

CASE 2-2

Real-World Case

Systems Integration at UPS Corp

Source: Adapted from Aimee Desrosiers. (2006). Case Study Report, U Mass Lowell; Emigh, J. (August 3, 2005). UPS Bolsters Online Shipment Tracking, Ziff Davis Internet; and UPS' Sutliff: Communication Key to Alignment, *CIO Insight* (January 28, 2003).

In the mid-1980s, United Parcel Service, Inc. (UPS) was struggling for market share with a relative newcomer to the shipping industry, Federal Express (Fed Ex). After only 10 years in business, Fed Ex was emerging as a formidable player largely due to the company's culture of embracing technology as a strategic competitive advantage in improving efficiency and customer service. In contrast, UPS studied their processes and employed less-technical changes (e.g., reducing physical motions in handling boxes) to shave time off their deliveries. Fed Ex started as an airfreight company and UPS as a truck delivery company, but the two increasingly desired market shares in the other's core business.

UPS faced the typical challenges of any shipping company. They knew that shipping errors due to the wrong address or loading the box on the wrong truck were expensive and time consuming. Errors happened frequently on systems that required manual data entry, and multiple systems required redundant processes to utilize the data. Much of the products UPS handles look similar, which allows for picking errors. UPS's phone-in customer service received an overwhelming number of phone inquiries each day that required time- and cost-consuming processes to locate approximate package status. They had also identified the Internet and integrated technology as global business drivers of the future. It was at this time that UPS decided to invest heavily in technology to drive growth.

UPS first identified their internal competencies and assets and looked for areas that could be improved through a strengths, weaknesses, opportunities, and threats (SWOT) analysis. They found that they had an extensive infrastructure and expertise in transportation. UPS next examined such external factors as their customers, the emerging business marketplace, and the competition. Traditional brick-and-mortar business and emerging e-Business all had similar requirements: integrated information and real-time connectivity. Their customers desired the power to buy, sell, and research on their own terms—not where

and when business dictated. It was clear that UPS needed to bridge the gap between physical product or services and access to electronic information.

UPS developed an action plan that would be focused on the customer and enabled by technology. They offered a new variety of services integrated with core transportation functions to make UPS an invaluable part of the customer's business. They chose to centralize data in one of two large data centers (i.e., the hubs of their IT platform). Integration is the cornerstone of UPS's success. Since going public in 1999, UPS has acquired more than 30 other companies. They have more than 3,600 IT staff with two data centers in Mahwah, NJ, and Atlanta, GA. UPS has more than 14 mainframes, 2,755 mid-range computers, 260,000 personal computers, and 6,200 servers. According to the CIO of UPS, "We haven't made [these acquisitions] to gain market share. Instead, we've made them for very strategic (technology) reasons."¹³ Each time, UPS integrates old and new services to add value to the delivery chain.

The IT department at UPS was a critical enabler and tried to integrate the systems from a business perspective.¹⁴ They installed a couple of different ERP modules from Oracle: one for the HR functions and another for financials. By implementing the ERP UPS saved a tremendous amount of money for the goods and services purchased from hundreds of locations around the globe. In addition, the UPS logistics network, which is very extensive, is rigorous because it was built on well-defined technological standards. When UPS adds new applications, therefore, they fit into the rest of their interconnected IT infrastructure, which doesn't tolerate excessive waste. UPS makes sure all new technology fits in nicely over their architecture. In general, two factors have contributed to the successful integration of technology at UPS: a corporate culture of open communication and a commitment to training.

UPS now integrates information from more than 60,000 Web sites with more than 7.2 million customers making online tracking requests daily. The sophisticated UPS IT platform offers such new software as Package Flow¹², which identifies the packages that should be loaded on the delivery truck first, second, and so on, so that the first deliveries are in the rear of the truck. Another software service is Trade Direct¹², which now allows retailers, dot-com sites, and other enterprises to track the status of both small packages and large freight around the globe through a single Web-based system. Management is also committed to training whenever new technology is introduced and to providing an environment where all employees can contribute ideas for improvement.

From the customers' standpoint, systems integration translates to better services related to package shipping and tracking that can be easily accessed from the UPS Web site, or by using software provided by UPS. If an incorrect zip code is entered, an error message prohibits the user from continuing the process. The system provides "smart" data (e.g., identifying rural addresses that may require extra delivery time and allowing the user to change options). It is possible to save a database of shipping addresses to auto-fill fields for frequent receivers.

The UPS integrated system platform provides real-time communication links between packages shipped because the tracking number, date, and status are immediately

recorded. A client's customer service could respond to an inquiry instantaneously instead of having to acquire a tracking number manually from shipping, trace the package, and call the customer back. This puts the power directly in the customer's hands. UPS is the model for successful integration for all industries.

CASE QUESTIONS

1. What are some of the system integration challenges faced by UPS?
2. Discuss the systems integration solutions at UPS. How does it help UPS integrate new technologies?
3. Discuss the advantages of systems integration for UPS customers.