

Asia Case Research Centre THE UNIVERSITY OF HONG KONG

ALI FARHOOMAND

# FEDEX CORP.: STRUCTURAL TRANSFORMATION THROUGH E-BUSINESS

"[FedEx] has built superior physical, virtual and people networks not just to prepare for change, but to shape change on a global scale: to change the way we all connect with each other in the new Network Economy."<sup>1</sup>

"[FedEx] is not only reorganizing its internal operations around a more flexible network computing architecture, but it's also pulling-in and in many cases locking-in customers with an unprecedented level of technological integration."<sup>2</sup>

Since its inception in 1973, Federal Express Corporation ("FedEx"<sup>3</sup>) had transformed itself from an express delivery company to a global logistics and supply-chain management company. Over the years, the Company had invested heavily in IT systems, and with the launch of the Internet in 1994, the potential for further integration of systems to provide services throughout its customers' supply-chains became enormous. With all the investment in the systems infrastructure over the years and the US\$88 million acquisition of Caliber Systems, Inc., in 1998, the Company had built a powerful technical architecture that had the potential to pioneer in Internet commerce. However, despite having all the ingredients for the makings of a successful e-business, the Company's logistics and supply-chain operations were struggling to shine through the historical image of the Company as simply an express delivery business. Furthermore, competition in the transportation/express delivery industry was intense and there were reports that FedEx's transportation volume growth was slowing

<sup>&</sup>lt;sup>1</sup> 1999 Annual Report

<sup>&</sup>lt;sup>2</sup> Janah, M. and Wilder, C., "Special Delivery", *Information Week*, URL: http://www.FedExcorp.com/media/infowktop100.html, 1997.

<sup>&</sup>lt;sup>3</sup> The Company was incorporated as "Federal Express Corporation" in 1971. In 1994, the Company was renamed "FedEx Corporation" and subsequently renamed "FDX Corporation" in 1998 and then "FedEx Corporation" in 2000. However, throughout the case, the Company is referred to as "FedEx" to avoid confusion.

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down, even though they were poised to take advantage of the surge in traffic that e-tailing and electronic commerce (EC) were supposed to generate. Hence, on 19 January, 2000, FedEx announced major reorganisations in the Group's operations in the hope of making it easier to do business with the entire FedEx family. The mode of operation for the five subsidiary companies was to function independently but to compete collectively. In addition to streamlining many functions, the Group announced that it would pool its sales, marketing and customer services functions, such that customers would have a single point of access to the whole Group. The reorganisation was expected to cost US\$100 million over three years. Was this simply a new branding strategy or did FedEx have the right solution to leverage its cross-company synergies and its information and logistics infrastructure to create e-business solutions for its customers?

# The Express Transportation and Logistics Industry

FedEx invented the air/ground express industry in 1973. Although UPS was founded in 1907 and became America's largest transportation company, it did not compete with FedEx directly in the overnight delivery market until 1982. Competition began with a focus on customer segmentation, pricing and quality of service. For most businesses, physical distribution costs often accounted for 10-30 per cent of sales or more. As competition put pressure on pricing, businesses began to look at ways to cut costs yet improve customer service. The solution was to have a well-managed logistics operation to reduce the length of the order cycle and thus generate a positive effect on cash flow.

The growth of the express transportation and logistics industry was brought about by three main trends: the globalisation of businesses, advances in information technology (IT) and the application of new technology to generate process efficiencies, and the changing market demand for more value-added services. As businesses expanded beyond national boundaries and extended their global reach to take advantage of new markets and cheaper resources, so the movement of goods created new demands for the transportation and logistics industry. With this, the competitiveness of transportation companies depended upon their global network of distribution centres and their ability to delivery to wherever their customers conducted business. Speed became of significance to achieve competitiveness, not only for the transportation companies but also for their customers. The ability to deliver goods quickly shortened the order-to-payment cycle, improved cash flow, and created customer satisfaction.

Advances in IT promoted the globalisation of commerce. The ability to share information between operations/departments within a company and between organisations to generate operational efficiencies, reduce costs and improve customer services was a major breakthrough for the express transportation industry. However, of even greater significance was the way in which new technology redefined logistics. At a time when competition within the transportation industry was tough and transportation companies were seeking to achieve competitive advantages through value-added services, many of these companies expanded into logistics management services. Up until the 1980s, logistics was merely the handling, warehousing and transportation of goods. By combining the functions of materials management and physical distribution, logistics took on a new and broader meaning. It was concerned with inbound as well as outbound material flow, within companies as well as the movement of finished goods from dock-to-dock. With this, the transportation industry responded by placing emphasis not only on the physical transportation, but also on the coordination and control of storage and movement of parts and finished goods. Logistics came to include value-added activities such as order processing, distribution centre operations, inventory control, purchasing, production and customer and sales services. Interconnectivity through the Internet and Intranets and the integration of systems enabled businesses to redefine themselves and to re-engineer their selling and supply-chains. Information came to replace inventory. Just-in-time inventory management helped to reduce costs and improve efficiency. With the advent of IT, express transportation became an aggregation of two main functions: the physical delivery of parcels, and the management and utilisation of the flow of information pertaining to the physical delivery (i.e., control over the movement of goods).

# FedEx Corp.

FedEx was the pioneer of the express transportation and logistics industry. Throughout the 27 years of its operation, FedEx's investment in IT had earned the Company a myriad of accolades. Since 1973 FedEx had won over 194 awards for operational excellence. Fundamental to the success of the FedEx business was the vision of its founder.

## The Visionary behind the Business

"If we're all operating in a day-to-day environment, we're thinking one to two years out. Fred's thinking five, ten, fifteen years out."

