

OPENING NEW FRONTIERS OF EFFICIENCY AND PRODUCTIVITY FOR THE MOBILE WAREHOUSE



The Evolution of Warehouse Mobility

Without mobility, business processes are tied to a desk and paper is used to distribute information. A paper driven process requires data to be handled multiple times leading to inefficient use of time and the greater chances of costly errors.

The growth of wireless technology in the warehouse has changed the nature of how electronic equipment can be used. Computing, printing, testing, weighing and scanning technology can now be brought to where the work is taking place and operators now have continual access to real-time information ANYWHERE in the facility.

Typical Mobility That Comes to Mind

Mobility in the warehouse or DC typically refers to handheld computers, belt worn portable printers, scanners or headsets. However, these units can be limited in size, capacity and functionality. For example, what if you:

- Print 100+ labels per day?
- Print large labels, packing slips or other documents?
- Need both a printer and PC, laptop or tablet?
- Need a full LCD screen or dual monitors?

New Mobility Avenues

A mobile powered workstation (MPW) is designed to hold and power up to (4) pieces of existing hardware for 8-12+ hours of normal use. (This enables “on-demand” label printing with a high-volume thermal printer.) The MPW is always within arm’s reach and the need for hazardous extension cords or data drops from the ceiling are completely eliminated.

INSTANT PRODUCTIVITY BENEFITS

By significantly reducing foot travel and paperwork, an MPW can have a very favorable impact on your bottom line [see table below]. In so many enterprises, countless hours are wasted as employees walk back and forth, chatting with coworkers en route, between sites where work is taking place (loading docks, storage racks, assembly lines, inspection/testing areas, etc.) and a desk-bound computer and printer where they log information into a database, print labels/orders, etc. Often, these employees are merely keying in data they have previously written on paper at the work site - a classic redundancy of effort. Or worse, they just rely on their memory, which leads to mistakes. In contrast, an employee operating an MPW has continual, paperless, real-time access to information via warehouse management systems (WMS), enterprise resource planning (ERP), or automated data collection (ADC) software from anywhere in the facility, since the workstation's computer is always at hand.

Create Your Own Mobile Station

An on-demand label printing / PC station provides a simple way to implement mobility in your facility.

A popular configuration consists of:

- 1 Your high-volume label printer
- 2 Your iPad, laptop or PC/LCD with WMS/ERP
- 3 A mobile powered workstation



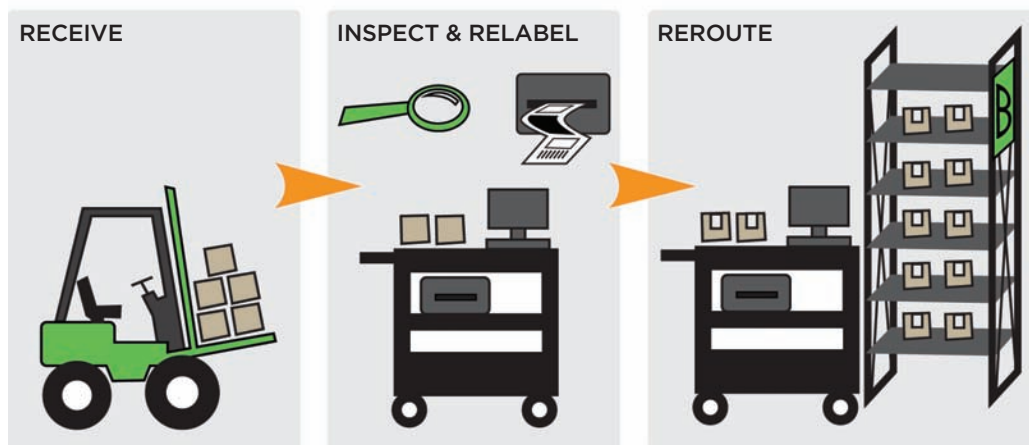
It's easy to underestimate how much time is spent walking back and forth to fixed printers, computers, scales and other equipment. But it's a costly practice. By eliminating just 6 minutes of walking per hour, thousands of dollars can be saved over the course of a year.

SAMPLE ROI CALCULATION

Enter # of minutes (per hour) spent walking to a static printer or computer desk	6 minutes
Enter average labor rate (w/benefits) per hour	\$22
Enter # of work hours per week	40
Enter # of mobile stations you want to implement throughout your facility	5
Average cost per Mobile Powered Workstation: (excluding optional accessories): (Costs range from \$1,300 - \$2,900)	\$2,200
▼ YEARLY SAVINGS ▼	
\$\$ saved per year when walking is eliminated	\$22,880
Hours saved per year	1,040
# of months to pay back initial workstation purchase	5.77

Because an MPW can carry a computer and relatively heavy peripherals such as a high-volume label printer and can supply them all with adequate on-board power, it is far more useful than a tiny portable/handheld thermal printer or scanner.


