Federal Express – delivering the goods

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This case study looks at how new business models can create vast improvements in competitiveness. However, the models must be suited to the business environment at the time and will have a 'shelf-life' as the business environment changes. The case study looks at one on the world's most successful adopters of a new business model that transformed the airfreight and package delivery sectors world-wide. But the advent of the internet in the mid-1990s meant that the FedEx business model had to change or the company would decline. This is also the story of how it rose to that challenge.

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In 1965, Yale University undergraduate Frederick W. Smith wrote a term paper about the passenger route systems used by most airfreight shippers, which he viewed as economically inadequate. Smith wrote of the need for shippers to have a system designed specifically for airfreight that could accommodate time-sensitive shipments such as medicines, computer parts and electronics.

In August of 1971 following a stint in the military, Smith bought a controlling interest in Arkansas Aviation Sales, located in Little Rock. While operating his new firm, Smith identified the tremendous difficulty in getting packages and other airfreight delivered within one to two days. This dilemma motivated him to undertake research on how to resolve the inefficient distribution system. In an interview with *Fortune Small Business* in 2002 he explained his business model for solving the problem:

> My solution was to create a delivery system that operates essentially like a bank-clearing system does. Put all points on a network and connect them through a central hub. If you take any individual transaction, that kind of system seems absurd – it means making at least one extra stop. But if you look at the network as a whole, it's an efficient way to create an enormous number of connections. . . . If, for instance, you want to connect 100 markets with direct point-to-point deliveries it will take 9,900 direct deliveries. But if you go through a single clearing system it will take at most 100 deliveries. . . . So you're looking at a system that is about 100 times as efficient. Back in 1971 my belief was that you could run small, high-value-added [packages] through this hub-and-spoke system. Also I did something else a little bit unusual, which was to combine the airplanes and trucks into one delivery system. This didn't seem to me to be controversial, but all the traditional people thought that it was highly iconoclastic. So that's the genius of Federal Express.

Thus, the idea for Federal Express was born: a company that revolutionised global business practices and now defines speed and reliability. It offered a service to ship packages of many sizes over both short and long distances. The company began operations in April 1973, with the launch of 14 small aircraft from Memphis International Airport. On that night, Federal Express delivered 186 packages to 25 US cities. Company headquarters were moved to Memphis, Tennessee, a city selected for its geographical centre to the original target market cities for small packages. In addition, the Memphis weather was excellent and rarely caused closures at Memphis International Airport. The airport was also willing to make the necessary improvements for the operation and had additional hangar space readily available.

Company growth

The company soon became the premier carrier of high-priority goods in the marketplace and the standard setter for the industry it established. The hub-and-spoke model became the standard for the industry. In the mid-1970s, Federal Express took a leading role in lobbying for air cargo deregulation that finally came in 1977. These changes allowed Federal Express to use larger aircraft (such as Boeing 727s and McDonnell-Douglas DC-10s) and spurred the company's rapid growth. By the mid-2000s Federal Express had the world's largest all-cargo air fleet, including McDonnell-Douglas MD-11s and Airbus A-300s and A-310s. The planes have a total daily lift capacity of more than 12,000 tonnes. In a 24-hour period, the fleet travels nearly 500,000 miles while its couriers log 2.5 million miles a day, the equivalent of 100 trips around the earth.

Overseas expansion

Following the first of several international acquisitions, intercontinental operations began in 1984 with service to Europe and Asia. In 1988, the company initiated direct-scheduled cargo service to Japan. Federal Express obtained authority to serve China through a 1995 acquisition from Evergreen International Airlines. By 2004 expansion had created an unsurpassed worldwide network delivering to customers in more than 210 countries and handling about 3.3 million packages and documents every business day.

Over the years, FedEx had thrived on a culture based on delivering quality customer service. The advent of the internet acted as a natural complement to an already highly technology-driven service model. FedEx began first offering web-based customer services in 1995, which allowed customers to track their shipments by means of a reference number. With more than 2 million customers, the internet gave them an opportunity to do this more efficiently as well as the ability to take service levels to new heights by building one-to-one customer relationships. FedEx had cleverly shifted away from the thinking that a website is just about offering products online, but instead focused on distributing information to add value to a customer's experience online. The internet facilitated FedEx's belief that information about a shipment is as important as the shipment itself.

