Warehouse Barcode Systems:

HOW TO LABEL A NEW FACILITY

DecisionPoint
TECHNOLOGIES

When you consider the massive number of items moving through a typical warehouse each day, the urgency around optimizing efficiency and accuracy is obvious. Fortunately, there's an easy, effective way to track and manage assets: barcode labeling and scanning systems.

By applying barcode labels to assets and throughout the facility, workers are able to quickly locate the right items at every point throughout the supply chain. This translates to improved worker productivity and greater inventory accuracy.

A warehouse labeling and scanning system is fairly simple and includes three primary components (plus software that "ties them all together"):

LABELS: Labels feature a barcode that contains a variety of product and location data.

PRINTERS: Thermal printers are used to generate the labels in-house.

SCANNERS: Wireless scanners allow workers to quickly locate and pick the right inventory and conduct cycle counts, and gather data about products, the warehouse, and the supply chain.

Barcode labels must be affixed not just to assets, but to the places (general and specific) where those assets are stored. The first step is to analyze your floor plan to pinpoint storage locations, and identify all of the following:

AISLES / RACKS: Labels identifying racks are the most common because even warehouses with a modest amount of inventory see timesaving and accuracy benefits.

SHELVES: Every shelf on that rack is labeled with a barcode to help workers narrow their searches.

BINS & TOTES: If items are contained on the shelves in bins or totes, these are also labeled to further refine the search.

Once all these discrete locations are identified, a unique code (a set of letters and numbers) is assigned to each and printed on the associated labels. When scanned, the barcode will tell the worker what items are stored at that specific location.

In addition to storage locations, individual assets can be labeled for identification, too. Information might include date of manufacture, size, cost, handling requirements, expiration date, and dozens of other data points.

Pre-printed or On-demand?

Pre-printed labels may be the right choice if your application requires variable numbering, colors, or graphics. Most companies, however, find on-demand barcodes worth the initial investment because of the added value they get from the customized information on each label.

There are several types of labels, and the one that's right for you will depend on your warehouse and its assets.

MAGNETIC: The best choice when the warehouse configurations change frequently, as they're easy to remove and reapply where needed.

REMOVABLE: Affixed using a tacky adhesive. These labels are simple to place and remove when needed.

PERMANENT ADHESIVE: Applied to items that require a onetime label (though excessive moisture or exposure to solvents can dilute adhesive effectiveness).

How will you choose?

The factors include:

- **Application surface:** Example: standard permanent adhesives don't work on oily surfaces

- **Temperature and environment:** Some products must survive a heated production process or be stored in freezers

- **Readability:** Some companies charge fines to suppliers for shipments with unreadable / low quality barcodes

- **Ribbon match:** Example: a wax ribbon cannot be used with a polyester top-coat label stock because the printing will rub off

- **Printhead resolution match:** Thermal printers have multiple resolution options, and the right match for the application is critical

BARCODE PRINTING

The most widely used technologies are direct thermal and thermal transfer printing. While both use a heated printhead to create images on labels, they're suited to different applications.

DIRECT THERMAL The best choice when the warehouse configurations change frequently, as they're easy to remove and reapply where needed.

THERMAL TRANSFER Affixed using a tacky adhesive. These labels are simple to place and remove when needed.

How will you choose?
An integrator like DecisionPoint Technologies will help ensure the best type of label printing for your needs.

BARCODE LABEL PRINTERS

Your type of label, application, and environment will drive the selection of the right label printer. These and other factors go into the choice:

- Where printers will be located
- The environment in which the printer will operate
- Expected duty cycles for the printer
- Minimum speed requirements
- Dimensions of the labels to be used
- How frequently label specs change

How will you choose?

An integrator like DecisionPoint Technologies will help ensure that you're using the right printer for your needs.

BARCODE SCANNERS

There are also different barcode scanners, and they fall into one of two categories (generally speaking):

SHORT-RANGE SCANNERS work best when workers can typically hold the scanners just a few inches from items being scanned. In large warehouses, that's usually not practical or efficient.

LONG-RANGE SCANNERS are more practical for large-scale operations, and in environments that are hazardous, such as freezer storage areas. These scanners can read barcodes up to 45 feet away, making it easy to scan items high on racks, and make cycle counts faster.

How will you choose?

The right handheld scanner for your operation will depend on:

- The nature of your facility
- How you'll use the hardware
- The distance from which labels will be scanned
- Physical or other limitations
- Your workforce

Both types are often put to use within the same facility, as there are appropriate use cases for each.

WHAT ABOUT RFID?

RFID labels can serve as a complementary technology in warehouse operations. You may want to consider RFID labeling if:

- You have high-value items that justify the additional tag cost
- Your operation would benefit significantly from bulk scanning capabilities
- You need to frequently update item information
- You have areas where automated scanning would provide substantial efficiency gains

A barcode system could serve as a primary solution, with RFID used for specific use cases in which the additional benefits justify the investment.
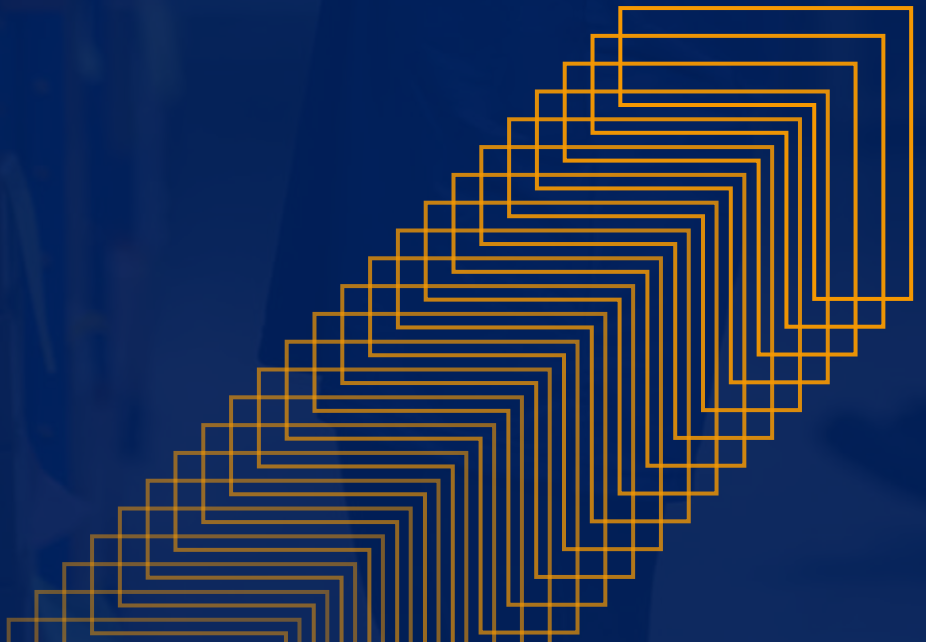
READY TO GET STARTED?

The first step in deploying a warehouse management labeling and barcode scanning solution is to identify an experienced partner to work with, and to get them onboard early in the process. Their knowledge and insights will help you avoid costly missteps and unnecessary delays.

The best vendor partners will work to understand what you're looking for, and what you hope to achieve. Knowing that, they'll want to understand your workers, workflows, network, and bandwidth so they can identify the best solution, and the resources you'll need both during implementation and ongoing.

Ready to put labels to work making your warehouse (and people) more efficient? The team at DecisionPoint Technologies would love to hear more about your business and your warehouse, and help develop the right labeling solution for your needs.

SCHEDULE A CONSULTATION