**Interactive Session: Technology: UPS Competes Globally with Information Technology**

**Case Study Questions**

1. What are the inputs, processing, and outputs of UPS’s package tracking system?

Inputs: The inputs include package information, customer signature, pickup, delivery, time-card data, current location (while en route), and billing and customer clearance documentation.

Processing: The data are transmitted to a central computer and stored for retrieval. Data are also reorganized so that they can be tracked by customer account, date, driver, and other criteria.

Outputs: The outputs include pickup and delivery times, location while en route, and package recipient. The outputs also include various reports, such as all packages for a specific account or a specific driver or route, as well as summary reports for management.

1. What technologies are used by UPS? How are these technologies related to UPS’s business model and business objectives?

Technologies include handheld computers (DIADs), barcode scanning systems, wired and wireless communications networks, desktop computers, UPS’s central computer (large mainframe computers), and storage technology for the package delivery data. Telecommunications for transmitting data, pagers, cellular phone networks, and many different pieces of UPS in-house package tracing software for tracking packages, calculating fees, maintaining customer accounts and managing logistics, as well as software to access the World Wide Web.

UPS has used the same strategy for over 90 years. Its strategy is to provide the “best service and lowest rates.” One of the most visible aspects of technology is the customer’s ability to track his/her package via the UPS Web site. However, technology also enables data to seamlessly flow throughout UPS and helps streamline the workflow at UPS. Thus, the technology described in the scenario enables UPS to be more competitive, efficient, and profitable. The result is an information system solution to the business challenge of providing a high level service with low prices in the face of mounting competition.

1. What problems do UPS’s information systems solve? What would happen if these technologies were not available?

Some problems this information system solves relate directly to logistics and supply chain activities, not just for itself, but also for other companies. These services include supply chain design and management, freight forwarding, customs brokerage, mail services, multimodal transportation, and financial services, in addition to logistics services. Because of the advanced integration of its technology, UPS can provide these services cheaper and more efficient than most companies can create them in-house.

Arguably, UPS might not be able to compete effectively without technology. If the technology were not available, then UPS would, as it has through most of its history, attempt to provide that information to its customers, but at higher prices. From the customers’ perspective, these technologies provide value because they help customers complete their tasks more efficiently. Customers view UPS’s technology as value-added services as opposed to increasing the cost of sending packages.

**MIS In Action**

**Explore the UPS Web site (**[**www.ups.com**](http://www.ups.com)**) and answer the following questions:**

1. **What kind of information and services does the Web site provide for individuals, small businesses, and large businesses? List these services.**

Answers will vary by the type of service students select. It’s important that they incorporate principles from this chapter in their answers.

Services include the following:

* + Shipping
    - Create a shipment
    - Calculate time and cost
    - Schedule a pickup
    - Order supplies
    - Use International Tools to estimate the cost to move a shipment across borders including duties, taxes, and transportation charges
  + Tracking Management
  + Freight Management including Critical, Air, LTL and Truckload, and Ocean Freight
  + Locations
  + Support
  + Business Solutions

1. **Go to the Business Solutions portion of the UPS Web Site. Browse the UPS Business Solutions by category (such as shipment delivery returns or international trade) and write a description of all the services UPS provides for one of these categories. Explain how a business would benefit from these services.**

Businesses benefit from the services UPS provides by not having to create the technology themselves. UPS provides a one-stop-shopping place for all the information and expertise necessary to efficiently manage a business’s shipping needs. The business can concentrate on its core competencies and outsource the work to UPS, often at lower costs.

Business Solutions categories are:

* + Shipment Delivery and Returns
  + Technology
  + Logistics
  + International Trade
  + Locations
  + Special Features
  + Industry Focus
  + Financial

The Shipment Delivery Returns category provides these services:

* + Logistics – Service Parts recovery solutions that help increase efficiencies
  + UPS Returns – Process and track return shipments quickly and efficiently
  + UPS Returns Plus – Return shipments with pickup service
  + UPS Returns Technology – Enable your customers to request a return shipping label directly from your Web site

The International Trade category provides these services:

* + Customs Clearance – tools and expertise to help manage international trade complexities
  + Distribution Center Bypass – Consolidation services to streamline your international supply chain
  + UPS Trade Direct – A multi-modal, international freight solution to move your products across oceans and borders faster
  + UPS World Ease – Consolidates multiple shipments destined for one country or the European Union so they are processed by customers as a single shipment
  + Consulting – Guidance on aligning processes and operations with business strategies
  + UPS Paperless Invoice – Electronic commercial invoices speed data to customs

1. **Explain how the Web site helps UPS achieve some or all of the strategic business objectives we described earlier in this chapter. What would be the impact on UPS’s businesses if this Web site were not available?**

UPS invests heavily in information systems technology to make its business more efficient and customer oriented. It uses an array of information technologies including barcode scanning systems, wireless networks, large mainframe computers, handheld computers, the Internet, and many different pieces of software for tracking packages, calculating fees, maintaining customer accounts, and managing logistics. You may want to highlight how UPS has had to change and adapt to new technologies to remain competitive.