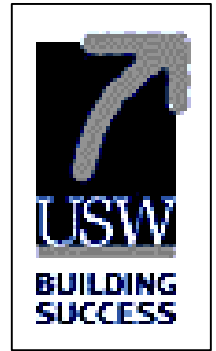


United Parcel Service: Moving at the Speed of Business

1. What is UPS's business model? Does it move at the "speed of business"? Explain.
2. Who is UPS's target market? What service(s) is UPS providing?
3. Who are UPS's competitors? What are the limits of their business models?



UPS has been rated "America's most admired mail, package and freight delivery company" for sixteen consecutive years by surveys conducted by Fortune magazine, and in 1998 was named "world's most admired" in the same category. United Parcel Service (UPS) is one of America's ten largest airlines. It is the largest private user of cellular technology on earth. Its drivers' hand-held computers make a million wireless calls a day. UPS also handles about six percent of the nation's daily gross domestic product. The \$24 billion company (see Table 1 for historical financial data) has 330,000 employees, delivering 12 million packages a day to seven million customers. Company revenues for the quarter ending March 31, 1999, totaled \$6.33 billion, up 8% compared to the \$5.86 billion reported for the same period in 1998. Net income for the 1st quarter rose to \$499 million compared to the \$352 million reported for the same period in 1998, a 42% jump. As the world's largest package distribution company, UPS transports more than 3 billion parcels and documents annually (See Table 2 for industry data). UPS operates more than 500 aircraft, 157,000 vehicles and 2,400 package and sorting centers to provide service in more than 200 countries and territories (see Appendix 1 for facts). The company is committed to serving the needs of the global marketplace. James P. Kelly,¹ chairman and CEO, explained the goals of UPS in the new global information world:



James P. Kelly, CEO

Microsoft has an advertising slogan that asks: "Where do you want to go today?" At UPS, we use the tag line -- "Moving at the Speed of Business." All of us should be asking: "Where do our customers want to go tomorrow, and how fast can we get them there?" I think about that every day. Wouldn't it be great if there was just one answer? But there isn't -- there are as many answers as there are customers. One thing that is certain, however, is that it's no longer enough to simply keep pace with customer demand -- we must be able to anticipate needs and deliver solutions to problems and issues ... as they emerge.

"How much better can we get?" To which I reply, one trillion dollars. That's the value of merchandise sitting in warehouses across the United States at this very moment. Logistics can take that static situation and make it dynamic. Today, for many customers, the UPS fleet has assumed the warehouse function. Parts and components come off our vehicles at one end of the operation and final products are loaded onto other UPS trucks at the other end for delivery to customers. It keeps the supply chain in continuous motion. And, of course, it must be connected by information that provides the confidence that bricks and mortar and security guards did 25 years ago.

I don't believe that warehouses can or should be totally eliminated. But if we can reduce that trillion dollars

¹ **June 17, 1998** -- [James P. Kelly](#), Chairman and CEO of United Parcel Service, delivered an address at the Warehouse of the Future Conference in Phoenix, Arizona. During his speech Kelly discussed global commerce and the creation of value-based logistics solutions based on globalism, connectivity and service.

of suspended merchandise even by half, it would represent \$500 billion in value redeemed. That value equation really hit home in the PC industry when Dell Computer announced its last quarterly earnings -- up 54 percent ... more than the four other top vendors combined. Here's the statistic that really jumped out at me: Dell had just eight days of product inventory on hand. That was less than one-fourth what it was three years ago. Gateway, Compaq, IBM, Hewlett Packard and other vendors are tightening their own supply chains and developing other strategies to reduce Dell's advantage. But the lesson is clear: in a business widely regarded as commoditized, superior logistics management can suddenly and dramatically tilt the balance of competition. That's part of the new model of commerce.

The UPS Early Years

In 1907 there was a great need in America for private messenger and delivery services. The US Postal Service would not begin the parcel post system for another six years. UPS founder, 19-year-old James E. ("Jim") Casey, borrowed US\$100 from a friend and established the American Messenger Company in Seattle, Washington. Despite stiff competition, the company did well, largely because of Jim Casey's strict policies: customer courtesy, reliability, round-the-clock service, and low rates. These principles, which guide UPS through today, were summarized by Jim's slogan: "Best Service and Lowest Rates."

The fledgling company soon focused on package delivery for retail stores, and in 1913 merged with a competitor, Evert ("Mac") McCabe, to form Merchants Parcel Delivery. Charles W. ("Charlie") Soderstrom joined the firm to manage the company's growing fleet of delivery vehicles. By 1918, the company pioneered the concept of consolidated delivery -- combining packages addressed to a certain neighborhood onto one delivery vehicle. This way, manpower and motorized equipment could be used more efficiently.

Growth, ingenuity, and change characterized the decades of the 1920s and 1930s. UPS provided delivery services in all major West Coast cities, and a foothold was established with a consolidated delivery service in the New York City area. Many innovations were adopted, including the first mechanical system for package sorting, and a 180-foot-long conveyor belt installed in Los Angeles. The name United Parcel Service was adopted. "United" because shipments were consolidated and "Service" because, as Charlie Soderstrom observed, "Service is all we have to offer." All UPS vehicles were painted the now familiar Pullman brown color, selected by Charlie Soderstrom because it was neat, dignified, and professional.

Developing Common Carrier Services

By the early 1950s it was clear that contract service to retail stores was limited, and UPS managers began looking for new opportunities. Retail stores began to encourage customers to carry home their packages, rather than have them delivered. This trend continued after the war as the population began migrating into the suburbs, where large new shopping centers with ample parking nearby, made it easy for customers to drive home their own packages. UPS decided to expand its services by acquiring "common carrier" rights to deliver packages between all addresses -- for any customer, private or commercial. This decision placed UPS in direct competition with the US Postal Service. In the 1950s, Federal authority was needed for each state border that was crossed, and each state had to grant permission for the movement of packages within its borders. Through 1975, UPS systematically fought to obtain authorization in all 48 contiguous states until it forged the "Golden Link" that made national parcel delivery service a reality.

The demand for air parcel delivery increased in the 1980s, and federal deregulation of the airline

industry created new opportunities for UPS. Deregulation caused established airlines to reduce the number of flights or abandon routes altogether. To ensure dependability, UPS began to assemble its own jet cargo fleet -- the largest in the industry. UPS entered the overnight air delivery business and by 1985, UPS Next Day Air service was available in all 48 states and Puerto Rico. Alaska and Hawaii were added later. That same year, UPS entered a new era with international air package and document service, linking the US and six European nations.

In 1988 UPS received authorization from the FAA (Federal Aviation Administration) to operate its own aircraft, thus officially becoming an airline. Today, UPS Airline is among the ten largest airlines in the US. UPS Airline features some of the most advanced information systems in the world, like the COMPASS (Computerized Operations Monitoring, Planning and Scheduling System) which provides information for flight planning, scheduling, and load handling. The system, which can be used to plan optimum flight schedules up to six years in advance, is unique in the industry.

