

Quality Barcode Printing Is Vital to Successful Supply Chains



Quality Barcode Printing Is Vital to Successful Supply Chains

Barcodes are indispensable for the exchange of vital data. It's time we recognized the important contribution that barcode printers make to the success of a company's supply chain—and to its bottom line.

If supply chain management is concerned about anything today, it's optimization. Ensuring that every link is working at peak capacity in the most efficient and productive manner is paramount. Moreover, it's crucially important that no part of the supply chain is overlooked or given short shrift. Everyone understands the vital role of transportation and warehouse management systems, or sales and operations planning, demand management and enterprise resource planning systems, and the need for optimal performance in each. But what about barcode solutions? How many of us realize the valuable contribution that printing of barcode tags and labels makes to the supply chain of any successful company?

To some extent, barcode solutions may be the victim of the ubiquity of the barcode itself. Around for decades, it has become such an integral part of private and public

life, that it is easy for some to forget the vital role the barcode plays in autoID and data capture technology, and what that means to the supply chain. But given the widespread use of barcoding, shouldn't ensuring that barcode labels and tags are printed correctly and accurately be the most obvious area to improve in your supply chain?

The fact is, labeling is critically important in today's supply chain. The highly complex movement of virtually every pallet, parcel or product involves a label of some kind. Many links in the supply chain—manufacturing, warehousing and transportation—are tied together by barcode labels. The data contained in those barcodes enable identification and monitoring of raw materials, parts and components, and finished goods wherever they travel in the supply chain.

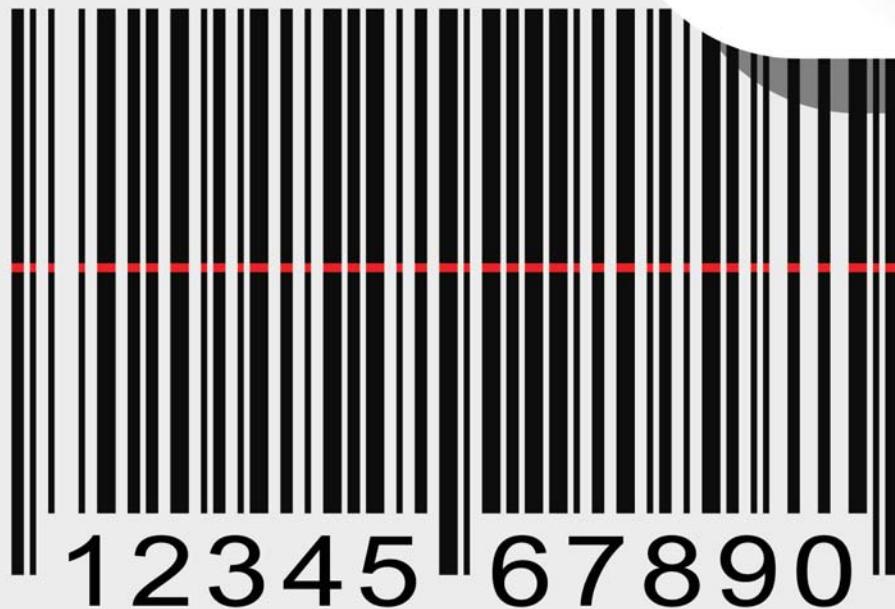
As the vital contribution of the supply chain itself has become more recognized,

supply chain managers have come to see how labeling has enabled efficiency and customer satisfaction, not to mention how it has helped enterprises with regulatory compliance.

Labeling is not just a tactical necessity, according to Richa Gupta, senior analyst, autoID and data capture, at VDC Research. In a paper she co-authored, she said that labeling has become a strategic imperative, one that top executives have begun to see is directly impacting their top and bottom lines.

If anything, Gupta says, in the connected world that enterprises operate in today, the demand for integrated labeling solutions has achieved an importance that can't be overstated. Barcode labeling is seen now as an indispensable component of doing business, and its function in the supply chain is being viewed more strategically than ever.

The supply chain is about flow—effi-



cient flow of materials and products—between and among partners and their suppliers and customers. Data is the fuel that powers that movement across a flexible and nimble demand-driven supply chain.

“We need the information, the data, contained on the barcode label for all kinds of reasons,” she says. “We need to know, for instance, what something is, where it is, where it is going—and we need to make sure all of that’s happening in an accurate manner.”

And in a cost-effective way as well. In a

survey, Gupta’s research organization found that 73 percent of enterprises said operations improvement and cost savings were among the top reasons they invested in barcode technology. Some 65 percent said customer and government regulatory requirements are among their top challenges. Enabling the accurate exchange of data helps meet those demands.

