



# **Automated Data Capture in Distribution**

How to leverage real-time data to be  
more efficient, accurate, and  
connected

# Table of Contents

[Chapter 1: Moving from Manual to Automated Data Capture](#)

[Chapter 2  
Impact Points in Distribution](#)

[Chapter 3  
How to Get Started with Automated Data Capture](#)

[Chapter 4  
Benefits of Change](#)

# Chapter I

## Moving from Manual to Automated Data Capture



**Automatically capturing critical components within the distribution process begins with both process and technological changes.**

For traceability and real-time visibility to be effective, companies must **shift from error-prone labor intensive manual processes to automated ones** – capturing, storing and managing information automatically.

# Achieve REAL-TIME

## Real-time Data Capture

When combined with a robust data management system, bar code scanning solutions create versatile data capture and reporting systems.

Real-time transparency limits the scope and impact of any potential recalls

## Barcode scanning

- Global trade identification numbers (GTINs)
- Ranch, feedlot, auction house, and processor locations
- Condition, quantity and historical data within the supply chain
- Handling instructions
- Lot/batch numbers
- Authentication codes
- Inspector IDs
- Transportation information

## Real-time transparency

Implementing a wireless local area network (LAN) within a distribution center enables a business to collect and correlate the various data **in real time** as it moves to, from and throughout a facility. **Respond instantly** with mobile computers equipped with bar code scanning, RFID and/or voice.

# The Small but Mighty Barcode

A barcode label condenses a lot of information into a tiny space that can be read by a computer. It is a simple and powerful idea, which explains the barcode's presence in so many industries and applications. The traditional pattern familiar to all is called a 1D barcode. 2D barcodes have also caught on in many industries.



These 2D barcodes arrange data in two dimensions, as opposed to the single dimension of traditional barcodes, allowing them to store more data.