- William Conley, VP, FedEx Logistics, Managing Director Europe

Fred Smith, Chairman, President and Chief Executive Officer of FedEx Corporation, invented the express distribution industry in March 1973. By capitalising on the needs of businesses for speed and reliability of deliveries, FedEx shortened lead-times for companies. Its next-day delivery service revolutionised the distribution industry. The success of FedEx's distribution business in those early days rested on Smith's commitment to his belief that the opportunities open to a company that could provide reliable overnight delivery of time-sensitive documents and packages were excellent. Despite losses in the first three years of operation due to high capital investments in the physical transportation infrastructure of the business, FedEx began to see profits from 1976 onwards. To compete on a global basis, the key components of the physical infrastructure had to be in place to connect the world's GDP. The underlying philosophy was that wherever business was conducted, there was going to have to be the movement of physical goods.

Under Smith's leadership, the Company had set a few records with breakthrough technology. In the 1980s, FedEx gave away more that 100,000 sets of PCs loaded with FedEx software, designed to link and log customers into FedEx's ordering and tracking systems. FedEx was also the first to issue hand-held scanners to its drivers that alerted customers of when packages were picked up or delivered. Then in 1994, FedEx became the first big transportation company to launch a Website that included tracking and tracing capabilities. Very early on, Smith could foresee that the Internet was going to change the way businesses would operate and the way people would interact. By applying IT to the business, FedEx leapfrogged the rest of the industry. Smith was the visionary who forced his company and other companies to think outside of the proverbial one. The core of FedEx's corporate strategy was to "use IT to help customers take advantage of international markets".<sup>4</sup> By 1998, FedEx was a US\$10 billion company spending US\$1 billion annually on IT developments plus millions more on capital expenditure. It had an IT workforce of 5,000 people.

## Building the Transportation and Logistics Infrastructure

In the early years of the FedEx transportation business, Smith insisted that the Company should acquire its own transportation fleet, while competitors were buying space on commercial airlines and sub-contracting their shipments to third parties. The strategy of

<sup>&</sup>lt;sup>4</sup> Garten, 1998.

expanding through acquiring more trucks and planes continued. By the tenth year of operation FedEx earned the accolade of being the first US company to achieve the US\$1 billion revenues mark within a decade without corporate acquisitions and mergers.

FedEx was quoted as being the inventor of customer logistics management.<sup>5</sup> As early as 1974, FedEx started logistics operations with the Parts Bank. In those days, a few small set-ups approached FedEx with their warehousing problems and decided on the idea of overnight distribution of parts. With those propositions, FedEx built a small warehouse on the end of its sorting facilities at Memphis. This was FedEx's first attempt at multiple-client warehousing. Customers would call up and order the despatch of parts and the order would be picked up on the same day. That was also FedEx's first value-added service beyond basic transportation. From there, the logistics side of the business snowballed.

Throughout the next three decades, FedEx's transportation business growth was attributable to a number of external factors that FedEx was quick to capitalise on. These included:

- Government deregulation of the airline industry, which permitted the landing of larger freight planes, thus reducing operating costs for FedEx.
- Deregulation of the trucking industry, which allowed FedEx to establish a regional trucking system to lower costs further on short-haul trips.
- Trade deregulation in Asia Pacific, which opened new markets for FedEx. Expanding globally became a priority for FedEx.
- Technological breakthroughs and applications innovations promoted significant advances for customer ordering, package tracking and process monitoring.
- Rising inflation and global competition gave rise to greater pressures on businesses to minimise the costs of operation, including implementation of just-in-time inventory management systems, etc. This also created demands for speed and accuracy in all aspects of business.

As of January 2000, FedEx served 210 countries (making up more than 90 per cent of the world's GDP), operated 34,000 drop-off locations and managed over 10 million square feet of warehouse space worldwide. It had a fleet of 648 aircraft and more than 60,000 vehicles, with a staff of nearly 200,000. It was the world's largest overnight package carrier, with about 30 per cent of the market share.

## **Building the Virtual Information Infrastructure**

"We are really becoming a technology company enabled by transportation."

- David Edmonds, VP, Worldwide Services Group, FedEx<sup>6</sup>

Even as early as 1979, a centralised computer system - Customer, Operations, Service, Master On-line System (COSMOS) - kept track of all packages handled by the Company. This computer network relayed data on package movement, pickup, invoicing and delivery to a central database at Memphis headquarters. This was made possible by placing a bar-code on each parcel at the point of pickup and scanning the bar-code at each stage of the delivery cycle.

In 1984, FedEx started to launch a series of technological systems, the PowerShip programme, aimed at improving efficiency and control, which provided the most active customers (over 100,000) with proprietary on-line services [see **Exhibit 1** for a chronological list of FedEx

<sup>&</sup>lt;sup>5</sup> Bruner, R. F. and Bulkley, D., "The Battle for Value: Federal Express Corporation versus United Parcel Service of America, Inc. (Abridged)", University of Virginia Darden School Foundation, 1995.

<sup>&</sup>lt;sup>6</sup> Krause, K., "Not UPS with a Purple Tint", *Traffic World*, URL: http://www.trafficworld.com/reg/news/special/s101899.html, October 1999.

systems]. In summary, these PowerShip systems provided additional services to the customer, including storing of frequently used addresses, label printing, on-line package pick-up requests, package tracking, and much more.

The emergence of electronic data interchange (EDI) and the Internet allowed companies to build one-to-one relationships with their customers. This was the perfect scenario for many manufacturers: the ability to match supply to demand without wastage. FedEx took advantage of such new technologies and started to track back along the supply-chain to the point of raw materials. As they did so, they identified points along the supply-chain where they could provide management services. Often, these services included transportation, order processing and related distribution centre operations, fulfilment, inventory control, purchasing, production and customer and sales services. The ability to interconnect and distribute information to all the players in a supply-chain became the focus of FedEx's attention. For many of its customers, logistics was viewed as a key means for differentiating their products or services from those of their competitors [see Exhibit 2 for examples of some customer solutions]. In other words, logistics became a key part of strategy formulation. As businesses were placing more emphasis on the order cycle as the basis for evaluating customer service levels, FedEx's role in providing integrated logistics systems formed the basis of many partnership arrangements. By helping them to redefine sources and procurement strategies so as to link in with other parties in the supply-chain, such as raw materials suppliers, customers were outsourcing their supply-chain management functions to FedEx, functions that were seen as peripheral to the core of their business [see Exhibit 3 and 4 for FedEx's coverage of the supply chain through integrated systems]. By improving, tightening and synchronising the various parts to the supply-chain, customers saw the benefits of squeezing time and inventory out of the system. Tighter supply-chain management was no longer viewed as a competitive advantage but a competitive imperative.