How important is labeling to the supply chain? “With the right label printing technology, we can make sure that the label matches what’s in the box as the item

moves throughout the pain points of the supply chain,” Gupta says. “If we put a label on a box as it’s going out the door somewhere, we can generate an ASN and tell somebody that the item is on its way to you. And during its travels, the data can be captured, and we can know where it’s going, we can know that it has arrived, and that it is what it is supposed to be. That’s the value.”

The contribution to an enterprise’s supply chain is certainly not lost on providers of autoID and data capture solutions. “When we talk of end-to-end communication,



“With the right label printing technology, we can make sure that the label matches what’s in the box as the item moves throughout the pain points of the supply chain.”

— Richa Gupta of VDC Research

machine-to-machine communication or identification, we almost always start with a barcode scanner capturing information from a barcode label,” says Paul Weslake, product manager for SATO’s CLNX™ series of printer. “The barcodes and the printers that produce them are essential for information exchange and running the supply chain today.”

Clearly, barcoding solutions have done a lot for the overall supply chain, but drilling down, how have employees actually been using the technology benefits? Have workers been empowered to keep the business running at maximum capacity?

In most distributed printing operations,

producing and applying labels is not the main component of an operator’s daily functions. Consequently, it’s imperative that labeling doesn’t interrupt the flow of other parts of one’s job. Ideally, label printing and application should be streamlined so that the worker that’s involved in picking, packing or some other task does not have to stop to tend to labeling. The printing process needs to be quick and efficient, and of course, as free of errors as possible.

In fact, says Gupta, with state-of-the-art systems, label printing can be a byproduct of the other aspects of an operator’s job, which is a boon to the supply chain.

Perhaps manufacturing, transportation

and logistics organizations are among the top users of labeling, and the application environments there require great flexibility. That’s why providers should be mindful about providing barcoding solutions that don’t require a worker to have to go to a separate location to print labels. The ability to print labels as required on demand should not be restricted to either a certain location or time of day.

In fact, the needs of an enterprise’s IT department should be top of mind for any solutions provider, says Weslake. Integrators are looking to implement a solution as quickly as possible and then not have to worry about it. “They’re saying, ‘How can I

get this in my system quickly because I don't have time to deal with it.”

Not only are IT departments concerned with rapid and easy implementation times, support and maintenance can be troubling, costly and time consuming. That's why sustainability is key to investing in barcode label printers and other technology. Can the product function for a prolonged period of time without either the operator or IT department personnel having to lose time dealing with the hardware or its media and consumables?

Certainly, the initial step involves ascertaining if one has chosen the right product for the job at hand. Clearly, some printers are more ideal for certain functions than others.

In addition, given that many enterprises already have some printing capability, implementing a new product can be challenging. How do you accomplish that without losing much time? Does the new technology have the right languages? VDC Research says its survey found that 72 percent of billion dollar-plus companies print labels in five or more languages. Does the new system “speak” to existing systems and run the same labels and tags as the one already installed on site? This isn't academic: 86 percent of those major compa-

nies canvassed by VDC have six or more locations using labeling as part of their supply chain. Eighty-three percent of them have two or more ERP applications integrated to drive labeling. No doubt, enabling machine-to-machine communication is highly important.

Maintenance can be a productivity killer. Time spent changing ribbons or cleaning print heads is time wasted. In an environment where items have to leave a warehouse or distribution center on time, changing media has to be done quickly and easily. Solutions should be easily understood and not require much training or intervention from supervisors or IT staff.

The use of on-board videos, instructing workers in the correct use and maintenance of the devices, has greatly reduced the amount of non-productive downtime.

Media capacity is key to enhanced productivity. If an enterprise can increase the size of media loaded in a printer, say from 8- to 10-inch rolls, an operator doesn't have to stop to re-load as often. That changeover takes on average about five minutes, which may not seem that important until you consider that some facilities have 100 printers or more. When you do the math, you see that downtime can be costly.

For the same reason, reliability is vitally

important. While choosing the right product for the job is important, so is matching the printer to the work environment. Is it rugged enough? If not, the quality of the print job can be negatively affected, and that can be expensive.

Flaky ribbons, ink buildup, paper dust—each can damage the print head or otherwise affect print quality.

No company wants to lose time or money in reprints of labels, and if you don't have quality media or if everything isn't precise, if the data can't be ascertained by scanner or other method, a reprint could be ordered.

Barcode verification can ensure that industry standards and specifications have been followed. After all, if a barcode can't be successfully read anywhere else in the supply chain, particularly in retail, that can be costly. Faulty or non-compliant barcodes can result in large penalties. By some estimates, chargebacks may reduce a manufacturer's revenue anywhere from two to 10 percent.

As Weslake puts it, “That barcode is someone's livelihood. That's how important it is. You need to have the ability to do the maintenance and move on.”

No link in the supply chain is unimportant, and the barcode printer is no different. Can yours be improved? ○

