

# Unify Your Business with Mobile Computers

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Is there a better way to run your industrial distribution company? What business model should you use? What role does IT (information technology) play in your organization? Is IT viewed as a strategic asset or a strategic liability? And what is the best way to measure and monitor key business processes to make smart and informed business decisions?

Sometimes the best way to answer these challenging questions is to look outside your industry for examples of companies that successfully follow a clearly defined operating model and view IT as a strategic asset. UPS, the worldwide leader in package distribution, is one such company and its business model provides insight, inspiration, and guidance.

At UPS, IT plays a central role in everything they do; it's part of their DNA. UPS implemented an operating model based upon unification—a single unified digital platform built on high standardization and integration of business processes and shared data to support end-to-end customer requirements. This operational model treats IT as a strategic asset, which leads to predictable, low cost business transactions and a unified view of the organization and customer. UPS analyzes data gathered from tightly integrated end-to-end business processes to make informed business decisions on routing, package pricing, and customer profitability.

A key element behind the success of UPS' digital platform is the use of mobile computers to capture critical data about every package they pick up and deliver. Data about each package is electronically uploaded and seamlessly integrated at a central digital platform, eliminating unnecessary labor costs. UPS analyzes this data to better understand customer profitability and route efficiencies, making the data about the package as valuable as the package itself.

UPS is currently deploying the Dolphin 99EX, Honeywell's most durable mobile computer, to efficiently record the delivery of millions of packages around the globe. The device is rugged enough to meet the realities of the package delivery business and sophisticated enough to accurately scan bar codes and electronically capture customer signatures. It



also contains cellular capabilities to transmit and receive package data and a GPS chip to help with navigation and route analysis.

When businesses rely on multiple isolated IT systems, instead of a unified model like UPS', IT can become a liability rather than an asset. While there are some very good individual IT products for specific solutions, using these products in combination comes at the expense of higher IT costs as extra labor is needed to wire systems and data together. Multiple systems create disjointed business processes and attempts to extract data or make changes to one system risk breaking another. Tying data together to provide a single view of a customer's account is inefficient and no longer necessary given the availability of today's unified software platforms.

## Integrate with Mobile Computers

Let's look at how the UPS model of unification can work for independent gas distributors. What useful data can be gathered about a cylinder (packaged gas) as it moves from the fill plant/dock, onto the truck, out to the customer, and back to the dock?

First, a unified business model best suited to meet the needs of the independent distributor should provide a single digital platform to manage the inventory, ordering, pricing, delivery, invoicing, documentation, A/R collection, and analysis of all cylinder transactions. It should be simple to implement and manage, minimize transaction costs, and provide the necessary data needed to analyze individual business processes. Most importantly, it

should measure overall business performance so that you can make informed decisions in a timely manner. The UPS model does all this.

Another key element of a unified business model is the seamless integration of all mobile transactions with a digital platform. Processes performed by mobile computers and integrated software reduce IT costs by minimizing back office labor and billing errors.

There are several business processes where mobile computers can capture key data about a cylinder. And with the right business intelligence tools this operational data can be turned into a goldmine of useful information and a great customer service tool. With operational information, distributors will quickly discover that the data about the cylinder becomes as valuable as the cylinder itself. What a great philosophy to infuse into your company's DNA! Let's take a closer look at a few examples.

## Fill Plant

Scanning cylinders in the fill plant generates a wealth of production data. Knowing how many cylinders (gas, volume) were filled on a daily, weekly, and monthly basis can help with planning production requirements and measuring employee productivity. Is Monday a more productive day than Friday? Which product lines are seasonal? Is production in line with demand or based upon outdated business practices? What's your loss ratio? These questions are easy to answer when production data is captured with mobile devices.

Capturing fill volume leads to more accurate billing. Recording lot numbers during the

fill process makes lot traceability and recall a breeze because each lot number is tied to an individual bar-coded cylinder. Reports generated from fill production data can measure and monitor volume loss ratios over time for more accurate gas cost analysis.

### Dock Exchanges

Mobile computers are a great way to introduce new services to your customers. Before mobile computers, efficiently processing customer dock returns required the customer to complete the necessary paperwork inside the facility. With mobile computing, transactions are performed electronically and are seamlessly integrated back into the digital platform. Today, Wi-Fi enabled mobile devices can be used to scan cylinder dock returns directly at the dock without paper work. These devices validate cylinder returns in real time and ensure that credit is given to the correct customer. Now that's customer service!