Businesses sought ways to improve their return on investment and became interested in any business process that could be integrated and automatically triggered (e.g., proof of delivery and payment) as opposed to being separately invoked. So not only was FedEx pushing its customers for integration, but its innovative customers were also demanding greater integration. Some customers had even jumped ahead of FedEx. Cisco, for example, had developed an extranet that allowed its customers to order FedEx services without leaving the Cisco Website. By integrating its services within the supply-chain of its customers, and thus generating increases in customer loyalty and in customers' switching costs, FedEx managed to effectively raise the barriers to entry for competitors.

The Internet refined the COSMOS system. Whenever new information was entered into the system by FedEx or by customers through the Internet, all related files and databases were automatically updated. For example, when a FedEx customer placed an order through fedex.com, the information would find its way to COSMOS, FedEx's global package-tracking system. The courier's Route Planner – an electronic mapping toll – would facilitate the pickup and delivery of the order from the customer. A product movement planner would schedule the order through the Company's global air and courier operations. The customer would be able to track the status of the shipment through PowerShip or FedEx Ship. The COSMOS system handled 54 million transactions per day in 1999.<sup>7</sup>

In 1998, FedEx decided to overhaul its internal IT infrastructure under Project GRID (Global Resources for Information Distribution). The project involved replacing 60,000 terminals and some PCs with over 75,000 network systems. The decision to go with network computers

<sup>&</sup>lt;sup>7</sup> ICFAI, FedEx: Excellence Through Information Technology, www.icfai.org (accessed 3 September 2007)

was made to avoid the "desktop churn" found with PCs.<sup>8</sup> The network computers linked over a global Internet Protocol network aimed to enhance the quality and quantity of services FedEx could deliver to its customers. For example, FedEx employees at any location at any time could track a package through the various steps in the FedEx chain. Other applications planned to be launched included COSMOS Squared, which allowed Non-Event Tracking, a feature that triggered alerts when scheduled events, such as the arrival of a package, did not occur. Through a 24-hour, seven-day operation called the Global Operations Command Centre, the central nervous system of FedEx's worldwide system in Memphis, FedEx was able to provide efficient gathering and dissemination of real-time data. The operation housed huge screens covering the walls that tracked world events, weather patterns and the real-time movement of FedEx trucks and aircraft. New systems were also introduced to predict with greater accuracy the amount of inbound traffic. This system allowed FedEx to prioritise the hundreds of variables involved in the successful pickup, processing and delivery of a parcel. Senior managers at FedEx believed that having current and accurate information helped them to reduce failure in the business.

As well as the data centre in Memphis, FedEx operated other centres in Colorado Springs, Orlando, Dallas-Fort Worth, Singapore, Brussels and Miami.

Also in 1999, FedEx signed an agreement with Netscape to adopt Netscape software as the primary technology for accessing its corporate intranet sites. FedEx's intranet included more than 60 Websites, created for its end users and in some cases by its end users. Customers could build integrated Websites using FedEx Applications Programming Interfaces (API) or FedEx intraNetShip <sup>9</sup>(free downloads from fedex.com) and incorporate a link that would allow them to track packages directly from their own site. Over 5000 Websites fed hundreds of thousands of tracking requests through to the fedex.com site.

"Our API solutions are designed to give global visibility and access across the supply-chain, from manufacturing to customer service to invoicing. We've managed to wipe out those irritating WISMO (Where Is My Order) calls because we've seamlessly linked our customers to their customers."

- Mike Janes, former VP, Electronic Commerce & Logistics Marketing, FedEx<sup>10</sup>

At the beginning of 1999, FedEx launched an enhancement to its package-tracking service. Customers could query and receive package status information for up to 25 shipments simultaneously, and forward this information on to up to three e-mail recipients. Furthermore, users in France, Japan, Italy, Germany, the Netherlands and Portuguese- and Spanish-speaking countries could access this information on-line in their native languages through fedex.com.

FedEx claimed to have the largest on-line client server network in the world that operated in real-time. Information became an extremely critical part of its business.

*"We're in the express transportation business, but we've discovered how to lock up a lot of value in the information that we have."* 

- Mark Dickens, VP, Electronic Commerce & Customer Services<sup>11</sup>

<sup>&</sup>lt;sup>8</sup> "Desktop churn" refers to the rapid obsolescence of PCs as new applications eat up processing power.

<sup>&</sup>lt;sup>9</sup> ICFAI, FedEx: Excellence Through Information Technology, www.icfai.org (accessed 3 September 2007)

<sup>&</sup>lt;sup>10</sup> Gentry, C., "FedEx API's Create Cinderella Success Stories", October 1998, URL: http://www.fedex.com/us/about/api.html.

<sup>&</sup>lt;sup>11</sup> Janah, M. and Wilder, C., "Special Delivery", *Information Week*,: www.FedExcorp.com/media/infowktop100.html, 1997.

"...even when on the physical side of the business, we outsource, for instance, the pick-up or the delivery or the warehousing activity for a customer, we have never outsourced the information. Protecting the brand has always been very, very critical for us."

- William Conley

The benefits of these services were not limited to FedEx's customers. For FedEx, its on-line services, which in 1999 handled 60 million transactions per day, saved FedEx the cost of 200,000 customer service employees. In turn, the Company reported spending 10 per cent of its US\$17 billion annual revenue on IT in 1999. Information had allowed FedEx to lower its costs such that the cost to customers of using FedEx in 1999 was lower than it was 25 years ago.

Going beyond delivery services, FedEx aimed to fully integrate its corporate partners every step of the way along the supply-chain. Fundamental to FedEx's strategy for establishing its e-business and logistics operations was how well it could forge technology links with customers.

