

ROBERTO BALDWIN GEAR 04.17.13 6:30 AM

SHIPSHAPE: TRACKING 40 YEARS OF FEDEX TECH





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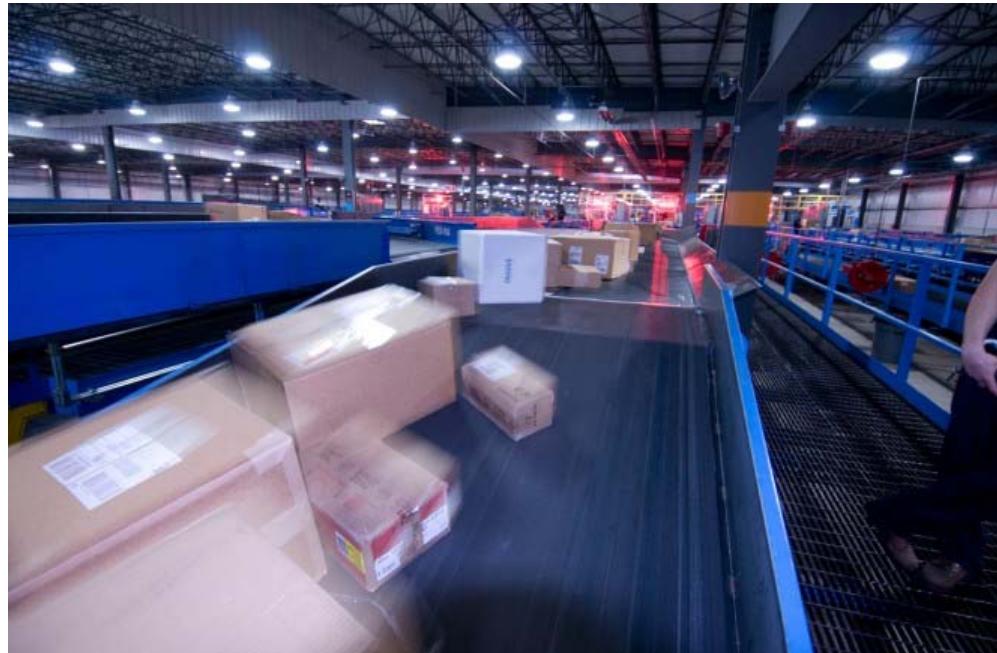
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FORTY YEARS AGO today, 186 packages were shuffled around a card table and loaded onto 14 Dassault Falcon jets. Next-day delivery history had been made.

FedEx's 40-year history is about far more than an unimaginable number of overnight deliveries. It's a case study in creating a service, then pushing technology forward to ensure that service actually works on a large scale. When it absolutely, positively has to be there overnight, you need powerful technology. And sometimes you have to create it.

Given the technological and logistical juggernaut that FedEx is today, it's ironic, and perhaps quaint, that process was largely a manual one when the company began, with little in the way of sophisticated technology to help guide the packages. But as the service grew, it became apparent that the company needed more than just a fleet of jets to meet demand.

“In order to scale the business and scale it with the quality that we wanted to, technology was an essential component. You can’t manage what you can’t measure,” FedEx CIO Rob Carter told Wired.

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Measuring and managing are essential for a company that ships 10 million packages each day, using hundreds of planes and distribution centers all over the globe. In its relentless pursuit of efficiency, FedEx has pioneered and developed technologies later embraced by everything from cellular industry to online retailing and distributed computing.

“They have a very systemic approach to innovation,” said professor James C. Wetherbe, author of *The World on Time: The 11 Management Principles That Made FedEx an Overnight Sensation.*”



One of FedEx’s great contributions was the tracking number, which has become a standard in shipping. By entering a numeric string into FedEx.com, you can find out exactly where your package is as it works its way toward you. It’s immensely convenient, but that is but a pleasant side-effect. The tracking number was initially an internal process for quality control.

The system, launched in the late 1970s, was created to improve efficiencies. It worked so well that, in 1979, the system was offered to customers as COSMOS (Customers, Operations and Services Master Online System). When the system went online it included early prototypes of handheld computers that scanned package barcodes with wands. FedEx was aware that of the importance of all this data. FedEx founder Fred Smith is famous for saying, “The information about the package is as important as the package itself.”

There are no truer words when you’re waiting for the latest gadget to be delivered to your home.

The system was then made available via a customer service line. If you needed to know where your package was, you would call FedEx, something the company used as a marketing tool.

“That was the first time I ever saw a company say ‘do business with us because of our technology.’ That was FedEx’s way to differentiate itself from any other shipper at the time,” professor Wetherbe told Wired.

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That tracking technology needed a backbone. In 1980 FedEx began buying up the 800MHz spectrum in North America. It erected towers and created a nationwide wireless data and communications network tied into a FedEx mainframe. FedEx drivers could share tracking information on terminals in their trucks long before mobile carriers offered any sort of cellular data network.

That package tracking data hit another milestone in 1994 when FedEx launched FedEx.com, the first transportation site to offer tracking information online. While many commercial sites were nothing more than advertisements, by plugging in a tracking number, users were presented with the location of their packages.

The company is currently using smart package technology so hospitals can track critical shipments. These smart trackers can be used in conjunction with a geofence so that when a package arrives at the hospital, the staff can take action immediately.

Through it all, the company’s fleet continued to grow. FedEx has 684 aircraft, including 11 Boeing 777s that can carry 178,000 pounds of payload. The Memphis hub, so essential during the early years of FedEx, has been joined by 16 others on six continents. All told the company processes 10 million packages daily.

That’s a big change from the days when a few guys shuffled a few dozen boxes around a card table.

“On a day to day basis, shipping 10 million packages, you have to have technology,” Carter said. Even if that means creating it yourself.

All photos: Courtesy FedEx