozen identical aircraft. Before the pilot had even cut the engines, an electric truck towing a train of small cargo bins emerged from the distribution center and pulled along side. The jet's cargo door was thrown open, revealing a cabin crammed with small packages. While mechanics checked the jet's exterior and an avionics engineer conversed with the captain, a crew of young men went rapidly to work unloading the little aircraft by hand. The unloading was completed within a matter of minutes, by which time another Falcon had parked alongside and been met by a second crew.

Adam led his visitor back inside the busy distribution building, which contained an 800-footconveyor system. Packages were being unloaded from one of the trains, deposited on moving conveyor belts, and sorted according to destination cities. There were boxes in a variety of sizes, large metal cans, cardboard tubes, envelopes, and an occasional sturdy package marked with the distinctive black and yellow symbol for radioactive materials.

"We're carrying 19,000 packages a day now, and have stations in 75 cities throughout the U.S.," said the director. "There's tremendous growth potential ahead for Federal Express, but we'll need to focus our efforts more carefully." He leaned over the conveyor belt and plucked up a large purple, red, and white envelope. "This is what we call a Courier Pak," he said. "You can put anything you like in it up to two pounds in weight, and for $12.50 we'll guarantee overnight delivery anywhere in our system. Right now, we're averaging about 1,300 Courier Paks a day but we've never put any real marketing effort behind it. I see no reason why we shouldn't increase that number to at least6, 000 daily."

The Genesis of Federal Express

Federal Express was the brainchild of Frederick W. Smith, Jr., who at age 27 had incorporated the company in 1971. After combat service as a highly decorated U.S. Marine Corps pilot and two years' successful operation of a business buying and selling used jet aircraft, Smith set about putting into practice a new concept for air transportation of packages. He was convinced that there was significant market potential for a small-package air service, flying primarily at night, on routes that met the needs of freight shippers. Most package airfreight at that time flew on commercial passenger flights.

Smith believed that there were major differences between passengers and packages, and the two required totally different treatment. Most passengers were moving between major business centers and wanted the convenience of daytime flights, whereas shippers needed nighttime service to coincide with late afternoon pickups. Additionally, most people flew round trip whereas any given shipment of goods flew in only one direction.

Consulting firms were retained to study the nature of the market for small-package air service. The resulting reports established that a mere 10% of the airline fleet was flying after 10 P.M. and that over 60% of all airline movements occurred between the 25 largest geographic markets. By contrast, over 80% of small, urgent shipments originated or terminated outside the 25 top markets. The reports also found the number of such shipments to be growing rapidly.

Encouraged by the consulting firms' optimistic growth projections for airfreight, Smith subsequently recruited several of the consultants as officers of the new corporation, and set about raising almost $90 million in financing. This total included his entire personal worth, $8 million from his family, a $40 million equity capital package from six major corporate investors, plus another $40million in bank loans. The privately owned Federal Express Corporation (FEC) thus became the largest single venture capital start-up in the history of American business.

The Federal Express Concept

The company flew small jet freighters over a unique route system, similar to the spokes of a wheel. The hub of this system was a sophisticated sorting facility located in Memphis, Tennessee. Memphis was chosen because it was relatively close to the "center of gravity" of package movements within the U.S.; its airport's excellent weather record also made it a reliable base point.

Aircraft stationed throughout the U.S. left their home cities every weeknight with a load of packages and flew into Memphis, often making one or two stops en route. At Memphis, all packages were unloaded, sorted by destination cities, and reloaded. The aircraft then returned to their home cities in the early hours of the morning. Packages were picked up and delivered within a 25-mileradius of the airport by FEC couriers driving company vans and working to a tight schedule. From door-to-door, the package was in Federal Express hands.

To facilitate handling, Federal Express limited packages to 70 pounds, with a maximum length-plus-girth of 108 inches. In its use of the hub system and limited package size, FEC borrowed heavily from the experience of United Parcel Service (UPS), a successful surface package carrier. Many of the new firm's operations managers were recruited from UPS.

For its fleet, Federal Express settled on the French-built Dassault Falcon, a twin-engined executive jet which FEC converted to a "minifreighter" with a cargo-carrying capacity of 6,200pounds. The use of these small aircraft qualified Federal Express as an air-taxi operator and enabled it to avoid restrictive regulation by the Civil Aeronautics Board.

Operations began in April 1973. Although losses were initially high, the volume of packages increased steadily. In mid-1975, Federal Express passed the break-even point. For the fiscal year ended May 31, 1976, the company achieved a net profit of $3.7 million on revenues of $75 million, after paying $65.3 million in operating expenses and $6 million in interest.