International Growth

In the 1980s UPS entered the international shipping market, establishing operations in the Americas, Eastern and Western Europe, the Middle East, Africa, and the Pacific Rim. Today, UPS operates an international small package and document network in more than 200 countries and territories, spanning both the Atlantic and Pacific oceans. With its international service, UPS can reach over four billion people, double the number of people who can be reached by any telephone network. In early 1999, UPS expanded operations to 18 new cities inside China. International package revenues climbed 10.2% to \$839 million compared to the \$761 million reported during the 1st quarter of 1998. This increase was fueled by an 18.9% increase in express volume in the Asia/Pacific operation and 19.4% growth in express and pan-European volume in the European operation. Operating profits for international package operations increased from \$11 million in 1998 to \$44 million.

United Parcel Service began providing transportation and distribution consulting services for customers in 1994. That year, fifteen cross-functional teams – eleven in the U.S. and four international – were created, each having a foundation in logistics, finance, and technology. These teams were charged with developing creative transportation-related solutions for UPS's largest customers in the U.S. and abroad. In late 1997, after having engaged with over 100 clients, UPS created a new, wholly owned subsidiary, UPS Professional Services, Inc., to further broaden the group's scope of operations. UPS intended to use information technology to support their global efforts.

In April, 1999, UPS restructured its UPS Logistics Group, a wholly owned subsidiary of United Parcel Service of America, Inc., into the Transportation Services Group. The new group is comprised of UPS Worldwide Logistics, UPS Truck Leasing, Worldwide Dedicated Services, Martrac, Roadnet Technologies, SonicAir and Professional Services. The UPS Logistics Transportation Services Group includes the new Transportation Resource Center (TRC), located in Norcross, GA. TRC enables the Transportation Services Group to provide integrated solutions for customers. TRC provides design and engineering expertise, including information technology support, network optimization, logistics coordination and carrier relations.

UPS truck leasing, one of the nation's largest truck leasing companies, provides full-service leasing, commercial equipment rental, and customized maintenance and fuel programs. Worldwide dedicated services specializes in providing dedicated transportation solutions that

involve customized equipment, information systems, and experienced dedicated fleet management. Martrac offers a broad range of transportation management services and operates the largest trailer-on-flat car fleet of temperature controlled trailers in the nation. Individually, the three units offer transportation services in their areas of expertise. In addition, as part of the transportation services group, these companies will provide transportation services transcending company lines. Revenues for non-package operations jumped 26.6%, from \$206 million in 1998 to \$261 million this year. This increase is due in large part to the continued growth and expansion of the UPS logistics group, which experienced an operating profit increase of 40.8%. Overall, operating profits for this segment declined from \$35 million to \$25 million.

Technological Developments

By 1993, UPS was delivering 11.5 million packages and documents a day for more than one million regular customers. With such a huge volume, UPS relies on technology to maintain efficiency, to keep prices competitive, and to provide new customer services. For example, UPSnet is a global electronic data communications network that provides an information processing pipeline for international package processing and delivery. UPSnet, which has more than 500,000 miles of communications lines, including a UPS satellite, links more than 1,300 UPS distribution sites in 46 countries. In one decade, UPS has spent nearly \$11 billion in information technologies. According to Kelly:

The question is how do we keep our enterprises moving forward in the information age? I believe the answer is partly technology. But the other part of the answer is putting that technology in human hands... Training people to use and understand technology to amplify the human condition. When we do that right, we can't help but create innovation... dramatic life-changing innovation.

UPS is moving into electronic commerce in many ways, leveraging our unique position as the physical link between buyer and seller. Our customers today regard us as a critical part of their supply chains. You will see us partnered with many of today's leading software companies...like PeopleSoft, iCat, IBM and others. Information technology has not changed our corporate mission, but it has fundamentally altered the way we operate our business. Our goal is to be as prominent in the virtual world as we are in the physical world.

Kelly had taken the Internet challenge on aggressively:

The answer has to do with the fact that the real information revolution isn't about computing. It's about connecting. And like other revolutions before it, this one brings power to the people. Or power to the person. The consumer sitting at the computer today... who wants things just so ... and can make it happen - finally, at long last, can make it happen - with the power of voice.

By early 1999, UPS was connected with some 15,000 customers who had downloaded UPS's Internet Tools for integration in to their web sites. UPS is the shipping industry leader in e-commerce. A Zona Research study found that UPS delivered 55 percent of online purchases during the 1998 holiday season. In addition to shipping for six of the top 10 Internet retailers, UPS handles the largest percentage of business-to-business movement of production inputs and inventory.

Keys to Successful Logistics

UPS's value-based logistics solutions require three key elements for success in today's world. According to Kelly, they were globalism, connectivity and service. He explained:

Globalism means more than doing business in several countries. It means having the capability to provide a

preferred standard of service to any customer, anywhere in the world. A big order. And that's possible only if you're plugged into a global supply chain. If, as a supplier or customer, you are plugged in, you can shop the world as easily as strolling through a bazaar. Do you have to set up facilities and staffs all over the world to do that? Not if you have the right logistics solution provider. That's a partner who understands how things get done in every country where you have customers -- or hope to. Local culture... customs clearance... regulations and taxes... business hours and holidays. A successful global logistics formula requires not just knowing about these issues but working with them every day.

The second requirement for logistics solutions is connectivity. When you add the dimension of connectivity to information and logistics, you have a powerful formula for success in E-Commerce. It's important that this connection be both physical and virtual.

UPS is unique in many respects. But in the context of logistics solutions, our most important differentiator is that we are directly connected -- both physically and electronically -- to virtually every business and home in America and a growing percentage of businesses in 200 nations and territories around the world. Imagine the power of that kind of connectivity in developing new supply chain solutions that do not exist today. Because of the way our business has developed over nine decades -- and because we invested heavily in advanced information and communications technology -- UPS has become a vital part of the global commerce value chain.

The massive IT infrastructure we've constructed is fed by data from millions of direct daily contacts with businesses and consumers worldwide. That information infrastructure is also allowing UPS to fulfill its strategy of being as prevalent and user-friendly in the virtual world as we are in the physical world. Over the year, we've been especially aggressive on this front, rolling out services such as UPS Document Exchange and Internet Tools. We've also forged a number of electronic-commerce alliances with companies like: IBM, AT&T, iCat, Harbinger, Open Market, Pandesic, Lotus, and PeopleSoft... to make sure that UPS shipping services are now standard features in their software packages used to create Internet-based catalogs and business-to-business shopping malls. Our presence in these various channels has many implications, none more important than UPS's goal to be everywhere our customers are... and in the context they deem valuable.

The final requirement for logistics solutions is really the first requirement for any successful business -- one that we cannot afford to overlook in the push toward the new commerce model. It's service to customers. For all our new technology and logistics prowess, the reality of my business comes down to a few simple moments of truth: a UPS driver handing a package to someone; a service rep handling a customer's phone call; a salesperson calling on one of our accounts. People make our business run.

Every cent UPS spends on technology systems... on operations systems... and on training and development... is directed toward the goal of providing the highest possible service to each customer. There are over 12 million opportunities a day for UPS people to impact our customers' perception of service. Their decision to use us instead of a competitor can be either reinforced or undermined each day. Even in this global, mass-customized, fast-moving world, service to the customer still lies at the heart of every successful company. If we ever forget that, all the technology and logistics prowess in the world won't do us any good.