"It's all about integration, whether it's inside FedEx, with our technology partners, or with our customers."

- Laurie Tucker, Senior VP, Logistics Electronic Commerce & Catalog<sup>12</sup>

"Integration of Internet services with our transportation offerings is not an addition to our core business; it is our core business."

- Dennis Jones, CIO<sup>13</sup>

*"When it comes to managing synergies across businesses, we've found that seamless information integration is a critical component."*<sup>14</sup>

# **Management and Operations Issues**

### Branding and Business Structure Up Until 19 January, 2000

In the first 21 years of business, FedEx operated under the corporate name of Federal Express Corporation. Its customers came to recognise it as "FedEx" in short and the brand took off as the Company grew and expanded its service offerings under the purple and orange flag. Hence in 1994, it seemed natural that the Company should change its brand name to "FedEx".

The Parts Bank was given official recognition when it became a division of FedEx Corp. in 1988 and became known as Business Logistics Services (BLS). It operated as a separate and independent company. In line with the express transportation side of the business, BLS developed expertise in the high-value, high-tech industries. It was involved in the express inbound, outbound and redistribution of goods. However, it focused mainly on the small parcel business. FedEx based its solutions on just-in-time logistics. As the business grew, concern was raised that the logistics business was not generating revenue for the express transportation business, but rather feeding this through to other carriers. Hence in 1994, BLS was renamed FedEx Logistics, and it became mandatory for the logistics business to include

<sup>&</sup>lt;sup>12</sup> Janah, M. and Wilder, C (1997)

<sup>&</sup>lt;sup>13</sup> Cone, E. and Duvall, M., "UPS Keeps Truckin'; FedEx: A Documented Success", Inter@ctive Week, 16 November, 1999.

<sup>&</sup>lt;sup>14</sup> 1999 Annual Report

FedEx transportation as part of its solution to customers. In 1996, the division changed its name yet again, to FedEx Logistics and Electronic Commerce (FLEC). The Company started to focus its resources on doing business on the Internet, and the name change was to reflect the changes in the marketplace.

Following the acquisition of Caliber Systems, Inc. in 1998, five separate subsidiary companies were formed: Federal Express, RPS, Roberts Express, Viking Freight and FDX Logistics. The latter four were Caliber businesses. Each subsidiary was managed independently and was responsible for its own accounts [see Exhibit 5]. However, Caliber and FedEx's logistics operations were fundamentally different in that they had completely distinct customer bases and service offerings. Caliber developed expertise in moving raw materials, plates of steel and steel bars and managing work-in-progress. It would manage the manufacturing of cars and fork-lift trucks. Caliber provided an elaborate logistics operation concentrating mainly on high-priced goods industries, and it provided a fuller supply-chain solution than FLEC did, whereas FLEC was primarily focused on finished goods, transportation logistics and reverse logistics (i.e., handling returns). One was concentrating its business at the front-end of the supply chain (e.g., receiving, work-in-progress) while the other was more involved in the back-end operations of the supply-chain (i.e., warehousing, transportation). Hence the two operations continued to operate independently of each other. Logistics systems and applications were also developed independently. Caliber Logistics became a subsidiary company under FDX Logistics, while FLEC continued as a division within Federal Express, the express transportation arm.

The acquisition served to reinforce FedEx's commitment to becoming more than just an express delivery company. Yet commentators and customers continued to associate the FedEx brand with transportation, and FedEx fought to transform the image of the Company outside of this mould. One solution was to rename the Company. With the acquisition, the Company created a holding company, "FDX Corporation". However, FedEx did very little to promote it new FDX corporate brand. Furthermore, its transportation subsidiary continued to operate under the Federal Express name with the purple and orange FedEx brand on its trucks and vans. The FedEx brand lived on, but with no advertising or aggressive promotion of FDX, the name did not resonate in the marketplace. While the likes of UPS had the advantage of promoting just one brand - UPS - to sell the entire company and its many service offerings, FedEx was trying to promote five different subsidiary companies with completely unrelated names and business logos under the FDX banner through distinctly separate sales and customer service teams. Furthermore, with two separate logistics businesses within the Group, separate sales forces selling services offered by different parts of the Company, separate customer services staff to deal with different queries and IT resources spread across the Group, customers were confused and resources were duplicated.

Despite the confusion, by 1999 FedEx purported to offer companies "total one-stop shopping" for solutions at all levels of the supply-chain. Each subsidiary continued to operate independently, with separate accounting systems and customer service staff, while competing collectively. However, while maintaining the autonomy of each subsidiary company, the challenge for FedEx was how to bring the companies closer together to create those synergies. Providing customers with a single point of access to the whole Group was the ultimate goal. In practical terms, the task was to decide how each of the subsidiary companies should leverage its skills and services to a broader audience.

# **Events Leading Up to the January 2000 Reorganisation**

FedEx needed to address a number of factors that would affect the prospects of the Company.

#### FedEx's Performance

In the year ending 31 May, 1999, the Company had out-performed analyst expectations, posting record earnings of 73 per cent, an increase of 28 per cent over the previous year.<sup>15</sup> Net income had risen 30 percent to US\$221 million. However, results took a downturn in the following financial year. For the first quarter ended 31 August, 1999, FedEx announced that rising fuel prices had severely impacted upon the Company's net income, causing it to miss its first-quarter target. With no sign of improvements in fuel prices and with the US domestic market growth slowing down, FedEx warned that earnings for the second quarter and the full fiscal year may fall below analyst expectations. Bearing in mind that the express transportation business (mainly Federal Express and RPS) accounted for over 80 per cent of the Group's revenue, and that the US market accounted for approximately US\$10 billion of the Group's revenue, both trends had a significant negative impact on net income.