This “on-demand” high-volume label printing/PC station (when compared to a portable printer), would enable the use of thermal transfer labels, large labels, a full computer screen to toggle between different software programs, and more. In essence, you have a fully functioning packaging/labeling/processing/inspection station that can be moved to wherever it is needed.



Although a large facility might need more than one, a single MPW can often do the job of two or three stationary desks, which means fewer computers and peripherals will be needed overall. For example, a workstation can be used all morning at a receiving dock and then wheeled to the shipping department for the afternoon. The opportunities to save time and labor through “on-the-spot” data entry, “on-the-fly” scanning, “on-demand” label printing, and other tasks are numerous and impressive. As you can imagine, an MPW can be an asset in a multitude of applications for the warehouse or DC.

In this area, an MPW can increase the number of packages processed per day by facilitating order picking, put-away, packaging, labeling, shipping, receiving, cross-docking, etc. In a receiving department, for example, the MPW operator can quickly scan barcodes or read radio frequency identification (RFID) tags to identify an incoming shipment and then inspect, re-label, and re-route it, all at the same workstation. Shipping accuracy improves when the operator can quickly scan outgoing shipments to verify that the order is correct and scheduled for the proper shipping method. For break-bulk and mixed-unit orders, MPWs allow quick and easy pickings with on-site high-volume printing of labels, packing

slips, delivery receipts, refund receipts, etc. The operator can track previously shipped parcels and keep track of multiple stock-keeping units (SKUs). He or she can even take and file digital photos to provide proof of the condition of a returned shipment and then credit the customer immediately.

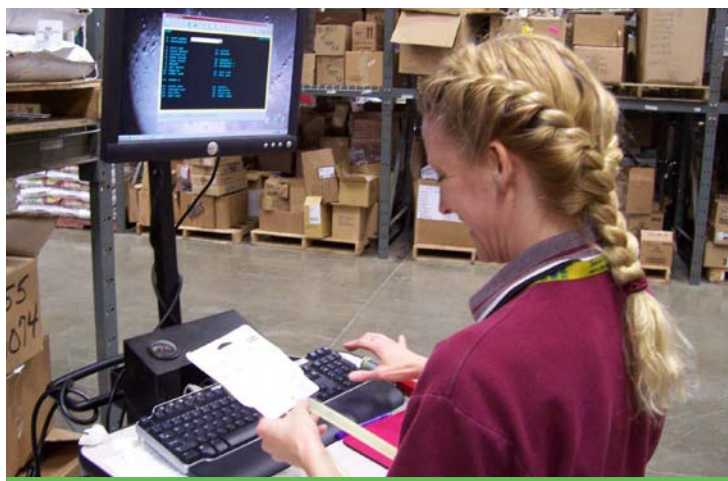
 No power outlets at the far corners of your facility? **Problem Solved.**

IMPROVED EMPLOYEE MORALE

Mentally and physically, consciously and subconsciously, employees know when their precious time is being wasted. They feel better about their jobs (and their lives in general) when they instead know they are doing work that needs to be done, and doing it efficiently. The efficiency gains provided by an MPW, as outlined on page 3, are not only for management ledger sheets but also for employees' direct, day-to-day experience — greater productivity benefits everyone.

Good MPWs provide specific ergonomic advantages. For starters, the MPW you choose should have adjustable shelves and large, stable work surfaces. Some MPWs allow the shelves to be easily raised and lowered, and some do not. A tall employee should be able to quickly raise a shelf to the most convenient height, and a shorter worker on the next shift should be able to lower it just as quickly. Your workstation should have a compact footprint and should be easy to push, with large, easy-to-grip handles and top-quality swivel casters. Casters should provide years of smooth, quiet rolling and positioning, yet must be lockable for stability and safety at the work site. The size, weight, and capacity of the on-board power package (battery/inverter/charger) are also ergonomic considerations; some packages are bulkier and heavier than others. Because the workstation is wireless, there are no cords long enough to trip over, but for cables connecting the devices on the workstation to each other, the best-designed MPWs

have cable-management components that keep cabling neat and tangle-free. The ability to easily recharge the battery is also important. There are systems designed especially to keep workstations powered 24 hours per day. When the power is running low, you can easily swap out the power package with a fully charged one. The power swap takes about 30 seconds to complete, requires no heavy lifting and enables the workstations to be used during multiple shifts with minimal interruption.