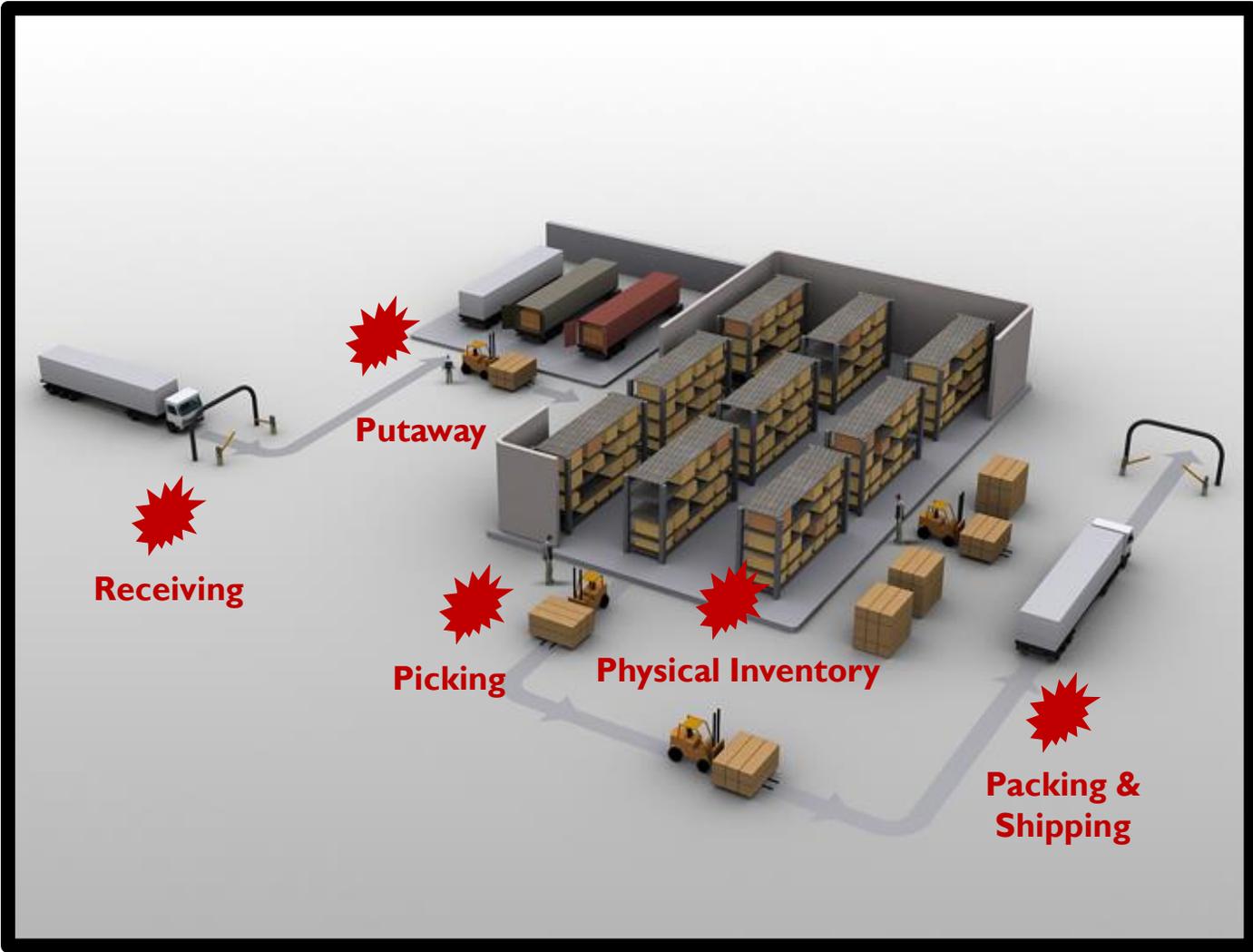
## But, Barcodes Are Just the Beginning

There are three main data capture technologies, although we will focus on just barcode scanning now.

- **Barcode** – still most cost effective and efficient way to capture data automatically
- **RFID** (radio frequency identification) – best for asset tracking; does not require line of sight or user-direction
- **Voice** – best for picking; increases user productivity

# Chapter 2

## Impact Points in Distribution



There are five primary components of a distribution center workflow impacted by data capture: **receiving, put away, picking, packing and shipping, and physical inventory/cycle count.**

# Barcode Scanning in Receiving

Real-time wireless connectivity and data capture at the dock door increases the velocity and the accuracy of the receiving function.

## Process Improvement

- Instantly process and reconcile shipments with a scan of a barcode
- Automatically deliver electronic processing directions for incoming shipments
- Print labels on the spot to replace damaged or missing
- Photographic documentation and proof of condition for incoming goods

## Benefits

- Streamlines and error-proofs the receiving process
- Enables instant inventory visibility and availability
- Eliminates congestion at the dock door
- Improves worker productivity
- Reduces cycle times
- Speeds the putaway process for faster inventory availability



# Improving Put Away

With mobility, the putaway process is virtually error-free – materials are always in the right location and ready to fill orders or replenish the production line, increasing customer satisfaction, production uptime, and yield.



## Process Improvement

- Scan of the barcode on items displays the right storage destination and the fastest route to putaway location
- Crosscheck putaway accuracy with a scan of the shelf tag
- Hazardous or incompatible products are handled correctly in terms of comingling or other storage requirements.

## Benefits

- Reduces dock-to-stock times
- Optimizes inventory availability and accuracy – incoming shipments are promptly stored in the right location every time
- Improves worker productivity – do more with the same
- Protects customer service and satisfaction – inventory is accurate and ready to fill

# Speeding the Picking Process

Whether your workers are picking individual items or cases, hands-free mobile solutions dramatically streamline and error-proof the picking process for fast and accurate fulfillment.



## Process Improvement

- Paper pick orders are replaced with electronic text or voice to enable batch, wave, and dynamic picking
- Use voice to keep users in constant motion
- Display the optimal route to the location
- Scan the barcode or RFID tag to verify the pick
- Picked items are instantly deducted from inventory
- Automatically capture lot numbers, serial numbers, catch weights, etc.

## Benefits

- Increase productivity
- Meet customer expectations for same day shipping
- Achieve 99.9% picking accuracy
- Improve customer service
- Eliminate returns and return fees
- Use granular picking to support first in, first out/ last in, last out
- Reduce out of stocks
- Improve data accuracy
- Cost-effectively handle compliance initiatives

# A Better Way for Physical Inventory/ Cycle Counts

Use mobile and wireless warehouse inventory management technologies to manage physical inventory in real-time and reduce the number of workers required for conducting cycle count.

## Process Improvement

- Include cycle counts as part of a daily or weekly routine
- Scan a barcode (or RFID tag) and automatically update inventory management data

## Benefits

- Streamline inventory management process
- Reduce shrinkage and loss
- Enhance accuracy without delay
- Improves customer service with real-time inventory control
- Imposes operational discipline
- Improved reporting
- Lessened labor time and cost



# Accurately Packing and Shipping

When you equip packers with barcode scanning capabilities and wireless connectivity to your business systems, quality control is simple, fast, and accurate.

## Process Improvement

- Scan barcode on all items to automatically validate
- Automatically calculate packing material needs
- Scan shipping materials as they are used for real-time inventory visibility

## Benefits

- Increase productivity— do more with the same
- Increase shipping accuracy
- Eliminate the costs associated with re-ships
- Protect customer satisfaction by ensuring orders are right before packing
- Reduce packing material costs
- Reduce out-of-stocks



# Chapter 3

## How to Get Started with Automated Data Capture



### Start with the Right Questions

- What are you trying to accomplish with automation?
- How much data would best support the application?
- What are the specific tasks involved?
- What is the work environment? Does it require more ruggedized equipment?
- What are your compliance-labeling requirements?
- What ROI can you expect (or do you require) by automating?

