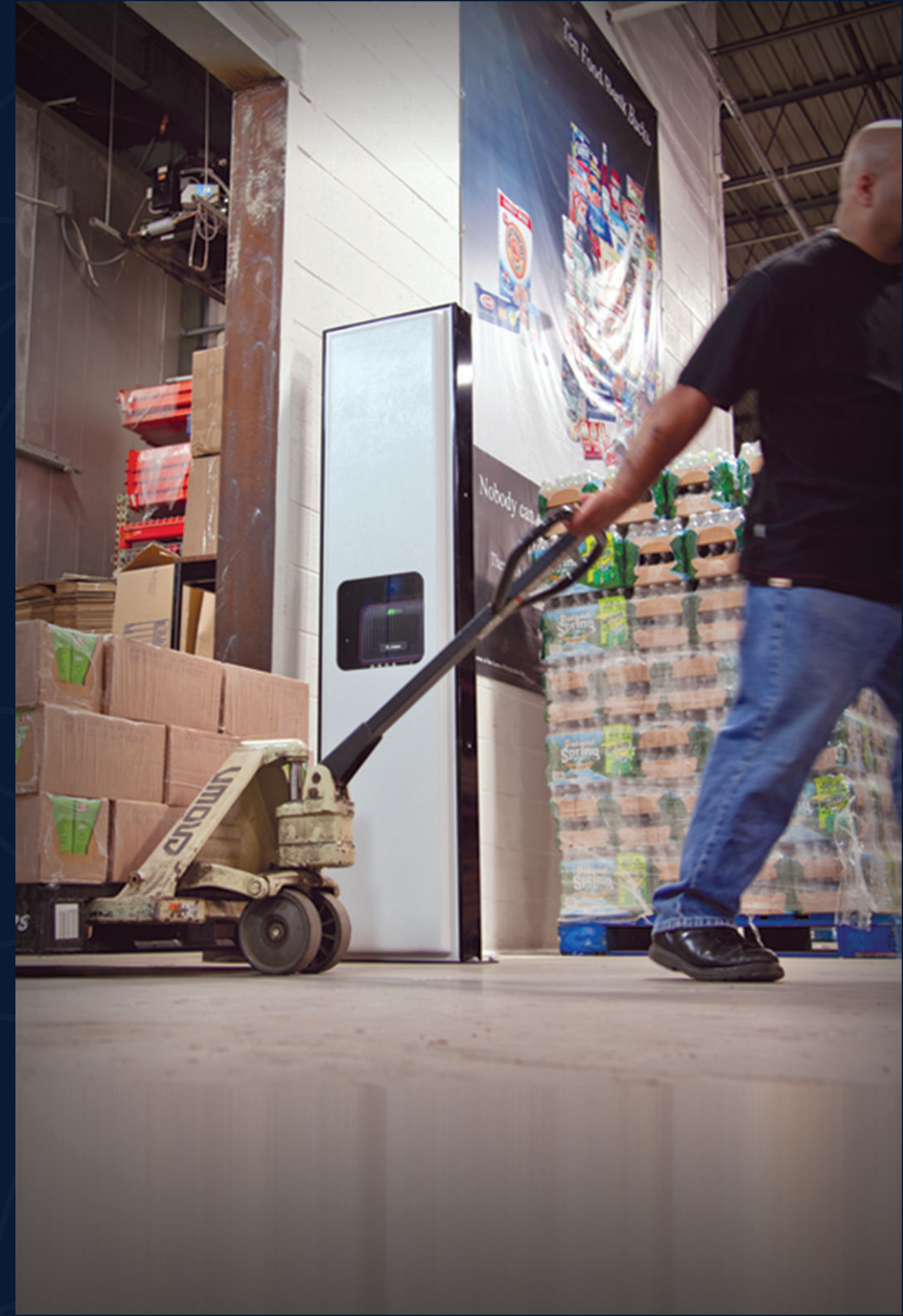


5 Steps to 100% Inventory and Asset Accuracy

A Warehouse Manager's Guide to RFID



T&W Operations, Inc.
Smart. Solutions.



If the idea of an approaching cycle count complete inventory, or asset accounting makes you sweat or lose sleep

it's probably because

your processes to ensure accountability and oversight are lacking. Total inventories often require days, or at least a very long night, to complete, shutting down operations and incurring above-average labor costs.

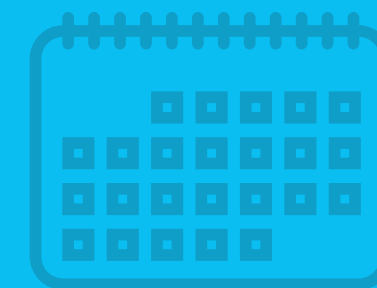
Even if you rely on cycle counting to manage inventory piecemeal over time or have procedures to ensure that company assets are properly checked out and in, it can be challenging to feel confident that your numbers are 100% accurate, or even 95%. 90%? Less?