### Truck Auditing

A mobile device can capture data during truck loading and unloading that pays off in several ways. First, it's an opportunity to validate the cylinder bar code and status against the digital system. This helps eliminate shipping errors that would otherwise occur at the point of delivery. Second, data can be used to analyze truck inventory levels. Overstocking truckloads translates into extra labor costs, underutilized assets, and higher fuel costs. Finally, end of day truck reconciliation will catch driver mistakes, identify cylinders that need retesting, uncover possible theft, and prevent billing mistakes by validating all cylinder transactions (ships/returns) for the day's deliveries.

### Routing Systems

Today's mobile computers come equipped with GPS capabilities that create a "bread crumb trail." They record the current truck location, how long each delivery took, miles driven, and a drive time vs. stop time. This data can be useful in a variety of applications. First, customer service can intelligently communicate when the customer can expect delivery. Second, delivery charges can factor in activity-based items such as service time. Third, huge savings can be realized with powerful route optimization software such as Roadnet Technologies and Descartes. (See "Reducing Transportation and Labor Costs," *CryoGas*, August/September 2011, p. 48.) These systems optimize and sequence deliver-

ies prior to being transmitted to individual mobile devices. Given that the cost to deliver a cylinder is over five times that of filling, doesn't it make sense to focus your resources and capital on distribution efficiencies?

### Point of Delivery

With the ability to capture, validate, review, and transmit a wealth of data about each delivery, a mobile device can boost driver productivity and eliminate errors. Today's most advanced mobile computers capture critical data at the point of delivery for all kinds of orders—bulk gases, cylinders, welding supplies, and rental equipment—without paper. Entire orders, line items, pricing, delivery instructions, and more can now be transmitted electronically via mobile computer.

Scanning a bar-coded cylinder instead of manually recording the information on a paper document eliminates driver errors such as: transposing a quantity, part number, or serial number; recording a ship instead of a return; or recording the transaction under the wrong customer number. Digital systems validate the entire transaction and can catch possible cylinder errors on the spot instead of at the end of the day back in the office.

### Customer Service

As discussed, mobile computers electronically transmit completed delivery information back to a digital system where invoicing is automated. This eliminates customer disputes about cylinder balances, payments, pricing, and proof of deliveries. The entire delivery transaction (cylinder bar codes, gas item, lot number, quantity, prices, delivery charges, taxes, and time stamp of each line item) can be emailed to the customer along with the invoice and electronic signature from the digital system. This customer service tool saves distributors countless hours and unnecessary labor costs typically associated with isolated systems.

This same service tool can be offered as a self-service web portal where customers can log in and view their account information. In addition, portals allow customers to perform other traditional business functions such as reordering and paying invoices with a credit card.

### Distribution Efficiencies

Data captured during the delivery process (i.e. driver number, truck number, number of stops, number of cylinders shipped and

returned per order, as well as the totals for the day) can be used to measure cylinder distribution efficiencies, route efficiencies, and driver productivity. According to Paul Matlock, President of TAP Resources ([www.tapresources.biz](http://www.tapresources.biz)), best in class performance is 17 stops per day per truck, 96 cylinders per truck, six cylinders per stop, \$35 cost per stop, \$512 cost per day, and \$6.25 cost per cylinder. How well do you measure up?

Cylinder Asset Optimization	
Stops/day/truck	17
Cylinders/truck	96
Cylinders/stop	6
Cost/stop	\$35
Cost/day	\$512
Cost/cylinder	\$6.25

Figure 1

Source: TAP Resources

### Cylinder Insight

Tracking a cylinder's status and location as it moves from filling to billing generates a goldmine of data that can help identify underutilized cylinders, monitor supply/demand requirements, optimize inventory levels, spot trends, and pinpoint bottlenecks in the distribution process.

Bar coding each cylinder gives you an exact count of how many cylinders you have in your fleet. Tracking the status lets you monitor utilization rates. Cylinder turns are easy to measure with a digital system as it monitors how long each cylinder stays in each status. These systems track how many days it takes to turn an empty cylinder back into a full cylinder that is again collecting rent. They can tell you if cylinder inventory levels are trending upwards even though demand is flat. They flag excess supply that could be reallocated to prevent unnecessary cylinder purchases. With each cylinder tracked by location, you can quickly measure and monitor these same metrics at individual branch locations for comparative analysis.

These are just a few examples of what's possible when cylinders are bar coded and tracked using an integrated, digital platform. Cylinder data not only becomes as valuable as the cylinder, it becomes an asset to leverage throughout your organization—and it all starts with building a digital platform that streamlines end-to-end processes with the use of mobile computers. ■

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