# Get the Right Partner Involved

The proliferation of mobile devices is great for price and selection, but hardware is just a fraction of what's required. For a successful project, you need a partner with deep implementation experience and a finely honed methodology. When researching possible business, challenge them with questions that go beyond hardware costs.

- What level of relationship does the provider have with industry-leading manufacturers and software developers?
- What is the provider's level of experience with different types of mobility projects?
- What is the provider's relationship to their existing client base? Does the provider have reference clients willing to discuss their experiences and their level of trust in the partnership?
- How is the provider supplying leadership in cutting-edge technology and processes?
- Can the provider explain, in detail, their implementation methodology and how it has proven successful in the past?
- Does the provider have longevity and financial stability?
- Does the provider offer complete post-implementation support services?

# Be Prepared

Understanding the process goes a long way toward the success of a data capture project. Here are some other steps companies should take to prepare:

- Appoint to the project solution team every department the solution will touch.
- Gather all existing documentation of current processes.
- Designate a project owner who truly buys into the project mission.
- Devote adequate technical and financial resources.
- Be aware of potential pitfalls.



**Conduct a mobility and process assessment.** One specific pain point often drives the decision to adopt a new mobility solution; however, the ideal case is to address multiple needs with one implementation. These needs may not be obvious; the best practice is to start a mobility project with an assessment of current processes as well as the overall market:

- How are customer demands and new capabilities changing the industry?
- How can other departments make use of real-time mobile devices in the field?

# Methods of Training

Training staff on the use of automated data capture equipment is an important component to the success of the overall project. A strong, organized approach by executive leadership is the best way to set the right tone and expectations.



## Best Practices and Ideas from the Field:

- Provide clear leadership and direction. It's important for everyone to understand that this is the new process, period.
- Train the trainer. Start by training the shift leaders – you'll create buy-in and an organized process for roll-out. Another important concept is “see one, do one, teach one” – which will help if there is turnover.
- Don't overlook the simple parts of the process. Show how a scanner works, how it most effectively scans, etc.
- Try a game. Use the scanners as part of a “laser tag” game or a “barcode race” and then transition into workflows.
- Provide basic troubleshooting procedures. Answer the simple questions and have this information readily available. (i.e., is the scanner plugged in to the proper portal?)
- Provide clear goals for the roll-out and celebrate when those goals are met. Detailing efficiency and accuracy gains to everyone will demonstrate the positive nature of the change and will keep momentum going.

# Chapter 4

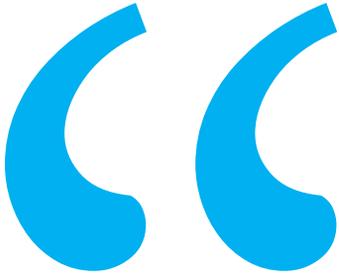
## Benefits of Change



### **You Can't Afford Not To...**

have real-time visibility into your distribution processes.

Automated data capture **ensures product quality standards are met and gives real-time information about production and equipment.** Track data back to the exact date, time, supplier components, operator, and machines used.



Real-time information  
puts **customer  
satisfaction & safety  
first.**”

## **Be Efficient – Accurate – Connected™**

Automated data capture will allow you to:

- Increase customer satisfaction and safety
- Meet government and compliance mandates
- Improve data accuracy (99.9%)
- Increase operational productivity
- Protect your brand and bottom line
- Focus on generating revenue

**Remember, barcoding systems only generate a profit when supported by improved processes.**

# ROI Calculator

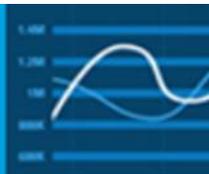
We have included an online tool from Motorola Solutions to help you calculate potential savings from a mobile solution. Please keep in mind that this ROI Calculator is far from all-inclusive, and your organization should also include potential “soft savings” when determining ROI.

Examples of “soft savings” in your ROI Analysis:

- Increased cash flow.
- Increased customer satisfaction and retention (reduce/eliminate lost orders).
- Increased sales and productivity per head-count.
- Enhanced job satisfaction and ultimately a higher rate of retention for users.
- Reduced total delivered cost of goods.
- Reduced assets deployed to manage inventory and fulfill orders.
- Real-time inventory data visibility.
- Less time spent on mistakes and more on making improvements.

*Click the banner to start:*

**CALCULATE YOUR SAVINGS**



Produced by Barcoding, Inc.

[www.barcoding.com](http://www.barcoding.com)

2014