Human error and outdated technology practices lead to inventory loss, redundant shipments, over-ordering, extra labor, and wasted time. If any of those occur in your operation (even occasionally), you should consider updating your asset & inventory processes, especially if you're still using spreadsheets or other manual practices.



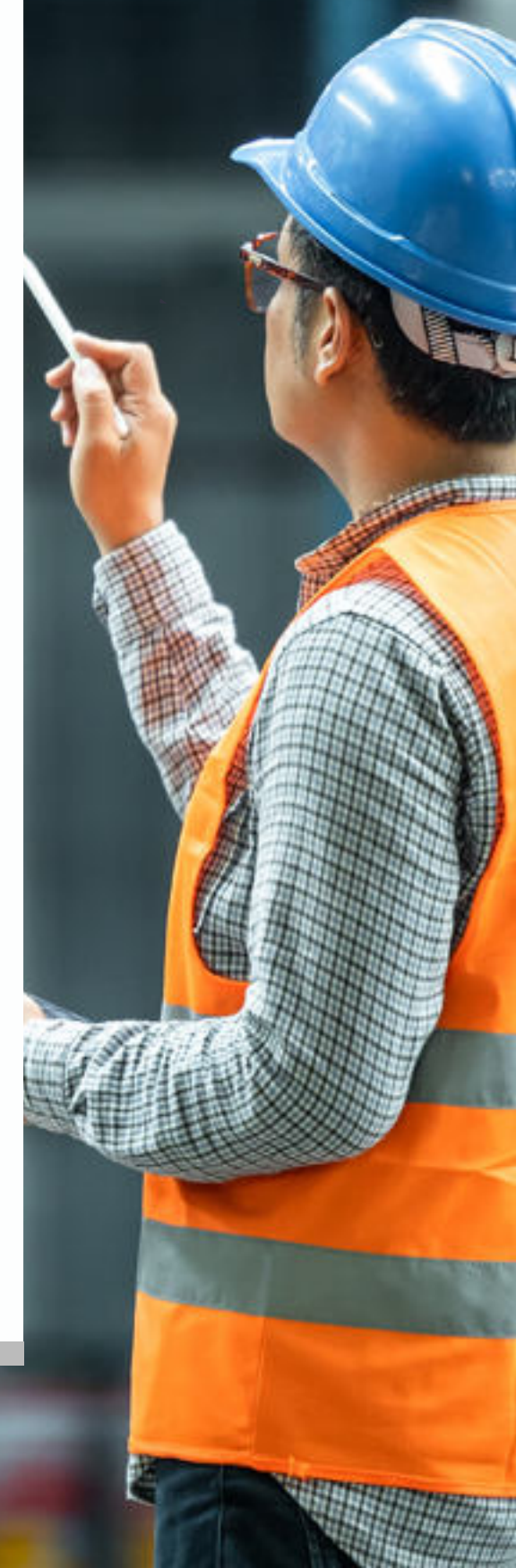
9,376

**AVERAGE SKUs
PER WAREHOUSE**



3 MONTHS

**TYPICAL CADENCE
FOR CYCLE COUNTING**







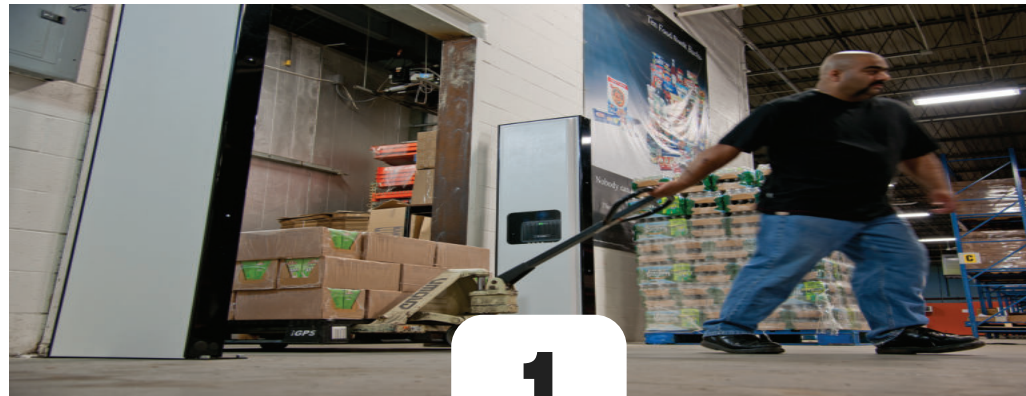
Barcodes vs. RFID: Compare & Contrast

Compared to barcodes, Radio Frequency IDentification (RFID) offers the unique benefit of reading up to 40 tags per second. RFID can store more data with a higher degree of complexity than barcodes, allowing readers to differentiate between two items of the same SKU if they are tagged individually. RFID technologies can bring a much higher level of transparency across the supply chain by enabling the capture of expiration dates, batch numbers, and lot numbers. RFID tags also hold more information than barcodes.