CASE IN POINT

In Virginia, [Care-A-Lot Pet Supply](#) tested an MPW in their distribution center, scanning products in their receiving and shipping departments and printing labels for pallets and general organization. “It saved time,” says Supervisor Brad Voorhes. “[We could] print out a label while standing in front of it instead of walking across the warehouse to a [stationary] desk, printing it out, and walking back.” Management was so pleased with the improved efficiency that they purchased several MPWs for the center and more for the company’s retail stores.

Care-A-Lot reports that since the workstations were introduced, productivity has increased by 40%.



System designed to keep workstation powered 24 hrs/day

IMPROVED VERSATILITY

The more your workstation can do, the more your business can accomplish, in ways you might not yet envision. That's why you'll want your new MPW to be versatile. Check the weight capacity of individual shelves and of the unit overall. The MPW you buy should definitely be powerful enough to run various devices simultaneously – look for one that can hold and power four devices for at least eight hours and can be recharged in five to eight hours. It's important that the MPW manufacturer offers multiple options for the workstation's power package, and choosing the best one for your business can be difficult on your own. Some MPW manufacturers have technicians who will make sure your package is fully integrated with the devices you intend to run, and some even have software tools on their websites that help the customer choose the most appropriate power package by calculating the total wattage of the equipment to be supported.

Last but not least, your MPW should be modular – designed to accept many different accessories for your specific application. Accessories include additional shelves, drawers, keyboard trays, laptop holders, flat-screen holders, and scanner holders. Like your business, your MPW will be what you make of it.



Label Holder



3" drawer



Single & Dual Monitor Mount & 30" Pole



Slide-Out Printer Tray



Adjustable & Lockable iPad Holder



Bubble Wrap Holder



Adjustable Keyboard Tray with Mouse Tray



Desk Organizer

Shop Around

Obviously, different needs require different MPW configurations, so shop around until you find the model that fits your facility. Some basic attributes, such as sturdiness and durability, trump all other characteristics. Because further technological advances will undoubtedly give us new gizmos that will once again require us to reorder our thinking as well as our equipment, versatility and ergonomics should also be at the forefront. Some careful research will lead you to a well-built yet reasonably priced model. You should expect to pay \$1,300 to \$2,900 for a good MPW, but when you consider the potential for productivity improvement, it should pay for itself many times over.

Conclusion

Converting a stationary workplace to a mobile one [with an MPW] is the easiest, most economical way to increase productivity of your current warehouse workers.

Main benefits include:

Increasing Productivity: Process the same transactions with fewer pieces of equipment.

Instant Gratification: Quickly obtain measurable productivity gains without months of planning and implementation. MPWs are typically delivered and on the floor the same day.

Improving Processes: The portable power systems allow you to fully leverage your wireless facility by cutting the power cords and letting your workstations move to where they are needed - with your people.

Enabling People: Operators and managers now have access to data and real-time information anywhere in the facility because they can take their workstation with them.

No Additional Purchases: Mobile workstations easily integrate with your existing hardware and software systems, eliminating the need for additional investment or equipment purchases.



CASE IN POINT

Shipping accuracy was a major concern at the [Magneti Marelli Powertrain USA](#) plant in North Carolina. Management was determined to reduce the number of mislabeled outgoing pallets loaded with fuel-pump modules, electronic throttles, and other component systems bound for auto makers, boat builders, and other customers. A typical shipment consisted of multiple pallets, each of which required at least two labels. The weak point in the shipping department turned out to be the 30-40 steps each inspector would have to take to the label printer. Sometimes, after an inspector had retraced his/her steps, labels in hand, the labels would end up on the wrong pallets. The number of errors was significantly reduced once the company purchased some MPWs. Now, every inspector can scan and print labels right beside the pallet that needs them. Thanks to swivel casters, the workstation can be easily maneuvered to the next pallet in seconds.

POWERED PROCESS IMPROVEMENT



ABOUT NEWCASTLE SYSTEMS

Newcastle Systems' commitment is to provide innovative solutions that help make Auto-ID Technology and other hardware truly mobile and information more readily available across an entire enterprise.

Loss of productivity and inefficiencies such as wasted steps to the printer, inaccurate inventory counts, improper labeling, time delays, manual processing and incorrect shipments are just some of the challenges that are alleviated with a mobile powered workstation.