The Evolving UPS Strategy

John Alden,² vice chairman of UPS, described the approach UPS had taken in developing its customer strategy:

Perhaps I can offer some lessons we are learning at UPS, as we "vary our form" from a traditional package delivery company into a global information service provider. What we're learning is that stretching brand

² *February 12, 1999* -- John Alden, Vice Chairman of United Parcel Service, addressed the Adcraft Club of Detroit. During his talk, Alden discussed the distinct challenges and opportunities associated with expanding the attributes of an entrenched brand. As the marketplace changes, the value of stretching a brand becomes even more important.

elasticity requires three indispensable elements. Those elements are 1) a meaningful promise to customers, 2) a distinct vision of the future, and 3) the commitment of everyone in the organization. There's nothing new about these three elements. In fact, they're pretty traditional. But how we rethink them, and how we apply them in the future, will most certainly change and call for innovation.

Moving at the speed of business

John Alden described the evolution of UPS's market position:

Even though we've been around since 1907, our public profile remained pretty low for our first 70-plus years. In fact, some would argue it still remains relatively low today. At UPS, our promises have grown with our customers' expectations. From the 1930's through the 1970s, our brand promise was directed squarely at customers' most important concerns, "Best Service, Lowest Rates." Our slogan then spoke of reliability and affordability, and we delivered on that promise. Until the early '80s, we did very little in the way of public relations, advertising, and even marketing. As a privately held company, operating in a largely regulated industry, we never felt compelled to talk a lot to the outside world. We never had to perform the Wall Street waltz. It was counter-cultural for UPS to draw too much attention to itself. Our philosophy was and still largely is "manage your service and your people, and the brand will take care of itself."

In the '80s, we built on that reliability and affordability and took our business in new directions. We invested billions in information technology, a fleet of airplanes, and many other improvements across our vast system. We added new services, expanded our business parameters, and challenged ourselves to build a global operations network. We learned a big expensive lesson in the process; a strong brand can sometimes be a detriment, because public perceptions are hard to change. Even though we largely exceeded the premium express services offered by newer competitors, most of the public's service perceptions of UPS remained the same. That perception was based on our dependable but routine ground delivery.

It wasn't enough for UPS to invest and change and expand. We had to let customers "observe" that UPS could do a lot more for them than they realized. So as we repositioned the UPS brand, we embarked on a very extensive campaign to communicate it to the marketplace. That process began in 1985 with TV and print advertising designed to differentiate UPS from our overnight delivery competitors. The ads emphasized service excellence and value, rather than price. The ads also capitalized on our greatest strength -- the total UPS system. The tagline for that campaign was "UPS. The Tightest Ship in the Shipping Business." The "Tightest Ship" ads gave us a brand platform from which to launch some critical new products including: 100 percent U.S. coverage, on call pickup, international service, next day air letter, and 10:30 a.m. guaranteed.

As successful as the "Tightest Ship" campaign proved to be, we knew we couldn't rest on that specific message. Our industry was changing too fast to be one-dimensional. Our competitors weren't standing still either. So in '93, we took our advertising in a new direction that redefined reliability in terms of more people relying on UPS for package delivery than anyone else. That led to a new tagline, "UPS. The Package Delivery Company More Companies Count On." I'll be honest with you; that campaign just didn't connect with our customers. We do a lot of customer focus groups and customer satisfaction and awareness surveys to gauge awareness and effectiveness of our various ads. Those results, along with sales and marketing intelligence, showed us that the "More Companies Count On" campaign was coming up flat.

Meanwhile, external pressures like outsourcing, global deregulation, and the critical role of information management, all combined to bring urgency to the package delivery business. So in 1995, we switched gears and launched a whole new ad campaign built on four strategic pillars. They are 1) Globalism, 2) Timeliness, 3) Flexibility, and 4) Technology. That campaign is the one we're still using today. It's "UPS. Moving at the Speed of Business."

"Moving at the Speed of Business" conveys a fundamentally changed company. It's a company performing with a sense of urgency in an environment of rapid and continuous change. It's a company to which flexible and innovative solutions are as important as reliable, on-time deliveries. This particular campaign has enabled us to communicate the power and possibilities of the UPS brand in customer-driven, information-

based, time-definite delivery services. And it adheres to the second major element for stretching a brand; it describes a distinct and compelling vision of the future.

The shift to a pull-oriented business model

The UPS business model has changed. Jim Kelly³, chairman and CEO, explained the UPS shift:

To begin with, we must recognize that there is an ongoing shift in the balance of power in the commerce model, from suppliers to customers. Driven by the customer-empowering capabilities of e-commerce, many companies are moving from a traditional, push-oriented business model...where manufacturers, suppliers, distributors and marketers have most of the power...to a customer-driven pull model. In the pull model, customers use electronic connections to pull whatever they need out of the system.

The old "push" model involved a linear flow of commerce that kept many members of the supply chain relatively isolated from end users. You know the process: At one end of the supply chain is the raw materials supplier, which is connected to a distributor, which is connected to a retailer, and finally to the end customer. Although we all liked to talk about the customer being king, the truth is that customer needs were only part of the equation under the push model. By the time customers' needs were filtered through the agendas of all the members of the supply chain, the production cycle ended up serving suppliers every bit as much as customers.

With the new customer-driven pull model, it's no longer a linear process. The new supply chain involves each participant scrambling to establish direct electronic connections to the party who pays - the end customer. In the process, electronic supply-chain connectivity gives end customers the opportunity to become better informed...to research and direct suppliers...and ultimately have a direct voice in the functioning of the supply chain.

The new business model creates a much more efficient supply chain, and a more efficient supply chain benefits both customers and manufacturers. You carry fewer inventories. You get your products to market faster. And those products are better aligned to customer needs. There may be no better lesson of the benefits of the pull-oriented model for manufacturers than Dell Computer. Most of you know the story. Dell makes its computers to order, relying on a very tight electronic supply chain to respond instantly to customer orders. Using Internet connections, Dell sends out electronic messages every two hours to its suppliers to alert them to the latest supply orders. Suppliers also get regular updates on the company's inventory levels and production plans. As a result, Dell's speed in customizing and delivering products is unmatched in the computer industry. And Dell's average eight days of inventory on hand compares very favorably to the 26-day level of their biggest competitor.

Leaner inventory. Lower costs. Better customer response. These are three good reasons why manufacturers should prefer letting customers do the pulling. This new model doesn't mean that all middlemen in the supply chain have to go away. But all members of the supply chain have to use electronic connectivity to respond more directly - and more efficiently - to the needs of end users. Whether that means integrating the supply chain so that it appears to the end user as one, virtual company, or bypassing middlemen altogether to forge direct connections to customers, it doesn't really matter. The point is, letting customers wield most of the power benefits both suppliers and customers.