FedEx's aim was to engage the customer through all possible channels and, therefore, the web was seen as a complement to existing channels like phone and mail. The use of the website as a tracking medium enabled FedEx to make massive savings in the cost per tracking query. And because it could exercise greater control and access, customers perceived this as an improvement in service. By implementing self-service, FedEx saved itself the cost of new call centres to handle more than 100,000 tracking enquiries every day.

Its experience in the industry made FedEx realise that logistics was the core issue for most businesses and, therefore, it capitalised on the fact that it was capable of bringing more to the table than just a van or a plane. So FedEx had redefined its relationships with various businesses by offering strategic consulting style solutions. It also developed a comprehensive set of web-based automated shipping solutions to meet the needs of small as well as large customers globally. With the advent of the internet, its information infrastructure allowed it to extend its services beyond pure transportation to address the other supply chain service needs of customers. This allowed FedEx to extend beyond giving customer access to real-time data, to become more involved in the customer's internal processes. In 2000, it launched its FedEx Home Services designed for the booming business to consumer e-tailers, taking the whole business of supply chain management away from these e-merchants, leaving them to concentrate on other areas such as marketing. Over the years, FedEx constantly redefined and increased its scope of product and service offering.

The corporate vision of satisfying worldwide demand for fast, time-definite, reliable distribution required a customer-focused approach. FedEx's information systems and networks were initially developed to improve internal operational efficiencies and cost reduction. By integrating its Internet Application Programming Interfaces for use in customers' internal networks, it was actually engaging more customers to use the internet with the automation of shipping and tracking possible through integration with FedEx. Another of its software products, 'Virtual Order', helped businesses to get online by giving them the software to set up an online catalogue that resided on FedEx's secure server. The key factors of success for FedEx were low cost, ease of use, free setup and service and trouble-free ordering, payments and delivery.

Integrating its services within the supply chain of its customers also raised customer switching costs and competitor barriers to entry. Products like 'FedEx Insight' offered large customers a new level of visibility into their shipping activities by helping plan their manufacturing or distribution resources, manage their inventories and returned goods, decrease inventory management costs and increase customer satisfaction. Additional FedEx e-business tools allowed companies to connect their existing environment to FedEx information systems, and vice versa. FedEx developed expertise in applying technology to shorten the order to delivery cycle with service including transportation, order processing, distribution centre operations, fulfilment, inventory control, purchasing, production, and customer and sales services. The focus was on its ability to interconnect and distribute information to all supply chain players.

FedEx forged strong relationships and developed innovative technology solutions based on customer needs. Being a technology leader, FedEx had a wide array of partnerships in technology. It partnered with Orbit Commerce to provide internet commerce services on a rental basis for small businesses and established an internet-based supply chain partnership with Cisco for all network supplies for running the end-to-end internet-based network. In addition, AT&T had a deal with FedEx to create a wireless internet site for package tracking and delivery. FedEx also signed exclusive delivery agreements with a number of e-tailers like eToys, Pro-Flowers, Value America and LL Bean. An order on one of these sites automatically triggered a FedEx dispatch request. FedEx's focus as an international logistics company gave the companies who signed with it a genuinely international reach. For example, orders could be placed in the United States for delivery in, say, France or the UK.

In the mid-2000s FedEx had an estimated annual information technology budget of $1.4bn (≈ €1.1bn) and more than 2,000 technology professionals around the globe dedicated to improving speed and convenience while reducing costs. Its aircraft, trucks, bar-code scanners, servers, web pages and more were linked to one of the world's largest, most advanced infrastructures. FedEx had always been a technology pioneer and plans included addition of voice and video to internet applications.

Internal processes have also been automated by having employee self-service in business operations such as purchasing, expense reporting and benefits management through the intranet.

FedEx had also effectively used the brand to great effect. Although the FedEx group consisted of many companies engaged in different types of logistics support, FedEx renamed itself as FedEx Corporation in 2000, to leverage its brand strength. This recognised the fact that customers wanted to deal with just one company to meet their total logistics requirements.

However, the internet had brought one serious threat to the core business – that of delivering important documents from place to place. Documents could be sent just about anywhere in the world in an instant via electronic networks. So why should customers pay through their noses for a courier when they could send an e-mail for a fraction of that cost? But this impacted on everyone's document business, and depended to a large extent on the shape of public policy on digitisation and copyright.

Sources

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