In the early summer of 1976, FEC operated 32 Falcons of its own—plus nine other aircraft operated under contract by supplemental carriers—and 500 vans leased from Hertz. It had over 2,000employees and boasted an average daily volume of close to 19,000 packages. Its flights served 75cities directly and pickup and delivery service was provided to 130 cities in the U.S. Because of the growth in volume, the company had established a second "minihub" in Pittsburgh and also operated a shuttle service between Boston, New York, Washington, and intermediate cities. Federal Express had 31,000 customers, of whom about 15,000 used the service in any one month.

The Airfreight Industry

A 1975 study estimated that some 1.5 billion tons of freight were shipped annually in the United States by rail, boat, truck, barge, and air. However, air's share of this total was less than 2%, the main reason being that airfreight cost a great deal more than surface freight.

Airfreight offered several advantages in addition to speed. Packaging requirements were fewer, and damage and loss rates usually lower. Airfreight shippers also had a lower volume of goods in transit or inventory at any one time than when surface transportation was used.

Typical users of airfreight were producers of time-sensitive, high-priced, finished goods going to widespread locations. Bulk products and commodity goods were rarely sent by air. Indeed, most air shipments were rather small; 55% weighed less than 50 pounds, while 90% of all shipments were composed of individual pieces weighing less than 70 pounds each.

Since the 1960s, airfreight usage had grown faster than any other segment of freight transportation. Domestic airline freight revenues nearly doubled between 1965 and 1970. By 1975, it was estimated that the airfreight market was producing nearly one billion dollars in revenue to the airlines, without including the retail markup charged by intermediaries.

Only one-fifth of all airfreight was delivered to airports by the shipper or picked up by the consignee. The bulk of the remaining 80% was accounted for, in roughly equal proportions, by three major intermediaries.

One, Air Cargo, Inc., was a trucking service. It was wholly owned by 26 airlines and performed pickup and delivery service for the airlines' direct customers. The service was provided by520 contract truckers at 480 of the 522 airports served by the airlines in the United States.

Freight forwarders were a second type of intermediary. The forwarders were trucking carriers who consolidated cargo going to the airlines. Basically, they purchased "wholesale" cargo space from the airlines and retailed this in small amounts. Forwarders catered to small shipment customers, providing pickup and delivery services in most cities, either in their own trucks or through contract agents. Whereas it cost the airlines about $10.00 in 1975 to handle a 50-lb. shipment on the ground, forwarders' costs were around $6.80. The freight forwarder industry grew at an average rate of 20% annually between 1965 and 1975. There were some 250 firms, with the largest 25accounting for over 90% of the business. Most forwarders were not profitable and only a few of the top firms consistently earned profits. Emery Air Freight was the largest and most profitable, with1975 domestic billings totaling $164 million and an operating income of $17.9 million.

The third intermediary, the U.S. Postal Service (USPS), used air services for transportation of long-distance letter mail and air parcel post. It had recently introduced expedited transportation of letters and packages up to 40 pounds in weight through its Express Mail concept. This service offered guaranteed overnight delivery or money back. For a 2-lb. package, USPS charged a flat rate of $2.25 from post office to post office or $6.25 from post office to addressee.

Because most airfreight was carried in the bellies of passenger aircraft, the operations of these intermediaries were constrained by the airlines, which flew routes and schedules designed to meet the needs of people rather than packages.

Shipping Decisions

Even in the mid-1970s, the purchase of transportation services had yet to receive the same management attention devoted to such company functions as manufacturing, purchasing, engineering, finance, or marketing. It was rare for a traffic executive to rise to top management in any company.

In most organizations, the responsibility for selecting a carrier to handle a specific freight shipment rested with an individual whose title typically was traffic manager, mailroom supervisor, shipping clerk, or dispatcher. Often this person was restricted to use of firms on an "approved carriers" list. Sometimes, others in the organization insisted upon use of a particular shipping method and even specified the carrier for packages they were sending. Federal Express had found that, for one shipment in four, it was the consignee who specified that FEC service be used.

Competitive Activity

Competition in the airfreight business was intense. It was believed that there were close to1,000 airfreight forwarder salespeople across the country, to which could be added there presentatives of the airlines and of couriers and messenger firms that provided high-cost, special pickup and delivery services, using both scheduled and charter airlines. Every *Yellow Pages* in the larger cities had extensive listings under "Air Cargo Service" (Manhattan had 240 entries), "Delivery Service," or "Messenger Service."

In general, the industry lacked marketing expertise, relying heavily on personal selling efforts. Brochures, sales materials, rate sheets, and routing guides were used to support the sales force. Direct mail was often used to generate sales leads. Only the biggest carriers, such as Emery and Shulman, advertised regularly on a large scale. One reason for the limited use of advertising was that most airfreight forwarders had few competitive advantages to offer. Emery Air Freight, by contrast, had spent millions on development of a system wide computer tracing capability called EMCON and had promoted this in its advertising.