In the mid-1980s, UPS began shifting its emphasis from operations efficiency and reliability to a customer orientation, focusing primarily on customer needs. UPS developed customer

³ **November 9, 1998** -- [James P. Kelly](#), Chairman and CEO of United Parcel Service, spoke at the 72nd Annual Convention of the National Electrical Manufacturers Association in Atlanta, Georgia. He spoke about empowering businesses with e-commerce and how UPS is harnessing the potential of the new pull-oriented technology to offer better service to customers.

information services, such as TotalTrack and MaxiShip. TotalTrack, based on a nationwide cellular mobile data system, provides customers with tracking information for all bar-coded air and ground packages. MaxiShip let customers manage the entire distribution process, from the rating and zoning of packages, to preparation of user-defined management reports. By 1999, a new package of UPS OnLine Tools included seven advanced shipping and logistics applications that provide businesses with the most extensive web-based transportation technology solutions to date. Specifically, UPS OnLine Tools include:

Enhanced Tracking- Enables shippers (and their customers) to track packages using their own internally generated reference number (e.g., a P.O. number). Embedding UPS enhanced tracking functionality into a Web site improves customer service and reduces costs by encouraging receivers to track their shipments online, rather than calling a phone center. Embedding Reference Number Tracking also encourages a web merchant's customer to come back to its site to check order status, which provides opportunities for further sales and marketing.

Published Rate & Service Selection- Enables a merchant's customers to compare UPS published rates for different levels of UPS service and select the service that best meets their needs.

Shipping & Handling- Enables merchants to customize their rate tables to include a handling charge, enabling the buyer to compare total shipping and handling charges for different UPS service levels.

Address Validation- Catches discrepancies in city-state-ZIP code combinations and helps companies improve customer service and reduce costs by ensuring that shipping addresses are correct at the point of order entry – before the order has left the shipping dock.

Time-in-Transit- Provides the buyer with the time-in-transit in business days for UPS ground shipments between any two postal codes within the continental U.S. This information helps the buyer choose the best UPS delivery option to meet their needs.

Service Mapping- Generates a color-coded map displaying UPS ground transit time for any origin ZIP code within the continental U.S. Service Mapping is a valuable tool for just-in-time inventory planning.

Electronic Manifesting- Enables customers who use a non-UPS OnLine compatible shipping system to upload shipment manifest information to the UPS mainframe, which is required for reference number package tracking. This enables UPS customers to designate their own tracking number, such as a purchase order or invoice number, to shipments.

UPS invested heavily to make the needed changes in IT to support its new business model. Kelly explained:

Over the past 10 years, UPS has spent over \$11 billion on information technology systems and services that allow us to compete in the digital age, and to provide the electronic connectivity and flexibility our customers demand of us. It's an investment that has allowed us to connect with customers in a number of different ways. We connect through online shipping and tracking services, through mainframe to mainframe communications, by integrating our shipping and tracking functionality into the software packages of some of today's leading e-commerce vendors, and through a suite of secure electronic delivery services. This investment in technology has produced a two-way street of loyalty. One, we've shown loyalty to our customers by creating a range of open, non-proprietary electronic commerce services. In other words, we're going to the places our customers do business, as opposed to trying to drive them to those places that are easiest for us to serve them. Customers have reciprocated in a big way. Those who are connected

electronically to us tend to increase their shipping volume by 10 to 20 percent.

Of course, in addition to trying to connect customers in the digital world, there are many other ways for all of us to show our loyalty to customers. Examples include listening to customers, aligning our organizations to meet customer needs, and treating and valuing customers as assets. These will never fall out of vogue.

We at UPS believe that one of the most critical elements is loyalty; and responding quickly and effectively to a service failure. Whether we're serving our customers or our employees, it's unrealistic to think we're going to deliver 100 percent on the mark every time. That applies whether we're in the package delivery business or any business. We're going to make mistakes. Communication is going to break down at times. Human nature and even Mother Nature can also periodically conspire against us. What's important is correcting the situation when things go wrong.

UPS has the physical infrastructure to cover the world. To build the virtual infrastructure system as well, UPS now spends about a billion dollars each year on information technology - more than on trucks. As Kelly explains:

UPS saw we had to revolutionize along with the revolution. And we jumped in with both feet. In the past few years, we turned our business model on its head and embraced the pull model of e-commerce. We built both a physical and a virtual Difference Engine - an infrastructure for direct connections with millions of customers.

In just the past couple of years, we've rolled out new e-commerce services, including one that lets customers connect their mainframe to ours to manage their production cycles, fulfillment, payables, receivables and customer care. Another that lets online customers ship and track up to 100 packages at a time; and a new suite of secure electronic delivery services that let companies send electronic documents that are validated, digitally signed and third-party verified. Our e-commerce philosophy is centered around the notion that customers will be the ultimate drivers of the supply chain - pulling what they need from it ... when they need it ... how they need it ... and on what terms and conditions.

That's why we've embraced an open-systems strategy ... making UPS shipping systems and functionality available in the places where customers do business rather than forcing customers to come to us. For instance, right now on the Internet you can find UPS functionality built into over 15,000 business web sites. We've also partnered with some of the nation's leading e-commerce systems providers to offer comprehensive solutions. These solutions help integrate UPS tracking and shipping functionality into our customers' supply chains. They essentially let end users tie together their electronic UPS shipping data with their manufacturing systems, inventory control, raw material suppliers and sales functions. In the process, they can transform their own supply chains from old-fashioned push systems to customer-driven, pull models. We feel very bullish about our prospects in this new commerce revolution.

We're in a unique position ... both from a sense of scale and connectivity. Our investment in the new commerce model ... in truly accepting the premise that the customer is king ... is starting to show strong returns. Already, more than half our business comes from customers connected to us electronically. And once these customers start using UPS online services, they tend to increase their shipping volume by 10 to 20 percent, and they tend to stay more loyal to UPS over the long haul. People are loyal if you give them the power to be.

While we have made great strides in positioning the company as a technology leader, many customers still don't know that. UPS has invested more than \$10 billion in technology over the past decade, and we spend more on computers and software each year than we do on trucks and airplanes. Many customers don't know we operate North America's most extensive cellular communications network, or that we are a major logistics consultant for the likes of Allied Signal, General Motors, and Daimler-Chrysler. Many customers don't know we're the preferred carrier for the bulk of the electronic commerce retailers in this country. In fact, we are still fighting the battle to be recognized as a major player in e-commerce. This is true even though Zona Research indicated UPS moved more than half of all the goods purchased online this past holiday season.

Along with its e-commerce connectivity, UPS has continued to expand its offerings, from pricing and service options, to whole new categories of business. For example, *inventory express* is a contract logistics management service in which UPS stores the customer's merchandise, then ships it as needed "just in time." UPS Worldwide Logistics assembles services based on the customer's individual needs, which might include freight payment, customs clearance, warehousing, carrier selection, rate negotiation, tracking, information systems, electronic data interchange, fleet management, order processing, and inventory control. To further expand UPS business opportunities, the UPS professional service group helps customers reconfigure their shipping needs to take advantage of small package delivery capabilities. Examples of its new package development activities are described in appendix 3.