Sure enough, FedEx reported that for the quarter ended 30 November, 1999, operating income was down by 10 per cent on the previous year and net income was down by six per cent. The Company was not achieving the level of US domestic growth as expected. Rising fuel prices continued to erode operating income. However, operations other than express transportation (i.e., Viking Freight, Roberts Express, FDX Logistics and Caribbean Transportation Services) achieved revenue and operating income increases of 27 per cent and 12 per cent respectively in the second quarter. With the adverse fuel prices alone, the Company anticipated that operating income could be down by more than US\$150 million for the year ending 31 May, 2000. This called for some immediate remedial action.

Other trends within the express transportation and logistics market were also putting pressure on the Company to re-think its business strategy.

#### The Internet Market and e-Tailing

The Internet changed the basis for competition for most businesses. Its low cost and diversity of applications made it appealing and accessible. The Internet levelled the playing field such that, once a company was on-line, as long as it fulfilled its orders to the expectations of its customers, the size of the company was of no significance. The impact of the Internet on FedEx was twofold. Firstly, it opened up opportunities in logistics management for FedEx as businesses were using the Internet to re-engineer their supply-chains. So long as customers were satisfied, it really did not matter whether the goods were warehoused or not, whether the goods came directly from a factory in some distant location or whether the goods had been made to order. Integration with customer supply-chains was the key.

Secondly, the express transportation needs associated with the growth in e-tailing (expected to reach US\$7 billion in 2000) and business-to-business EC (expected to reach US\$327 billion by 2002) presented enormous opportunities for companies such as FedEx.<sup>16 17</sup>

FedEx was sure that it had the right business model to take advantage of these opportunities.

http://www.wired.com/wired/4.12/features/ffedex.html

<sup>&</sup>lt;sup>15</sup> Gelsi, S., "FDX Posts Stronger-than-Expected Profit", CBS MarketWatch, 30 June, 1999, URL:

http://cbs.marketwatch.com/archive.../current/fdx.htm?source=&dist=srch, February 2000. <sup>16</sup> Lappin, T., "The Airline of the Internet", *Wired*, 4 (12), December 1996, URL:

<sup>&</sup>lt;sup>17</sup> Erwin, B., Modahl, M. A. and Johnson, J., "Sizing Intercompany Commerce", *Business Trade & Technology Strategies*, 1 (1), Forrester Research, , Cambridge, MA, 1997.

"We're right at the centre of the new economy. ... Businesses are utilising the Internet to re-engineer the supply-chain. In the new economy, the Internet is the neural system. We're the skeleton – we make the body move."

- Fred Smith<sup>18</sup>

But so were its competitors.

#### The Competition

In January 2000, CBS MarketWatch Live reported that FedEx's express delivery business was maturing and was not growing as fast as it used to.<sup>19</sup> Furthermore, the industry was loaded with companies, local and global, that provided a myriad of transportation services to a wide range of businesses. Competition was fierce. All major transportation and delivery companies were betting big on technology. Although FedEx pioneered the Web-based package-tracking system, such systems became the industry norm rather than a competitive advantage.

The four leading companies in the international courier business were DHL, FedEx, UPS and TNT. Between them they held more than 90 per cent of the worldwide market.<sup>20</sup>

### UPS

Since 1986, UPS had spent US\$9 billion on IT and had formed five alliances in 1997 to disseminate its logistics software to EC users. However, while FedEx developed all its IS software in-house, UPS made a point in stating that it was not a software developer and that companies taking that route were "trying to go a bridge too far".<sup>21</sup>

In early 1998, UPS formed a strategic alliance with Open Market, Inc., a US-based provider of Internet software, to deliver a complete Internet commerce solution providing integrated logistics and fulfilment. They were also working with IBM and Lotus to standardise formats on their Website.

In 1999, UPS raised US\$5.47 billion through its initial public offering, the largest in the US IPO history. The company shipped more than 55 per cent of goods ordered over the Internet and offered over the full range of logistics solutions to its customers.

### DHL

In 1993, DHL announced a four-year US\$1.25 billion worldwide capital spending programme aimed at investing in handling systems, automation, facilities and computer technology. The company launched its Website in 1995. It was 25 per cent owned by Deutsche Post and 25 per cent owned by Lufthansa Airlines. Plans were under way for an initial public offering in the first half of 2001. Though the company dominated the UK market, it projected an increase in worldwide turnover of 18 per cent to US\$5.26 billion.<sup>22</sup>

### TNT

In 1998, TNT launched a Web Collection facility on the Internet. Later the same year, TNT launched the world's first global Price Checker service on its Website that allowed customers

<sup>&</sup>lt;sup>18</sup> Collingwood, H., 1999.

<sup>&</sup>lt;sup>19</sup> Adamson, D., "FDX Corp. Changes Name to FedEx", CBS MarketWatch Live, 19 January, 2000.

<sup>&</sup>lt;sup>20</sup> Murphy, D. and Hernly, K., "Air Couriers Soar Despite Mainland Gloom", South China Morning Post, 30 May, 1999.

<sup>&</sup>lt;sup>21</sup> Blackmon, D. A., "Ante Up! Big Gambles in the New Economy: Overnight Everything Changed for FedEx", The Wall Street *Journal Interactive Edition*, URL: http://www.djreprints.com/jitarticles/trx0001272701443.html, 4 November, 1999. <sup>22</sup> Exelby, J., "Interview – DHL UK Foresees Tough Market", URL: http://biz.yahoo.com/rf/000117/mq.html, 17 January, 2000.

to calculate the price of sending a consignment from one place to another anywhere in the world. Other applications were under development that would allow customers to integrate with TNT's on-line services. Then in 1999, TNT launched QuickShipper, a one-stop on-line access to TNT's entire range of distribution services, from pricing to delivery. This new service was to be integrated with existing on-line tools such as Web Collection and Price Checker.

Also in March 1999, TNT launched the express industry's first dedicated customer extranet, Customised Services environment. This offered regular customers easy access to detailed and personalised shipment information through the use of user IDs and passwords. With this came a host of service offerings.

While FedEx had pioneered many logistics solutions that had helped it to achieve economies of scale faster than its competitors, the advantages were quickly eroding as newer technologies became even more powerful and less expensive.