The Small Package Market

The market for domestic transportation of small packages could be divided into four groups, categorized by order of speed desired.

Emergency service received maximum speed and was the most costly. This category catered to "panic" shippers and was not price sensitive. It included courier services, airline baggage services, and aircraft charter. Companies active in this field included Purolator Courier Corporation, Shulman Sky Cab, Delta Dash (a service of Delta Airlines), and other airlines, some air taxis, and many expeditors. This category was generally known as "same day service".

Rush service could be described as "fast, within certain limits." It was only somewhat price sensitive and generally involved next day delivery. Competition included many airfreight forwarders, some airlines, and U.S. Postal Service Express Mail.

Routine Air was the largest airfreight category. Price competitive, it was often referred to in the trade as "2 + 1" (want it there in two days but can live with three). Competition included Air Parcel Post (U.S. Postal Service), UPS "Blue Label" service, and some airfreight forwarders.

The *Routine* category included all other freight services and involved mostly surface transportation. It was by far the largest segment of the market and highly price sensitive. Major carriers were the U.S. Postal Service (fourth class parcel post) and United Parcel Service.

The estimated size of the three air markets in 1974 is shown in *Table A*. All three markets were growing rapidly, together averaging an estimated 20% increase each year. The higher priority services were believed to be growing at an even faster rate.

Table A

Market	#Shipments (millions)	Average $ per Shipment	Total $ Volume (millions)
Emergency	2.5	$ 30	$ 75
Rush	15.5	10	155
Routine Air	122.3	4	490

Federal Express Service

In 1976 the majority of FEC's shipments were for next day delivery. *Priority One* provided overnight service for packages, with deliveries before 12 noon on the next business day. Special handling, at $2.50 extra charge, was available for hazardous materials or, at a $5.00 surcharge, for *Signature Security*. The latter was designed to provide continuous responsibility for the custody of high security packages (such as confidential documents or exceptionally high-value shipments).Another overnight delivery service was *Courier Pak*; this provided transportation of documents or other items up to two pounds in weight in special, waterproof, tearproof envelopes, 12 inches by 151/2 inches. On average, the contents of a Courier Pak weighed about one pound. Courier Paks could be shipped individually or in containers holding about 30 each. Pak envelopes cost $12.50 each for shipment anywhere in the Federal Express system and had to be purchased in advance in quantities of five or more at a time.

For shippers who were in less of a hurry, Federal Express offered its less expensive *Standard Air Service*, with deliveries guaranteed on the second business day after pickup. An even lower priority service, *Economy Air*, offering third day delivery, had been discontinued in January 1975when it was found to be losing money.

Rates for Priority One (P-1) and Standard Air Service (SAS) were based on weight and distance, with discounts being granted on a sliding scale for consignment of multiple shipments on a single day. As a result, shipping costs per package varied widely, but analysis showed that in 1976the average P-1 package cost the shipper $23.56 to send, while the average SAS package cost $12.62.

Various restrictions discouraged shipment of large packages with a high volume-to-weight ratio, since the carrying capacity of the Falcons usually “cubed out” (i.e., filled the aircraft interior) before it “grossed out” (i.e., reached the maximum loaded weight allowable). The average Priority One or Standard Air Service package weighed about 14 pounds. A rough rule of thumb at FEC was that 10 pounds of cargo took up about one cubic foot of space.

Marketing at Federal Express

At the outset, FEC's main problem was finding shippers willing to use its services. The company took a long time to break into major accounts, although an early commitment from the Department of Defense and other U.S. government agencies provided needed volume, as well as credibility.

Several "blitz teams" of four or five salespeople canvassed different cities prior to FEC's start-up, working a few weeks in each city to presell the service. Selling continued after start-up, while blitz efforts were extended to other areas as the system expanded. Advertising was limited to an opening announcement in local newspapers and to direct mail.

As the organization matured, contact with customers came to be made by three types of employees. The first were sales representatives, called customer service representatives or senior account managers. The second were the couriers, who delivered and collected packages. And then there were the customer service agents, who worked at the stations, handling customer queries by phone and arranging for special pickups of packages.

In 1974, J. Vincent Fagan was appointed senior vice president—marketing. He quickly determined that an aggressive advertising policy was necessary. Focus group interviews with shipping managers had shown them to be somewhat timid individuals.[1]For the most part, neither well educated nor particularly ambitious, their basic job strategy seemed to be one of avoiding problems with their supervisors. One way was to use a reliable, well-regarded carrier such as Emery Air Freight, which enjoyed very high awareness. In Vince Fagan's words, "They could use Emery forever and never be criticized."