Using the Internet for global brand development

UPS's vision of the future has moved far beyond package delivery. While package delivery is its core business, the UPS of the 21st century planned to be a global facilitator of commerce. It planned to be a mover of goods, information, and funds. John Alden explains:

Providing a distinct and compelling vision of the future is even more challenging when you apply it to the international arena. Until recently, that's where we had very low brand awareness. Ultimately, we want our brand to mean the same thing around the world. But we also realize until we develop the recognition, we have to initially take a more segmented approach.

Our international branding efforts are starting to bear fruit. Our global business is gaining strong momentum, producing over \$3 billion in revenues last year. Our worldwide sponsorship of the Olympic Games has also prompted greater brand recognition around the globe. I mentioned earlier that good branding should reinforce a strong vision, and a strong vision should be central to a good brand. However, it takes more than good advertising to communicate the vision of a brand. Aggressive public relations, customer communications, and internal communications are all necessary channels to articulate and reinforce the company's vision of the future.

And even the UPS drivers and our brown delivery trucks play a role here. But perhaps nowhere are we more publicly visible than on the World Wide Web. Since launching our Web site in 1994, we have continually enhanced it with practical tools, such as package tracking, and quick-cost applications. The Web site also provides extensive information about our operations around the world, and about our service to communities. And it's paid off. We get more than a million hits a day. Of the top retailing Web sites, like Barnes and Noble.com and e-toys.com, UPS is the shipper of choice. I should also mention that UPS shipping functionality is now embedded in more than 15,000 Web sites, providing additional linkage to the already six million customers who are electronically connected to us today. The popularity and usefulness of our Web site make the Internet an integral part of our brand-evolution program.

UPS had committed a huge amount of time and energy to shift its corporate culture. John Alden explains:

We needed to move away from a mindset focused solely on operational efficiency, to a more balanced approach that included needs and desires. During one of our training sessions, one of our employees stated the challenge quite clearly. "Our job is to make it easier for people to do business," she said. That's what we wanted to achieve, and it didn't happen until we got everybody's buy-in. Our front-line employees let us know that brand management is not just a "corporate-office" issue. Every UPSer has a stake in the company's success, and is a shepherd of our brand.

People are most valuable

Kelly believes that "People are our most valuable resource." As he explains it:

The truth of it is ... people really are the most precious resource. The funny thing about technology is that its competitive differences keep disappearing. It's a fleeting advantage. Take out the human touch, and technology is worthless. Take out service, quality and customer relationships, and your business soon will be worthless. The fact that it moves so fast means it's always in danger of becoming a commodity ... and ironically, unless you constantly drive it hard, technology loses its power to be a Difference Engine. No matter how wonderful technology is, the people who stand behind what you offer are the real Difference Engines. They're the ones who keep promises, whether they're associated with a car or a computer ... or a bottle of Merlot from Virtual Vineyards.

The dedication of UPS people is achieved through two long-standing company policies: employee ownership and training. UPS stock is primarily owned by the managers and employees of UPS. This promotes excellent service because every manager and employee stockholder is working for his or her own business. Since the beginning, UPS has been committed to training. Today our drivers hold the company in their hands -- literally -- with notebook-size computers capable of remarkable things. Our sales force, meanwhile, is today challenged with selling technology solutions... customized and mass-customized services that require a greater dependency on information exchange between UPS and our customers. In other words, it requires even greater connectivity between both parties. We've also learned that "training for change" only works in an environment that is conducive to change.

Last year, we spent over \$300 million on in-house coursework for our employees worldwide. In addition, many UPS managers take on "special assignments" that can last for six months to a year. By doing so, they gain new experiences and skills. UPS creates these assignments to align the best people with some of the most critical tasks facing the company. Corporate alignment is much easier to achieve when people are in tune with the demands of the marketplace and the workplace.

The daily, cyclical nature of UPS's business requires the company to employ some 160,000 part-timers. During the peak delivery season, UPS hires even more part-timers. They helped UPS move the 295 million packages during the Christmas season. The 1997 Teamsters' strike was directed at adding more full-time employees. During the Teamsters' strike, the company lost several hundred million dollars in business and about four percent of its U.S. package volume. The company was forced to reduce its workforce to match its package volume. By 1998, the company had reached pre-strike levels in both categories. According to Kelly:

Our research shows clearly that our people have an extremely high level of pride in their jobs and in the company. That pride translates into strong loyalty and a shared sense of mission. It also translates into an annual turnover of full-time employees that runs at just four percent, well below industry average.

UPS was building a flexible organization that allowed people to function as teams. Management was pulling together small, nimble teams to solve ad hoc problems, then moving to other tasks. According to Kelly:

This is something we're used to at UPS... our drivers are trained to be entrepreneurial business agents -- to solve customer problems and meet their needs in whatever way necessary. Our managers take on special assignments as a matter of course, too, so they understand our whole delivery system... and the diversity of our customers and our workforce better. And this is a trend that affects not just UPS but everybody in business.

The Difference Engine

Kelly decided that UPS would be driven by a *difference engine*. He explains:

The Difference Engine is more than a machine. It's people using technology to win business ... and to enhance customer relationships. Ironic, isn't it? Even when it comes to making a difference, the more things change the more they stay the same. Where does that leave business? Well, I think we need to acknowledge the abiding laws that govern us ... like "The customer is king", like "Business delivers solutions", that

"People are our most-precious assets." And we have to blend them with what's genuinely new. I believe what's old is the human nature to seek out simplicity and comfort ... and to reward it ... with loyalty. I believe what's genuinely new is the force of e-commerce. And like all new things, it brings out what's important about the old.

Kelly believed that the new commerce model would change our lives in the 21st century. He often quoted the publisher of Forbes magazine, Rich Karlgaard. Karlgaard predicts six key developments that will drive cost and distribution models in the coming years. All six related to electronic commerce. Kelly explains them:

The first is that perfect information about goods and services is coming to the customer. The web, as we all know, is making that possible.

All that perfect information, according to Karlgaard, will lead to a la carte buying...a nice way of saying that customers will just pull whatever they need from the supply chain... and the challenge of being a one-stop-shop supplier will intensify.

The third development is that global free trade is inevitable. No government will have the power to stop web-inspired trade.

The fourth development is that spot-pricing and auction-bidding will become the norm...whether it's airline tickets or automobiles, customers will be able to get on the web and make a deal.

In this environment, a company's brand will become more important than ever -- which is the fifth development.

The final prediction is that vast new markets are all but guaranteed. Karlgaard backs this up with an analysis of Moore's Law, which states that as the power of computing increases, the price of computing decreases.

Take the telephone industry as one example. Now that telephony is going digital, it's been estimated that the costs of making telephone calls will drop an average of 30 percent a year in the next few years. That has strong implications for the 55 percent of the people in the world who have never used a phone before.

World penetration will likely triple in the next 15 years. As Karlgaard writes, "Think of the vast, educated middle classes of India and China at last plugged into the global market of goods and services. Markets will swell and labor pools will expand. Everything will change."

The real point here is that we're on the cusp of some truly extraordinary changes...not just here in the U.S. but around the world. Now is the time to apply a lot of creative energy into thinking what role your business will play in this dynamic new environment.

