Flattener #8: Insourcing, What the Guys in Funny Brown Shorts Are Really Doing

One of the most enjoyable things about researching this book has been discovering all sorts of things happening in the world around me of which I had no clue. Nothing was more surprisingly interesting than pulling the curtain back on UPS, United Parcel Service. Yes, those folks, the ones who wear the homely brown shorts and drive those ugly brown trucks. Turns out that while I was sleeping, stodgy old UPS became a huge force flattening the world.

Once again, it was one of my Indian tutors, Nandan Nilekani, the Infosys CEO, who tipped me off to this. "FedEx and UPS should be one of your flatteners. They're not just delivering packages, they are doing logistics," he told me on the phone from Bangalore one day. Naturally, I filed the thought away, making a note to check it out, without having any clue what he was getting at. A few months later I went to China, and while there I was afflicted with jet lag one night and was watching CNN International to pass the wee hours of the morning. At one point, a commercial came on for UPS, and its tag line was UPS's new slogan: "Your World Synchronized."

The thought occurred to me: That must be what Nandan was talking about! UPS, I learned, was not just delivering packages anymore; it was synchronizing global supply chains for companies large and small. The next day I made an appointment to visit UPS headquarters in Atlanta. I later toured the UPS Worldport distribution hub adjacent to the Louisville International Airport, which at night is basically taken over by the UPS fleet of cargo jets, as packages are flown in from all over the

world, sorted, and flown back out again a few hours later. (The UPS fleet of 270 aircraft is the eleventh largest airline in the world.) What I discovered on these visits was that this is not your father's UPS. Yes, UPS still pulls in most of its $36 billion in sales by shipping more than 13.5 million packages a day from point A to point B. But behind that innocuous facade, the company founded in Seattle in 1907 as a messenger service has reinvented itself as a dynamic supply-chain manager.

Consider this: If you own a Toshiba laptop computer that is under warranty and it breaks and you call Toshiba to have it repaired, Toshiba will tell you to drop it off at a UPS store and have it shipped it to Toshiba, and it will get repaired and then be shipped back to you. But here's what they don't tell you: UPS doesn't just pick up and deliver your Toshiba laptop. UPS actually repairs the computer in its own UPS-run workshop dedicated to computer and printer repairs at its Louisville hub. I went to tour that hub expecting to see only packages moving around, and instead I found myself dressed in a blue smock, in a special clean room, watching UPS employees replacing motherboards in broken Toshiba laptops. Toshiba had developed an image problem several years ago, with some customers concluding that its repair process for broken machines took too long. So Toshiba came to UPS and asked it to design a better system. UPS said, “Look, instead of us picking up the machine from your customers, bringing it to our hub, then flying it from our hub to your repair facility and then flying it back to our hub and then from our hub to your customer's house, let's cut out all the middle steps. We, UPS, will pick it up, repair it ourselves, and send it right back to your customer.” It is now possible to send your Toshiba laptop in one day, get it repaired the next, and have it back the third day. The UPS repairmen

and -women were all certified by Toshiba, and its customer complaints went down dramatically. packages delivered or goods repaired quickly anywhere in the world, you can act really small.

In addition, by making the delivery of goods and services around the world superefficient and superfast-and in huge volumes-UPS is helping to level customs barriers and harmonize trade by getting more and more people to adopt the same rules and labels and tracking systems for transporting goods. UPS has a smart label on all its packages so that package can be tracked and traced anywhere in its network.

Working with the U.S. Customs Service, UPS designed a software program that allows customs to say to UPS, “I want to see any package moving through your Worldport hub that was sent from Cali, Colombia, to Miami by someone named Carlos.” Or, “I want to see any package sent from Germany to the United States by someone named Osama.” When the package arrives for sorting, the UPS computers will then automatically route that package to a customs officer in the UPS hub. A computerized arm will literally slide it off the conveyor belt and dump it into a bin for a closer look. It makes the inspection process more efficient and does not interrupt the general flow of packages. These efficiencies of time and scale save UPS's clients money, enabling them to recycle their capital and fund more innovation. But the level of collaboration it requires between UPS and its clients is unusual.

