

United Parcel Service (UPS)

HP Handheld sp400 All-in-One delivers efficiencies



“At UPS, we're always looking for process re-engineering opportunities supported by IT to help gain efficiencies, reduce cost, and meet our customers' expectations. The HP Handheld sp400 All-in-One allows us to accomplish these objectives while also significantly reducing the environmental impact of paper waste.”

—Ted Abebe, Senior Project Manager, UPS

HP customer case study: UPS gains efficiencies, reduces environmental impact with HP Handheld sp400 All-in-One

Industry: Package delivery

Objective:

Re-engineer processes to simplify training, lower costs, improve efficiencies, cut paper waste and reduce environmental impact

Approach:

Migrate from fixed-mount thermal printer/workstation/monitor/keyboard setup to HP Handheld sp400 All-in-One scanner-printer

IT improvements:

- Integrated, hands-free scanner and printer in a single, mobile device with RF communications to business application
- Business application supporting sub-second response times over large numbers of concurrent radio frequency devices while meeting business reliability requirements
- 2D imaging, decoding and validation to support advanced data acquisition
- Simplified user interface for usability and training gains
- Failover processes to enhance system reliability

Business benefits:

- Reduced environmental impact of 1,338 tons of paper saved
- Labor cost savings of \$16.9 million by 2013
- Projected capital cost savings of \$11.8 million
- Consumables cost savings of \$1.9 million by 2013
- Competitive advantage of cost-efficient, high-quality service
- Labor hours saved totals more than 92,000 hours per year



The world's largest package delivery company, UPS manages the flow of more than 15 million packages a day in more than 200 countries and territories. UPS customers don't care how the company does it; they care about whether their packages arrive intact, on time, and at a reasonable cost. To make good on those promises, UPS constantly re-engineers its processes. A new key tool in this effort is the HP Handheld sp400 All-in-One scanner-printer. This small device, which fits comfortably in the hand or strapped onto the fingers, stands to save UPS more than \$30 million in labor, capital and consumables costs over the next five years alone, while saving the paper equivalent of 1,338 tons of paper per year once the imprinter is fully deployed.

“Ultimately, it's all about reducing operating costs so you can provide high-quality service at a competitive

Customer solution at a glance

Primary applications

Package sorting

Primary hardware

- HP Handheld sp400 All-in-One scanner-printer

HP Services

- HP Care Pack service

price," says UPS Senior Project Manager Ted Abebe. "The HP Handheld sp400 All-in-One enables UPS to improve efficiency while reducing costs and environmental impact."

The HP Handheld sp400 All-in-One is a groundbreaking scan-and-print solution that integrates a 2D (two-dimensional) barcode imager, a paperless inkjet printer and wireless communication into a single device. UPS uses the device to scan packages, send data wirelessly to a server, and print handling instructions directly onto the package. Before, it took moving trolleys loaded with thermal printers, PCs, monitors and keyboards to accomplish the same objective.

"We wanted a mobile solution that would de-skill the job setup," Abebe explains. "The HP Handheld sp400 All-in-One requires minimal training, it speeds processing and it eliminates the need for fixed setup."

A drive to gain efficiencies, reduce environmental impact

The solution traces its roots to an overall UPS goal to improve efficiencies. The company took a close look at its processes for unloading, sorting and reloading packages for delivery. Re-engineering efforts started with evaluating current processes and systems. Workflow analysis revealed that current job set-ups were procedurally complex with multiple points of failure: Employees had to be trained in fairly involved procedures for operating the equipment, changing label paper and troubleshooting problems. "Because turnover is a natural process, training was inherently the weakest link in the operational chain," Abebe says. In addition, it took a team of three people to unload, scan and sort packages, revealing an opportunity to combine job functions for increased efficiencies. The process also was error-prone and when packages were mislabeled they had to be routed for correction. Then there was the environmental impact. The thermal printers used paper labels backed with liners, with the liners ultimately turned into garbage.

Taking all this into account, UPS decided it wanted a mobile solution that simplified the process end to end while reducing waste. That led the company to HP. "Early on, when the project was still an exercise on paper, we considered all the printing technologies available in the marketplace, to evaluate what would work best for our mobile needs," says Systems

Development Project Manager Scott Loverich. "What we came to was inkjet, and therefore we partnered with HP."

Collaboration creates new solution

HP and UPS developed the HP Handheld sp400 All-in-One in collaboration. The team started with a proof-of-concept feasibility assessment considering cost, performance, usability and safety. We built and refined prototypes, then started deploying the product in sites across the United States. "HP was incredibly committed," Loverich recalls. "We had frequent conference calls, meetings, and when we went to field testing HP was right there."

"UPS developed a business application that interfaced to the sp400 (and other devices) providing the required performance, RF connectivity, and reliability to enable widespread deployment in an industrial environment. UPS also provided its project management and integration expertise to manage the collaborative development activities between HP and UPS. Infrastructure and process updates, along with continuous testing activities led to a successful implementation," says Scanning Applications Project Manager Carl Skonberg.

Deployment results have met expectations: The previously steep learning curve was flattened to a quick, one-page training. Job functions were combined for efficiency gains, and operations gained greater flexibility with their operating plans. Gone were the paper labels and liners; the HP Handheld sp400 All-in-One prints directly onto the package with original HP inks using recyclable cartridges. Adding up the gains, UPS expects to reduce operating costs by \$18.8 million by 2013 and avoid another \$11.8 million in capital costs.

Worldwide deployment, expanding functional areas

UPS started deploying the hand-mounted version of the HP Handheld sp400 All-in-One for the sorting function. It plans to use the solution in more than 75 operating facilities, sorting an average volume of 1.5 million packages a day. It doesn't stop there, however. UPS today is studying a handle-mounted version of the device for efficiency gains on the package unloading side of the operation. "We just completed a productivity study that showed promising results," Abebe says. "That has given us the confidence level to proceed with further testing."

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