Combining e-commerce and logistics

The essence of UPS's business strategy was to integrate its traditional infrastructure with the Internet. Kelly explains:

There's a second major way to ensure that e-commerce empowers rather than electrocutes your company. It involves combining e-commerce and logistics management. It's about merging virtual and physical infrastructures to integrate and tighten the supply chain. After all, once you've given more power to the end customer to direct your supply chain, you've then got to make sure the various members of the supply chain react as if they were a single company. That means getting the product to the customer quickly, accurately, and at a reasonable cost.

First and foremost, in this new era of global commerce, you need a global physical infrastructure. You need that infrastructure to provide a preferred standard of service to any customer, anywhere in the world. You need an infrastructure that can accommodate and span local cultures, customs requirements, regulations and taxes, and different business hours.

Secondly, in tandem with the physical infrastructure, you need sophisticated information systems to electronically integrate each member of the supply chain. That's no small task, considering that each member might use different manufacturing platforms, different information-control systems, different packages. Maybe these challenges are why so many companies are turning to third-party logistics providers to help integrate their supply chains. In fact, U.S. spending on third-party logistics is expected to reach \$50 billion by 2000 -- and a trillion dollars in the coming decade.

UPS's logistics division is dedicated to helping our customers manage their supply chains. UPS Worldwide Logistics offers about five million square feet of distribution space and 35 centralized locations around the world. And that's what you tend to think of when you think of logistics: warehouses, racks and forklifts, and inventory management. But we've expanded on the concept of logistics management to include functions you would have never guessed UPS would be performing... Like facility planning and design... customs and brokerage services... quality assurance and testing... warranty repair... order processing and fulfillment... after-sale servicing... customer-service call centers... private fleet management... intermodal delivery... and state-of-the-art supply-chain information systems to track products through the entire product lifecycle. By providing wide-ranging logistics services, UPS essentially becomes a key part of our customer's supply chain.

Let me give you a couple of examples. In 1997, IBM approached UPS Worldwide Logistics subsidiary to manage its Storage System Division's supply chain for the Asia-Pacific region. Prior to this, the IBM division had managed its own internal warehouse for hard-disc drives and outsourced the lanes of transportation to several carriers. UPS opened a logistics center in Singapore exclusively for IBM in January 1998, and today we manage the whole process... from picking up discs from different manufacturing plants... to warehousing... order processing... delivery... and then documenting the transactions. According to IBM, consolidating the division's logistics operations has cut cycle time by 60 percent. And IBM was so impressed with the results in Asia-Pacific that they've charged UPS with managing the storage division's entire global supply chain.

Here's another recent example: Allied Signal's Automotive Products Group manufactures FRAM filters, Bendix brakes and Autolite electronics products. AlliedSignal asked us to help them figure out a way to get its products more quickly and efficiently to its 10,000 warehouse distributors, wholesalers and retail outlets across the country. UPS Worldwide Logistics not only operates two regional distribution centers and delivers products to AlliedSignal's customers, we helped AlliedSignal design and build these state-of-the-art, 256,000-square-foot facilities. And we installed technology to help improve the speed and accuracy of order fulfillment. Workers are guided through an order by going from bin to bin, following a system of lights and LCD panels that tell how many items should be picked from each bin. Weight scales cross-check the order to see if the weight of the items matches the order. Discrepancies in weight trigger package inspections. This foolproof technology has resulted in more accurate order processing and faster fulfillment.

AlliedSignal and IBM are just two of the companies that have chosen to outsource critical logistics services in order to gain competitive advantages. Rather than stick with the status quo, they've taken the more difficult route. It's not easy to change the direction of your supply chain... from push to pull... and it is even harder to build complementary physical and virtual infrastructures that support truly seamless supply chains. But the new era of e-commerce leaves us with little other choice. Either we can plug into our customers -- or our competitors will. Thanks to e-commerce, the power is on.

Building Competitive Advantage for the Future

To gain competitive advantage and not be relegated to the status of a commodity means getting tightly focused on your core business and wrapping it in a high-value supply chain that includes strategic partners. Kelly continues to explain the future needs of his company.

I believe we are going to push supply chain management capabilities a lot further. We have the tools to do just that. A cascade of advancements in transportation and information technology has provided us with a powerful infrastructure. Reliable, fuel-efficient airplanes guided by extremely sophisticated satellite navigation and weather systems enable shipments to be moved very quickly between points on the globe.

At the same time, the price-performance of information systems and telecommunications has improved in giant leaps. A megabyte of storage, which cost about \$100 in the early 1980s, costs 10-cents today. And according to Lou Gerstner of IBM, in two years it will cost two cents. That two-cent megabyte means UPS can vastly expand information stored in our DB2 database, which is already the largest in the world. Likewise, shrinking costs for our cellular network -- also the world's largest -- means UPS customers will receive a lot more up-to-the-second information about their shipments.

As an industry, we are just beginning to exploit all the capabilities of this new technology. Software developers are creating stunning new transaction and knowledge-based systems that forge even tighter links between suppliers and manufacturers.... distributors and retailers... and buyers and sellers of all kinds. At UPS, this is taking on many exciting new forms... whether it's through electronic document exchange services... or a new wave of inventory financing, credit guarantee and other trade facilitation services that you'll be hearing more about in the coming months. Logistics and supply chain solutions will be the prime beneficiaries of these new systems.

Gaining agility -- creating that seamless enterprise network -- is not something that most businesses can do on their own -- not if they're going to devote enough people and resources to the real battlefield: marketing and product development. Instead, companies are turning more and more to UPS and other providers of logistics solutions. Our role is to integrate our customers' supply chains with our own operations, and leverage our information investments with theirs... to create a seamless, profitable flow of commerce. That's a responsibility that falls not just on UPS, but on our entire industry. This leads directly to the second area I'd like to focus on.

UPS no longer considers itself just a delivery company, but is in the customer satisfaction business, with customer needs being the company's driving force. The highest priorities for UPS over the next five years were to deploy technology that allows UPS to continue introducing new services, to provide customers with comprehensive information about their shipments, and to provide training so all employees will clearly understand UPS services, the technologies that make them possible, and be able to communicate that information to the customer. Kelly concludes:

Globalism... Connectivity... Service: None of these factors stands alone in providing value to commerce. But when they are combined in logistics solutions, they become the powerful enablers of the new commerce model. As providers of logistics solutions, UPS and others must stay ahead of customer requirements so we can deliver the precise logistics capabilities they need, when they need them, to fulfill the promise of commerce in the new millennium. As an industry, we have a responsibility to not only take business where it wants to go today ... but anticipate where it will need to be tomorrow. You can be sure that will require the agility and the acumen of moving beyond the speed of business.