# The January 2000 Announcement

*"All of your transportation and logistics needs can now be met by one organisation – FedEx Corporation."*<sup>23</sup>

On 19 January, 2000, FedEx announced three major strategic initiatives:

- A new branding strategy that involved changing the Company's name to "FedEx Corporation", and extending the "FedEx" brand to four of its five subsidiary companies. The subsidiary companies became:
  - FedEx Express (formerly Federal Express)
  - FedEx Ground (formerly RPS)
  - FedEx Custom Critical (formerly Roberts Express)
  - FedEx Logistics (formerly Caliber Logistics)
  - Viking Freight (no change)
  - [See Exhibit 6.]
- Major reorganisations such that there would be one point of access to sales, customer services, billing and automation systems. With these consolidations, the Company announced intentions to form a sixth subsidiary called FedEx Corporate Services Corp. in June 2000 [see **Exhibit 7** for new Group structure]. The new subsidiary would pool together the marketing, sales, customer services, information technology and electronic commerce resources of the Group. The invoicing functions would also be combined for all the companies.
- Introduction of a new low-cost residential delivery service, FedEx Home Delivery, to be launched in the US.

Of significance was the merging of the two logistics operations (Caliber Logistics and FLEC) into FedEx Logistics. The two companies seemed to complement each other in terms of their service offerings and customer base. Both had a few of the same customers but many different ones. Furthermore, Caliber's presence was mainly in North America and Europe, while FLEC had expanded into other continents. FedEx Logistics brought together all the splintered operations of logistics in all the subsidiary companies, streamlining costs, presenting one menu of logistics service offerings to customers, and aligning R&D of systems upon common, agreed platforms. This reorganisation also brought about another major change in operations. It was no longer mandatory for the logistics business to use FedEx

<sup>&</sup>lt;sup>23</sup> Corporate Overview, FedEx Corporation, URL: http://www.fedexcorp.com/aboutfdx/corporateoverview.html, 20<sup>th</sup> January, 2000.

transportation as part of its solutions to customers. Being "carrier-agnostic" meant that FedEx Logistics would use FedEx transportation where it fitted, both in terms of cost and in terms of geographic coverage. The decision would also rest on customer preference and the kind of goods being transported. For example, Caliber was transporting fork-lift trucks, cars and steel plates that FedEx did not have the physical capacity to handle.

Combining the two operations brought together the IT expertise and the know-how of the logistics business. Under one CIO, standards were set for the development of systems on a worldwide basis, including vendor selection. In the past, regions developed their own solutions and operated in isolation. However, the Internet forced the Company to consolidate its systems and solutions as customers demanded global solutions. Through the IT groups located in Memphis, Leiden (Holland) and Singapore, the Company resolved to develop global systems for worldwide implementation, with functions such as multiple currencies and multiple languages. FedEx Logistics forecast a 70 per cent growth rate in the year ending 31 May, 2000. However, the business so far failed to generate any profit. The company aimed to build on its expertise in the five market segments: health care, industrial, high-tech, automotive and consumer.

The Company anticipated having to spend US\$100 million on these changes over three years. The intention was to take advantage of one of its greatest assets, the FedEx brand name; the name that customers could count on for "absolutely, positively" reliable service and cuttingedge innovation. The value of the brand had been ignored, particularly when the Company decided to change its corporate name to FDX in 1998. Realising its mistake, the renaming of the Company as FedEx Corporation and the extension of the brand to its subsidiaries fell in line with its intention to provide customers with an integrated set of business solutions. Customers wanted to deal with one company to meet their transportation and logistics needs.

Each subsidiary company was to continue operating independently, but collectively the Group would provide a wide range of business solutions. It was this collective synergy of solutions that FedEx believed would form the competitive advantage of the Company in the future. For customers, the benefits included easier means of doing business with FedEx. There was to be one toll-free telephone number, one Website, one invoice and account number, one sales team, one customer service team and a streamlined customer automation platform to handle electronic transactions for small and large businesses [see **Exhibit 6 and 7** for details of the changes following reorganisation]. The new organisation was aimed at helping businesses of all sizes to achieve their shipping, logistics, supply-chain and e-business objectives. However, analysts questioned whether the new Group structure would work, given that there would still be different teams of delivery and pick-up staff for the different operations. Hence, one person could pick up one package sent by ground and another person could pick up another package sent by express from the same company. Companies such as UPS, on the other hand, would have one person pick up both types of packages.

In addition to these changes, FedEx anticipated growth in consumer EC and planned to start a new service called FedEx Home Delivery (within the FedEx Ground subsidiary company) to meet the needs of businesses specialising in business-to-consumer e-tailing. FedEx had been successful in providing services to the business-to-business EC market. Now it aimed to achieve the same leadership status in the business-to-consumer EC market. However, expanding the residential delivery business was one segment that FedEx consciously made a decision not to pursue throughout the 1990s. This gave UPS the opportunity to lead in residential delivery services.

In late 1997, Smith was quoted as saying,

"We've made huge investments in our networks, and now that bow wave has passed. We think we have a good chance of harvesting a lot of that investment."<sup>24</sup>

In the two years that followed, the results of the Company showed little signs of a harvest. Was the January restructuring going to bring in the harvest? The announcement certainly served to tell investors that they were making some major changes to address some competitive issues. However, analysts took a pragmatic view to the announcement, saying that, "the proof is in the pudding".<sup>25</sup>

"Our biggest challenge is to correctly manage everything that's on our plate."

#### - Fred Smith<sup>26</sup>

Was the reoganisation going to leverage the power of the networks and the information and logistics infrastructures that FedEx had built? Did it provide the right ingredients to achieve the objectives of creating value for FedEx customers while at the same time improving profitability for FedEx? Given the speed at which technology and the marketplace were changing, would the new organisation structure be adaptable to the changing business environment? Were there better alternative solutions that the Company could have considered?