Plow & Hearth is a large national catalog and Internet retailer specializing in “Products for Country Living.” P&H came to UPS one day and said that too many of its furniture deliveries were coming to customers with a piece broken. Did UPS have any ideas? UPS sent its “package engineers” over and conducted a packaging seminar for the P&H procurement group. UPS also provided guidelines for them to use

in the selection of their suppliers. The objective was to help P&H understand that its purchase decisions from its suppliers should be influenced not only by the quality of the products being offered but also by how those products were being packaged and delivered. UPS couldn't help its customer P&H without looking deep inside its business and then into its suppliers' businesses-what boxes and packing materials they were using. That is insourcing.

Consider the collaboration today among eBay sellers, UPS, PayPal, and eBay buyers. Say I offer to sell a golf club on eBay and you decide to buy it. I e-mail you a PayPal invoice, which has your name and mailing address on it. At the same time, eBay offers me an icon on its Web site to print out a UPS mailing label to you. When I print that mailing label on my own printer, it comes out with a UPS tracking bar code on it. At the same time, UPS, through its computer system, creates a tracking number that corresponds to that label, which automatically gets e-mailed to you-the person who bought my golf club-so you can track the package by yourself, online, on a regular basis and know exactly when it will reach you.

If UPS had not gone into this business, someone would have had to invent it. With so many more people working through horizontal global supply chains far from home, somebody had to fill in the inevitable holes and tighten the weak links. Said Kurt Kuehn, UPS's senior vice president for sales and marketing, “The Texas machine parts guy is worried that the customer in Malaysia is a credit risk. We step in as a trusted broker. If we have control of that package, we can collect funds subject to acceptance and eliminate letters of credit. Trust can be created through personal relations or through systems and controls. If you don't have trust, you can rely on a shipper who does not turn [your package] over

until he is paid. We have more ability than a bank to manage this, because we have the package and the ongoing relationship with the customer as collateral, so we have two points of leverage."

More than sixty companies have moved operations closer to the UPS hub in Louisville since 1997, so they can make things and ship them straight from the hub, without having to warehouse them. But it is not just the little guys who benefit from the better logistics and more efficient supply chains that insourcing can provide. In 2001, Ford Motor Co. turned over its snarled and slow distribution network to UPS, allowing UPS to come deep inside Ford to figure out what its problems were and smooth out its supply chain.

"For years, the bane of most Ford dealers was the auto maker's Rube Goldberg-like system for getting cars from factory to showroom," BusinessWeek reported in its July 19, 2004, issue. "Cars could take as long as a month to arrive-that is, when they weren't lost along the way. And Ford Motor Co. was not always able to tell its dealers exactly what was coming, or even what was in inventory at the nearest rail yards. 'We'd lose track of whole trainloads of cars,' recalls Jerry Reynolds, owner of Prestige Ford in Garland, Tex. 'It was crazy.'" But after UPS got under Ford's hood, "UPS engineers... redesigned Ford's entire North American delivery network, streamlining everything from the route cars take from the factory to how they're processed at regional sorting hubs"-including pasting bar codes on the windshields of the 4 million cars coming out of Ford's U.S. plants so they could be tracked just like packages. As a result, UPS cut the time it takes autos to arrive at dealer lots by 40 percent, to ten days on average. BusinessWeek reported: "That saves Ford millions in working capital each year and makes it easy for its 6,500 dealers to track down the models most in demand... 'It was the

most amazing transformation I had ever seen,' marvels Reynolds. 'My last comment to UPS was: 'Can you get us spare parts like this?'"

UPS maintains a think tank, the Operations Research Division, in Timonium, Maryland, which works on supply-chain algorithms. This "school" of mathematics is called "package flow technology," and it is designed to constantly match the deployment of UPS trucks, ships, airplanes, and sorting capabilities with that day's flow of packages around the world. "Now we can make changes in our network in hours to adjust to changes in volume," says UPS CEO Eskew. "How I optimize the total supply chain is the key to the math." The sixty-person UPS team in Timonium is made up largely of people with engineering and math degrees, including several Ph.D.'s.

UPS also employs its own meteorologists and strategic threat analysts to track which atmospheric or geopolitical thunderstorms it will have to work around on any given day. To further grease its supply chains, UPS is the largest private user of wireless technology in the world, as its drivers alone make over 1 million phone calls a day in the process of picking up and delivering packages through its eighty-eight thousand package cars, vans, tractors, and motorcycles. On any given day, according to UPS, 2 percent of the world's GDP can be found in UPS delivery trucks or package cars. Oh, and did I mention that UPS also has a financing arm-UPS Capital-that will put up the money for the transformation of your supply chain, particularly if you are a small business and don't have the capital.