Appendix 1: UPS Facts

WORLDWIDE FACTS	EUROPE FACTS	TECHNOLOGY FACTS
<p>Founded: August 28, 1907; Seattle, Washington</p> <p>World Headquarters: Atlanta, Georgia USA</p> <p>Chairman & CEO: James P. Kelly</p> <p>1998 Revenue: US\$24.8 Billion</p> <p>1998 Delivery Volume: 3.14 billion packages and documents</p> <p>Daily Delivery Volume: 12.4 million packages and documents</p> <p>Daily Air Delivery Volume: 1.8 million packages and documents</p> <p>Service Area: More than 200 countries and territories Every address in the United States</p> <p>Employees: 326,800 Worldwide (291,500 USA; 35,300 International)</p> <p>Customers: 1.61 million (shippers who receive automatic daily pickup service)</p> <p>Operating Facilities (hubs and centers): 1,713</p> <p>Delivery Fleet 157,000 vehicles (package cars, vans, tractor-trailers)</p> <p>UPS Jet Aircraft Fleet: 51 727-100 8 727-200 12 747-100 4 747-200 73 757-200 27 767-300 23 DC-8-71 26 DC-8-73 224 <i>Total</i></p> <p>Chartered Aircraft: 302</p> <p>Daily Flight Segments: Domestic: 995 International: 559</p> <p>Airports Served: Domestic: 391 International: 219</p> <p>Air Hubs: <u>United States:</u> Louisville, Ky. (Main US Air Hub) Philadelphia, Pa. Dallas, Texas Ontario, Calif. Rockford, Ill. Columbia, S.C. Hartford, Conn. <u>Europe:</u> Cologne/Bonn, Germany <u>Asia Pacific:</u> Hong Kong; Singapore; Taipei; Taiwan <u>Latin America and Caribbean:</u> Miami, Fla. USA</p> <p><u>Canada:</u> Hamilton, Ontario; Montreal, Quebec</p>	<p>Background: United Parcel Service was founded on 28 August 1907 in Seattle, Washington. The company first entered Europe in 1976 when it established a domestic operation in West Germany. The 1980s saw UPS begin to expand operations throughout Europe, as the company identified the opportunities presented by the development of the single market and responded to customer need for pan- European door-to-door delivery services.</p> <p>1997 Europe Revenue: US\$2 billion (Approx.)</p> <p>1997 Europe Delivery Volume: More than 174 million packages and documents</p> <p>1997 Europe Daily Volume: More than 695,000 packages and documents</p> <p>Employees: More than 24,000</p> <p>Operating Facilities: 260</p> <p>Delivery Fleet: Approximately 10,000 (package cars, vans and tractor-trailers)</p> <p>Europe Air Hub: Cologne / Bonn, Germany</p> <p>European Offices: UPS offers Express services to more than 45 countries and territories in Europe. UPS also provides domestic delivery within the following countries:</p> <ul style="list-style-type: none"> • Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, UK • Additionally, UPS has operations in Greece, Hungary and Russia and service partners/agents in Albania, Bosnia, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Iceland, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Turkey, Ukraine and Yugoslavia. <p>European Services: UPS offers the broadest portfolio of time-definite services available from same day service to logistic solutions for total supply chain management. Customs and brokerage services are also available.</p> <p>European Headquarters: <u>UPS Europe N.V./S.A.:</u> Avenue Ariane 5 1200 Brussels, Belgium <u>Public Relations Contact:</u> Susan Fletcher UPS Europe Public Relations Tel: (32) 2 776 9833</p> <p>Email: eur1sjf@europe.ups.com</p>	<p>Chief Information Officer: Ken Lacy</p> <p>Number of Technology Employees: 4,000</p> <p>Data Centers: Mahwah, N.J. and Atlanta, GA.</p> <p>Mainframes: 14</p> <p>Capacity: 8,013 MIPS</p> <p>Terabytes of Storage (Direct Access Storage Device, DASD): 55</p> <p>Mid-range Computers: 868</p> <p>PCs: 218,000</p> <p>LANs/Connected Workstations: 3,500/120,000</p> <p>UPS's Global Telecommunications Network: <i>Countries located:</i> 100 <i>Users served:</i> 600,000+ <i>Fiber optic and satellite dedicated lines:</i> 3,000 <i>Cellular calls processed:</i> 1.2 million daily</p> <p><i>Packages tracked electronically: 11 million+ daily</i></p>

Appendix 2: UPS Professional Services

UPS Professional Services handles a variety of transportation and distribution problems, including distribution network analysis, optimization, expansion, and realignment for improved service levels and costs. Its package lab and consulting services address initial packaging and product design needs, to on-site training and implementation. Unique packaging solutions have included:

Framed Art: Using the industry-accepted International Safe Transit Association (ISTA) test procedures, the key problem areas in the packaging were identified. UPS professional services packaging engineers then designed a new packaging system for framed art and made prototype samples of the proposed packaging. Extensive testing in accordance to ISTA was performed to verify the performance of the packaging system. The solution reduced damage by 86.2 percent and reduced the packaging cost by over 20%.

New Markets: A supplier to home improvement warehouse stores shipped palletized goods through less-than-truckload (LTL) carriers. The client was looking to open additional markets by selling through smaller retailers and hardware stores. UPS Professional Services redesigned the packaging system to meet the size requirements of small package carriers while incorporating the use of its packaging as a Point of Sale display. The client now has a packaging system that has opened additional markets, while affording a wider choice of transportation options.

Liquids: A distributor of industrial liquid products shipped on full pallets via LTL carriers. To increase market share, the client wanted to ship in smaller shipments via small parcel carriers to reach more customers in a larger geographic area. However, they had problems with leaking containers when they shipped in smaller shipments. Based on design modifications recommended by UPS Professional Services, the bottles' seals were altered successfully. The client now ships in smaller loads, reaching more customers in a larger geographic area – and saving money.

Replace/Return: A major automaker was faced with a recall of more than 160,000 catalytic converters. The new catalytic converters were shipped in multi-ply Kraft packaging, which the consignee used to return-ship the old converter. Unfortunately, the multi-ply Kraft packaging system was not resistant to the sharp, cutting edges of the used converters. UPS Professional Services suggested a tough, woven bag that would be lightweight, flexible and still stand up under two-way shipment. More than 160,000 converters were shipped using the reusable packaging solution, with a near 100-percent packaging performance.

Field Product Return: A major manufacturer and distributor of copy and fax machines had to upgrade leased machines to a new system or lose the lease. They needed a packaging solution that was sturdy enough to ship to their client empty, but protect the delicate equipment on the return shipment. UPS Professional Services designed a universal packaging system that would provide adequate protection for safe transport via the small parcel environment. The easy use package was designed for office personnel who had no packaging experience. To date, hundreds of copy and fax machines have been returned with a near 100-percent packaging performance.

Heavy Weight Packaging (Over 70 lbs.): Small parcel carriers are now shipping packages previously shipped via the LTL carriers. Designing the optimum packaging solution for over 70-pound products enables customers to capitalize on the cost savings and time-in-transit benefits of small parcel distribution with reliable packaging protection. In most cases, the packaging is

modified for the small parcel environment. UPS Professional Services design the optimum packaging solution involving packaging materials, cushion systems, blocking and bracing techniques, packing methods and closures consultation. This directly impacts profitability and customer satisfaction.