 <sup>&</sup>lt;sup>24</sup> Grant, L., "Why FedEx is Flying High", 10 November, 1997, URL: http://pathfinder.com/fortune/1997/971110/fed.html.
<sup>25</sup> Bazdarich, C., "What's in a Name?: Traders Swayed by Nominal Changes", CBS MarketWatch, 21 January, 2000, URL: http://cbs.marketwatch.com/archive...st.htx?source=htx/http2 mw&dist=na, February 2000.

<sup>&</sup>lt;sup>26</sup> Collingwood, H., 1999.

#### EXHIBIT 1 FEDEX'S RECORD OF SYSTEMS INNOVATIONS

- 1979 COSMOS (Customer Oriented Services and Management Operating System), a global shipment tracking network based on a centralised computer system to manage vehicles, people, packages, routes and weather scenarios on a realtime basis. COSMOS integrated two essential information systems: information about goods being shipped and information about the mode of transportation.
- 1980 DADS (Digitally Assisted Dispatch System) co-ordinated on-call pickups for customers. It allowed couriers to manage their time and routes through communication via a computer in their vans.
- 1984 FedEx introduces the first PC-based automated shipping system, later named FedEx PowerShip; a standalone DOS-based system for customers with five or more packages per day. The customer base was immediately transformed into a network that allowed customers to interact with the FedEx system and download software and shipping information.
- 1984 PowerShip Plus, a DOS-based shipping system integrated with customers' order-entry, inventory-control and accounting systems, for customers who ship more than 100 packages per day.
- 1985 FedEx was the first to introduce bar-code labelling to the ground transportation industry.
- 1986 The SuperTracker, a hand-held bar-code scanner system that captures detailed package information.
- 1989 FedEx launches an on-board communications system that uses satellite tracking to pinpoint vehicle location.
- 1991 Rite Routing demonstrates the value of a nationwide, centralised transportation management service.
- 1991 PowerShip PassPort, a Pentium-class PC system that combines best of PowerShip and PowerShip Plus for customers who ship more than 100 packages a day. (1,500 users)
- 1993 MultiShip, the first carrier-supplied customer automation system to process packages shipped by other transportation providers.
- 1993 FedEx ExpressClear Electronic Customs Clearance System expedites regulatory clearance while cargo is en route.
- 1993 PowerShip 3, a client-server shipping system for customers who ship three or more packages per day.
- 1994 The FedEx Website debuts at www.fedex.com, the first to offer on-line package status tracking so that customers can actually conduct business via the Internet.

- 1994 DirectLink, a software that lets customers receive, manage and remit payments of FedEx invoices electronically.
- 1995 FedEx Ship, a Windows-based shipping and tracking software allows customers to process and manage shipping from their desktop. (650,000 users) It extended the benefits of PowerShip to all FedEx's customers, providing software and toll-free dial-up to the FedEx network.
- 1995 FedEx launches the AsiaOne network, a transportation routing system.
- 1996 FedEx became the first company to allow customers to process shipments on the Internet with FedEx interNetShip, available through www.fedex.com. (65,000 users). This allowed customers to create shipping labels, request courier pick-ups and send e-mail notifications to recipients of the shipments, all from the FedEx Website.
- 1996 FedEx VirtualOrder, a software that links Internet ordering with FedEx delivery and on-line tracking. It also puts customers' catalogues on their Websites for them.
- 1997 FedEx introduces e-Business Tools for easier connection with FedEx shipping and tracking applications.
- 1998 FedEx Ship for Workgroups, a Windows-based software housed on a server that lets users share information, such as address-book information, access to shipping logs and a tracking database. The server can be connected to FedEx via either modem or the Internet.
- 1998 PowerShip mc, a multi-carrier electronic shipping system.
- 1999 The FedEx Marketplace debuts at www.fedex.com, providing easy access to on-line merchants that offer fast, reliable FedEx express shipping.
- 1999 The EuroOne network was launched to link 16 cities to FedEx's Paris hub by air and another 21 cities by road-air. Like AsiaOne, this was a transportation routing system.
- 1999 FedEx MarketPlace, a convenient link to on-line shopping. Through this new portal, shoppers had one-click access to several top on-line merchants that utilised FedEx's delivery services, including Value America, L. L. Bean, and HP Shopping Village (Hewlett-Packard's consumer EC Website).
- 1999 FedEx made a deal with Netscape to offer a suite of delivery services at its Netcenter portal. This entailed automatically integrating Netscape with the FedEx site. Although customers of Netscape could choose not to use FedEx, the use of an alternative shipper meant that they would not benefit from the efficiencies of the integrated systems. Considering the Netscape Netcenter had more than 13 million members, the deal was a winner for FedEx.

(NB. PowerShip had 850,000 on-line customers worldwide; PowerShip, PowerShip 3 and PowerShip PassPort were hardware-based products.)

#### **EXHIBIT 2**

**Dell Computers** pioneered the direct selling model in the computer industry and succeeded because it was able to keep inventory very low. FedEx provided the system to track and monitor the assembly of each PC on order. Because the assembly line could be in any one of five manufacturing locations around the world, however, FedEx described itself as the conveyor belt for that manufacturing line. FedEx was a key partner for Dell, allowing customised, built-to-order products to be delivered within days of a customer placing an order, a huge advantage in an industry whose components become obsolete at the rate of two per cent per month.

Five years ago, **National Semiconductor Corp.** decided to outsource its warehousing and distribution to FedEx. By 1999, virtually all of NatSemi's products, manufactured by six factories (three being subcontractors) were shipped directly to FedEx's distribution warehouse in Singapore. Hence, FedEx had control over the goods, the warehouse and the despatch of orders (via FedEx transportation, of course). Having complete visibility of NatSemi's order systems allowed FedEx to reduce the average customer delivery cycle from four weeks to two days, and distribution costs from 2.9 per cent of sales to 1.2 per cent. FedEx could pack and fulfil orders without NatSemi having to notify them. In effect, it became the logistics department of NatSemi. Furthermore, this arrangement enabled NatSemi to dispense with seven regional warehouses in the US, Asia and Europe. NatSemi reported savings in the region of US\$8 million over the five-year period [see Exhibit 4].