For example, notes Eskew, UPS was doing business with a small biotech company in Canada that sold blood adhesives, a highly perishable alternative to stitches. The company had a growing market among the major hospital chains, but it had a problem keeping up with

demand and could not get financing. It had distribution centers on the East and West coasts. UPS redesigned the company's system based around a refrigerator hub in Dallas and extended it financing through UPS Capital. The result, said Eskew, was less inventory, better cash flow, better customer service-and an embedded customer for UPS. A maker of bridal headpieces and veils in Montreal wanted to improve its flow of business with the U.S. Eskew recalled, "We designed a system for consolidated [customs] clearances, so their veils and headpieces would not have to come over [the border] one by one. And then we put [the merchandise] in a warehouse in [upstate] New York. We took the orders by Internet, we put the labels on, we delivered the packages and collected the money, and we put that money through UPS Capital into their banks electronically so they had the cash back. That allows them to enter new markets and minimize their inventory."

Eskew explained, "When our grandfathers owned shops, inventory was what was in the back room. Now it is a box two hours away on a package car, or it might be hundreds more crossing the country by rail or jet, and you have thousands more crossing the ocean. And because we all have visibility into that supply chain, we can coordinate all those modes of transportation."

Indeed, as consumers have become more empowered to pull their own products via the Internet and customize them for themselves, UPS has found itself in the interesting position of being not only the company actually taking the orders but also, as the delivery service, the one handing the goods to the buyer at the front door. As a result, companies said, "Let's try to push as many differentiating things to the end of the supply chain, rather than the beginning." And because UPS was the last link in the supply chain before these goods were loaded onto planes,

trains, and trucks, it took over many of these functions, creating a whole new business called End of Runway Services. The day I visited Louisville, two young UPS women were putting together Nikon cameras, with special memory cards and leather cases, which some store had offered as a weekend special. They were even putting them in special boxes just for that store. By taking over this function, UPS gives companies more options to customize products at the last minute.

UPS has also taken full advantage of the Netscape and work flat-teners. Before 1995, all tracking and tracing of UPS packages for customers was done through a call center. You called a UPS 800 number and asked an operator where your package was. During the week before Christmas, UPS operators were fielding six hundred thousand calls on the peak days. Each one of those calls cost UPS $2.10 to handle. Then, through the 1990s, as more and more UPS customers became empowered and comfortable with the Internet, and as its own tracking and tracing system improved with advances in wireless technology, UPS invited its customers to track packages themselves over the Internet, at a cost to UPS of between 5(2 and 100 a query.

“So we dramatically reduced our service costs and increased service,” said UPS vice president Ken Sternad, especially since UPS now pulls in 7 million tracking requests on an average day and a staggering 12 million on peak days. At the same time, its drivers also became more empowered with their DIADs -driver delivery information acquisition devices. These are the brown electronic clipboards that you always see the UPS drivers carrying around. The latest generation of them tells each driver where in his truck to load each package-exactly what position on the shelf. It also tells him where his next stop is, and if he goes to the wrong address, the GPS system built into the DIAD won't allow him to

deliver the package. It also allows Mom to go online and find out when the driver will be in her neighborhood dropping off her package.

Insourcing is distinct from supply-chaining because it goes well beyond supply-chain management. Because it is third-party-managed logistics, it requires a much more intimate and extensive kind of collaboration among UPS and its clients and its clients' clients. In many cases today, UPS and its employees are so deep inside their clients' infrastructure that it is almost impossible to determine where one stops and the other starts. The UPS people are not just synchronizing your packages- they are synchronizing your whole company and its interaction with both customers and suppliers.

"This is no longer a vendor-customer relationship," said Eskew. "We answer your phones, we talk to your customers, we house your inventory, and we tell you what sells and doesn't sell. We have access to your information and you have to trust us. We manage competitors, and the only way for this to work, as our founders told Gimbel's and Macy's, is 'trust us.' I won't violate that. Because we are asking people to let go of part of their business, and that really requires trust."

UPS is creating enabling platforms for anyone to take his or her business global or to vastly improve the efficiency of his or her global supply chain. It is a totally new business, but UPS is convinced it has an almost limitless upside. Time will tell. Though margins are still thin in this kind of work, in 2003 alone insourcing pulled in $2.4 billion in revenues for UPS. My gut tells me the folks in the funny brown shorts and funny brown trucks are on to something big-something made possible only by the flattening of the world and something that is going to flatten it a lot more.