The New York firm of Carl Ally, Inc. was selected in October 1974 as the company's advertising agency, because they had a reputation of being a "bomb thrower" in the advertising business. Their first advertising, in early 1975, used both press and TV, and was a four to five week introductory campaign designed to stimulate awareness.

In April 1975, FEC commissioned the Opinion Research Corporation to conduct an impartial test of relative delivery speeds and costs for FEC, Emery, and two other well-known carriers. After Opinion Research rotated test shipments among a variety of different city pairs and different days of the week, the results showed that 93% of Federal Express Priority One packages arrived the next day, versus only 42%

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[1] Focus group interviews involve groups of perhaps five to eight subjects, led by a trained interviewer who directs a discussion on specific topics.

for Emery and even lower percentages for the other two. These results were used as the basis for the 1975–1976 TV and print advertising campaign, which positioned FEC firmly against Emery.

In March 1976, Fagan established a new position of director of marketing administration. To fill this spot he recruited Heinz J. Adam, a marketing executive with the American Can Company in New York. Adam was evaluating FEC's various services, with a view to developing strategies forfuture growth. Working with other staff members, he had begun an in-depth analysis of the market potential for Courier Pak.

The Situation in June 1976

The early summer of 1976 saw FEC management looking ahead to continued growth. With the average flight carrying 4,900 pounds of freight and loaded to 85% of volume capacity, the company was seeking legislation in Congress to allow it to operate larger aircraft. However, it was recognized that this change might take a long time to achieve.

A January 1976 survey showed that awareness of FEC among prime prospects (i.e., air freight shippers not presently using FEC) had increased significantly, with FEC ranking third out of 10 airfreight companies. Among these prospects, 75% recalled the Federal Express name on prompting. However, prompted awareness of Emery was close to universal and for Airborne it was

85%.Unprompted recall figures were: Emery, 61%; Airborne, 22%; and FEC, 12%.

At this point, Heinz Adam had been with Federal Express just three months. While still adjusting to the move to Memphis after living some 20 years in New Jersey and working in New York City, he was enthusiastic about his new position. He described it as demanding but very stimulating. “It’s the first time I’ve really had fun in a job!” he remarked.

Adam termed Federal Express “a very people-oriented organization: people are what make things work here; the loyalty of its employees has been very important to the company.” In addition to high wages and good benefits, FEC also operated a profit-sharing plan for employees. A recent attempt by the Teamsters to unionize FEC employees was voted down by a four-to-one margin. On the other hand, Adam did not see Federal Express as a customer-oriented business. “It’s operations-oriented,” he said, “and as a marketing man this drives me up the wall sometimes.”

Courier Pak

As he reviewed the company’s performance since the beginning of 1975, Heinz Adam became increasingly convinced that Courier Pak had unfilled potential. Sales had almost doubled in the past year, but still represented less than 10% of total overnight package volume for Federal Express and barely 5% of overnight dollar volume. Studies by

FEC's cost accounting department showed that the variable costs associated with the average Priority One package totaled$10.60; for the average Standard Air Service package they were $9.21, and for Courier Pak $4.25. Experience suggested that the decision to use a Courier Pak was often made by executives (or their secretaries) rather than by shipping managers. For instance, an advertising executive might rush advertising proof sheets to a client by Courier Pak, bypassing the shipping department altogether.

A spring 1976 survey of Priority One and Courier Pak usage by FEC's top 1,400 customers found that 24% used both Courier Pak and Priority One; less than 1% used only Courier Pak, while the rest used only Priority One. The key attribute separating Courier Pak from Priority One service in the customer's mind was the expectation that the former would be delivered to the addressee and not just to the receiving dock. Other analysis showed that 57% of Courier Pak volume came from the 14 top FEC stations and 20% from the top 3; the figures for Priority One were 44% and 15%respectively. [2]On average, users sent 0.45 Courier Paks per day.

A review of the market size for "emergency," "rush," or "special handling" delivery of documents or other small items suggested that the market was almost 870,000 pieces per day (see Exhibit 1).

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[2] In rank order, the 14 largest airfreight markets in the U.S. were: New York, Los Angeles, Chicago, San Francisco, Boston, Philadelphia, Detroit, Atlanta, Dallas, Milwaukee, Minneapolis, Cleveland, Houston, and Miami

Although Federal Express management was pleased with the company's progress, they knew that the competitive climate had toughened. The better carriers had improved their service and were becoming more aggressive, while Express Mail was believed to be doing well. A few days earlier, Adam had opened his *Wall Street Journal* to a double-page advertisement for Emery Air Freight. He planned to make a proposal soon to Fagan on future strategy for Courier Pak and would have to take this overall situation into account in deciding how to proceed.