Appendix 3: How UPS Works

Pickup

Every day, customers around the world rely on UPS to ship 11.5 million packages and documents. Whether it's bound for the other side of town, or the other side of the globe, each package passes through the UPS network, which has been carefully engineered to provide speed, reliability, and efficiency. The first step in the process is pickup. UPS delivery drivers are assigned a specific route, making regularly scheduled stops along the route. Typically, the driver delivers packages in the morning, and picks up packages in the afternoon. Large-volume customers, who might ship thousands of packages a day, may have a UPS tractor trailer stationed on site. The familiar UPS package car serves lower-volume customers who might ship as few as 2-5 packages a week. Customers with urgent shipments of Next Day Air letters or packages can call UPS for On-Call Air Pick Up. Using state-of-the-art communications technology, On-Call Air dispatchers locate the nearest package car and electronically dispatch it to the customer location for "just in time" pickup. Occasional customers can drop off their packages at conveniently located UPS letter centers and service counters.

The Hub

To transport packages most efficiently, UPS has developed an elaborate network of "hubs" or central sorting facilities located throughout the world. Each hub is "fed" by a number of local operating centers, which serve as home base for UPS pickup and delivery vehicles. Each afternoon, packages from the local operating centers make their way to the hub, usually by tractor trailer. At the hub, thousands of packages are carefully unloaded from numerous trailers. In one huge but fast-paced operation, the packages are sorted by ZIP code and consolidated on conveyor belts according to destination. At the other end of the hub, packages undergo a finer sort and are routed to either an out-bound trailer, or for a local delivery, to a package car serving the immediate area. Before being loaded, each package is checked one last time, just to make sure it has been sorted correctly.

Feeder Network

To transport packages between hubs, UPS uses the ground feeder network. Every day, feeders, or tractor trailers, transport thousands of packages from the hub where the package originated, to the hub nearest the package's destination. Several types of trailers are used, depending on typical load. They range in size from 24 to 45 feet in length, and carry as many as 1,800 packages. Trailers are specially designed for maximum package security and easy loading/unloading. Their unique features include "roll backs" (rollers that allow packages to be moved more easily from front to back) and "drop frames" (which allow smaller packages to be securely stored at the bottom of the trailer). With innovations such as these, a skilled UPS loader, working alone, can completely pack a 24-foot trailer in just one hour!

Delivery

Each UPS driver delivers up to five hundred packages a day, including express packages which must be delivered by 10:30 a.m. To consistently handle such a large volume, the process requires

careful planning and teamwork. At the hub, when packages are loaded onto package cars for local delivery, they are loaded in the reverse order in which they will be delivered. This process is called the "preload." By delivering packages in sequence, from one address to the next closest address, drivers complete their routes as quickly and productively as possible. Each driver is assigned a specific route, or "loop." To optimize the driver's effectiveness, UPS industrial engineers continually research and analyze delivery trends and traffic patterns for each route. When the package is delivered, technology helps ensure that the package has arrived at the correct address, and provides customers with useful information. Using a hand-held computer device called a DIAD (Delivery Information Acquisition Device), the driver electronically captures information about each package, including the time of delivery, and even the signature of the person receiving the package. This information is transmitted via cellular telephone from the package car to UPS computers, where it is available for customers to trace their packages or verify proof of delivery.

UPS Air

Along with shipments moved by ground, UPS handles an average 1.3 million air packages each day, including Next Day and 2nd Day Air packages and documents. To accommodate this volume, UPS uses a system of "air hubs" located around the world. At the main UPS air hub in Louisville, Kentucky, over 60 airplanes land and take off each night. Between 10 p.m. and 2:20 a.m., hundreds of thousands of packages must be unloaded from the aircraft, sorted, then routed to the appropriate ground or air feeder. By midnight, the process is well under way, and UPS aircraft begin taking off at the brisk rate of one every two minutes. The UPS fleet consists of Boeing 727, 747, 757, 767, and DC-8 aircraft that fly packages daily to over 390 domestic airports and more than 219 international airports. The 757/767 Package Freighters, customized according to UPS specifications, are among the most technologically sophisticated and quietest commercial aircraft ever built. And, with highly efficient engines installed on other UPS aircraft, the UPS fleet is one of the most efficient in the sky.

International Delivery

As businesses increasingly compete in the global marketplace, UPS is there to help, providing delivery and information services to expedite international shipments and to simplify the process of conducting business overseas. For example, with the UPS global information network, and the UPS Pre-alert system, customs officials in the US and many other countries can be informed about an incoming shipment while it is still en route. And, in most cases, customs clearance is granted by the time the package arrives. Another UPS service, Consolidated Clearance, lets international shipments be combined and cleared by customs in batch, then delivered to individual consignees. UPS customers can choose from a variety of international services, including Two Day International Express, Three-to-Five Day Expedited service, and Overnight Courier service. And, UPS international customer service representatives are available 24 hours a day to help track shipments and confirm deliveries around the world.

Table 1: UPS Financial Statements

INCOME STATEMENT All dollar amounts in millions except per share amounts.	Dec. 98	Dec. 97	Dec. 96
Revenue	24,788	22,458	22,368
Cost of Goods Sold	--	--	--
Gross Profit	--	--	--
Gross Profit Margin	--	--	--
SG&A Expense	21,698	20,760	20,339
Operating Income	3,090	1,698	2,029
Operating Margin	12.5%	7.6%	9.1%
Net Income	1,741	909	1,146
Profit Margin	7.0%	4.0%	5.1%
Fully Diluted EPS (\$)	--	--	--
BALANCE SHEET (\$ mil.)	Dec. 98	Dec. 97	Dec. 96
Cash	1,240	460	392
Net Receivables	2,713	2,405	2,341
Inventories	0	0	0
Total Current Assets	5,425	4,477	4,255
Total Assets	17,067	15,912	14,954
Short-Term Debt	410	41	--
Total Current Liabilities	3,717	3,398	3,158
Long-Term Debt	2,191	2,583	2,573
Total Liabilities	9,894	9,825	9,053
Common Stock Equity	7,173	6,087	5,901

Table 2: Mail, Package, Freight Delivery Industry

Industry Rank	Company	Fortune 1,000 Revenues Rank	Revenues		Profits		Profits as % of			Earnings per share	Total Return to Investors		Employees	
			\$ millions	% Change From 1997	\$ millions	% Change From 1997	Revenues %	Assets %	Stock-holders' Equity %	1988-98 Annual Rate (%)	1988-98 Annual Rate (%)	1998 (%)	Number	% Change From 1997
1	United Parcel Service	46	24,788	10	1741	92	7	10	24	10	--	--	333,000	1
2	FDX	94	15,873	38	503	39	3	5	13	7	13	46	113,000	5
3	Pittston	403	3,747	10	66	-40	2	3	9	--	--	--	36,000	29
4	Airborne Freight	475	3,075	6	137	14	4	9	18	27	22	17	19,975	4
5	Air Express International	824	1,513	-2	44	-12	3	6	14	15	21	-28	7,423	0
6	Fritz Companies	920	1,300	12	18	5773	1	2	7	--	--	-22	10,000	9
TOTAL	--	--	50296	--	2,509	--	--	--	--	--	--	--	519,398	--