For **Omaha Steaks**, when orders were received, they would be relayed from Omaha Steaks' IBM AS/400 to its warehouse and simultaneously to FedEx by dedicated line. FedEx would generate the tracking and shipping labels and the orders would be delivered to one of FedEx's regional hubs for onward delivery.

**Cisco Systems** was a Silicon Valley Internet hardware maker that transacted 80 per cent of its business over the Web. At the end of 1999, FedEx had signed an agreement with Cisco to coordinate all of Cisco's shipping over the next two years, and to gradually eliminate Cisco's warehousing over the following three years. How could this be possible? Cisco had factories in the US, Mexico, Scotland, Taiwan and Malaysia. The finished parts were stored in warehouses near the factories awaiting completion of the whole order before it was despatched to the customer. But Cisco did not want to build more warehouses, pay for reshipping and hold massive volumes of inventory in transit. So the solution was to merge the orders in transit. As soon as parts were manufactured, they would be shipped to customers. Once all the parts had arrived at the customer's site, assembly would take place, thus doing away with warehousing. (This was known as the "merge-in-transit" programme offered to companies such as Micron Computers.) FedEx created a unique system for Cisco that would automatically select routes and pick the most effective and economical mode of transportation, which included carriers other than FedEx's fleet of trucks and planes. Just as critical, however, was that the real-time information status of the synchronisation operation was constantly available on the Internet.

#### EXHIBIT 3 FEDEX SOLUTIONS FOR THE ENTIRE SUPPLY-CHAIN



The FedEx Integrated Logistics Solution



EXHIBIT 4 EXAMPLE OF INTEGRATED CUSTOMER ORDER PROCESS MANAGEMENT: NATIONAL SEMICONDUCTOR

The information flow value of integrated services to NatSemi's customer

Time Duration: Two Business Days

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#### EXHIBIT 5 SUBSIDIARY COMPANIES OF FEDEX FOLLOWING THE ACQUISITION OF CALIBER SYSTEMS INC. IN 1998

- Federal Express was the world leader in global express distribution, offering 24-48-hour delivery to 211 countries that comprised 90 per cent of the world's GDP. In 1998, FedEx was the undisputed leader in the overnight package delivery business. It had a fleet of 44,500 ground vehicles and 648 planes that gave support to the US\$14 plus billion business. It had 34,000 drop-off locations, and 67 per cent of its US domestic shipping transactions were generated electronically. Goods shipped ranged from flowers to lobsters to computer components. This company was constantly running in crisis mode, seeking to move packages through all weather and conditions to fulfil shipments overnight. The underlying philosophy that ensured high service levels was that every package handled could make a difference to someone's life. The company handled nearly three million shipments per day in 1998.
- **RPS** was North America's second-largest provider of business-to-business ground smallpackage delivery. It was a low-cost, non-union, technology-savvy company aquired with the Caliber purchase. The company specialised in business-to-business shipments in one to three days, a service that FedEx could not attract because it was unable to offer prices low enough to attract enough volume. Being a 15 year-old company, RPS prized itself on having one of the lowest cost models in the transportation industry. It employed only owner-operators to deliver its packages. In terms of volume and revenue growth, RPS out-performed FedEx. For the future, plans were to grow RPS's business-to-consumer delivery service to take advantage of the growth of electronic commerce, thus carving a niche in the burgeoning residential delivery market. In 2000, the company owned 8,600 vehicles, achieved annual revenues of US\$1.9 billion and employed 35,000 people, including independent contractors. It handled 1.5 million packages per day.
- Viking Freight was the first less-than-truckload freight carrier in the western United States. The company employed 5,000 people, managed a fleet of 7,660 vehicles and 64 service centres, and shipped 13,000 packages per day.
- **Roberts Express** was the world's leading surface-expedited carrier for non-stop, timecritical and special-handling shipments. The service offered by Roberts Express has been likened to a limousine service for freight. In 1999, the company handled more than 1,000 shipments per day. It was the smallest company within the FedEx Group. Urgent shipments could be loaded onto trucks within 90 minutes of a call and shipments would arrive within 15 minutes of the promised time 96 per cent of the time. Once loaded, shipments could be tracked by satellite every step of the way. Goods such as works of art or critical manufacturing components often required exclusive-use truck services. Exclusivity allowed customers greater control but at a price. This service was an infrequent necessity for most customers. Roberts had exclusive use of a handful of FedEx aircrafts, but the company still had to pay for use and for crew time.
- Caliber Logistics was a pioneer in providing customised, integrated logistics and warehousing solutions worldwide. The acquisition of Caliber in January 1998 brought with it over-the-road transportation and warehousing capabilities. Since the acquisition, FedEx tried to move away from traditional logistics offerings to providing total supply-chain management solutions, and Caliber Logistics was renamed FDX Logistics. To the customer, this meant that FedEx could provide warehousing services, but only if this was part of a bigger deal. In September 1999, FedEx bought its first freight forwarder, Caribbean Transport Services (formerly GeoLogistics Air Services). Caribbean had a strong overseas network. FDX Logistics was the parent company of FedEx Supply-chain Services and Caribbean Transportation Services.

#### EXHIBIT 6 BEFORE AND AFTER THE REORGANISATION

BEFORE	AFTER
Multiple brands under FDX umbrella	A single branding system leveraging the power of the FedEx brand so more customers can use FedEx reliability as a strategic competitive advantage
Separate sales force with directed co- operation	A single, expanded sales force especially targeting small and medium-sized businesses, cross-selling a wide portfolio of services and pricing schemes
Multiple invoices and account numbers	A single invoice and single account number from FedEx
Multiple automation platforms offering all FDX services	Streamlined customer automation systems to handle electronic transactions and database management needs for small and large businesses
Separate customer service, claims trace functions	Single customer service, claims and trace functions by calling 1-800-Go-FedEx® (800- 463-3339) or visiting its Website at www.fedex.com.

EXHIBIT 7 GROUP STRUCTURE



Following the January 2000 Reorganisation