However, RFID does not have to be a complete replacement for barcodes. The two can complement one another for a robust inventory and asset management solution.

CAPABILITIES	 BARCODES	VS  RFID
Line of Sight	Scanner must have a clear, unobstructed view of the barcode to read it	Not required for RFID readers. They can read tags up to 300 feet away in some instances.
Durability	Less durable in harsh conditions. May tear, wrinkle or fall off.	Many RFID tags are weatherproof and are able to withstand chemical exposure and extreme temperatures
Data Capture	Typically limited to 20 characters of information.	An RFID tag can include up to 100 times more data than barcodes, such as product origin, lot and expiration dates.
Productivity	Labels must be scanned individually.	Readers can scan up to 200 tags simultaneously.

5 Ways to Deploy RFID in Your Warehouse



1

No-touch receiving

Dock or supply room door-mounted readers can immediately validate received goods



2

WIP Asset Location

Track the location and status of work in progress



3

ERP/WMS Integrations

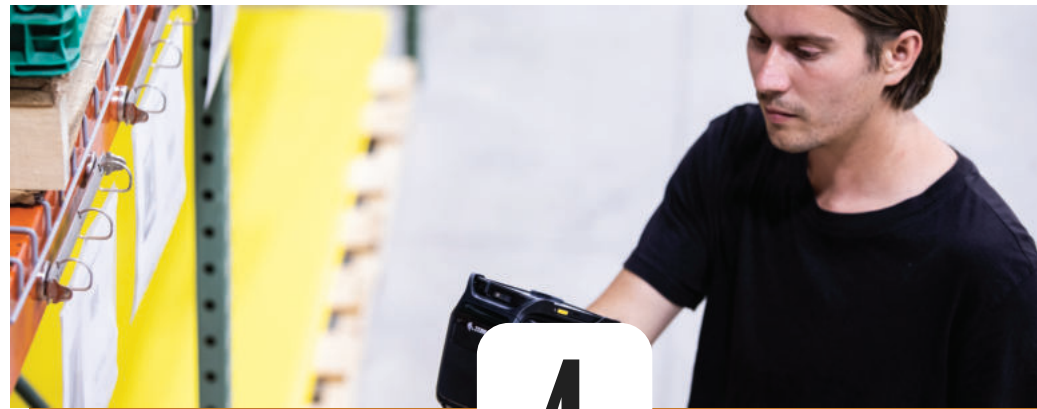
All inventory movements are automatically recorded in your systems

RFID Form Factor: Fixed Readers

Typically mounted above or around dock doors, storage areas, or conveyor belts, fixed readers receive information from RFID tags as items pass. Fixed readers require tuning to ensure they only read the tags they're intended to read without any spillage.



(continued) 5 Ways to Deploy RFID in Your Warehouse



4

Returns Management

A quick scan of an RFID tag on a returned item will update with no manual keying



5

Asset Tracking

Equipment (mobile devices, printers, computers, and more) can be tracked with RFID

RFID Form Factor: Handheld Readers

Similar to barcode scanners, handheld RFID readers can be easily transported from one area to the next, and a simple 'wave of the wand' in the direction of a group of tags is all that's needed to count items.



Building Your RFID Solution – What to Watch For

RFID is a force multiplier for supply chain organizations but can have challenges to implement. There are some issues and decisions to be made along the way. Below are a handful of considerations you'll want to be mindful of when evaluating RFID solutions.



Network Robustness

Your wireless network serves as the foundation for an RFID deployment. As such, it is critical to have a strong WLAN in place before deploying RFID-based inventory or asset solutions.



RFID Tag Selection

Not all tags are ideal for tracking all materials—ensuring that you have the right tags for affixing to metals vs. plastics is critical to a successful project. Furthermore, tag cost can be prohibitive for specific use cases, which is better to know early on.



IT Solution Provider

Every RFID project is unique, and buying into the idea of a one-size-fits-all deployment is a recipe for disaster. The right RFID partner will help you define your goals and build a customized solution.

TIS RFID from T&W Operations – Smart Solutions

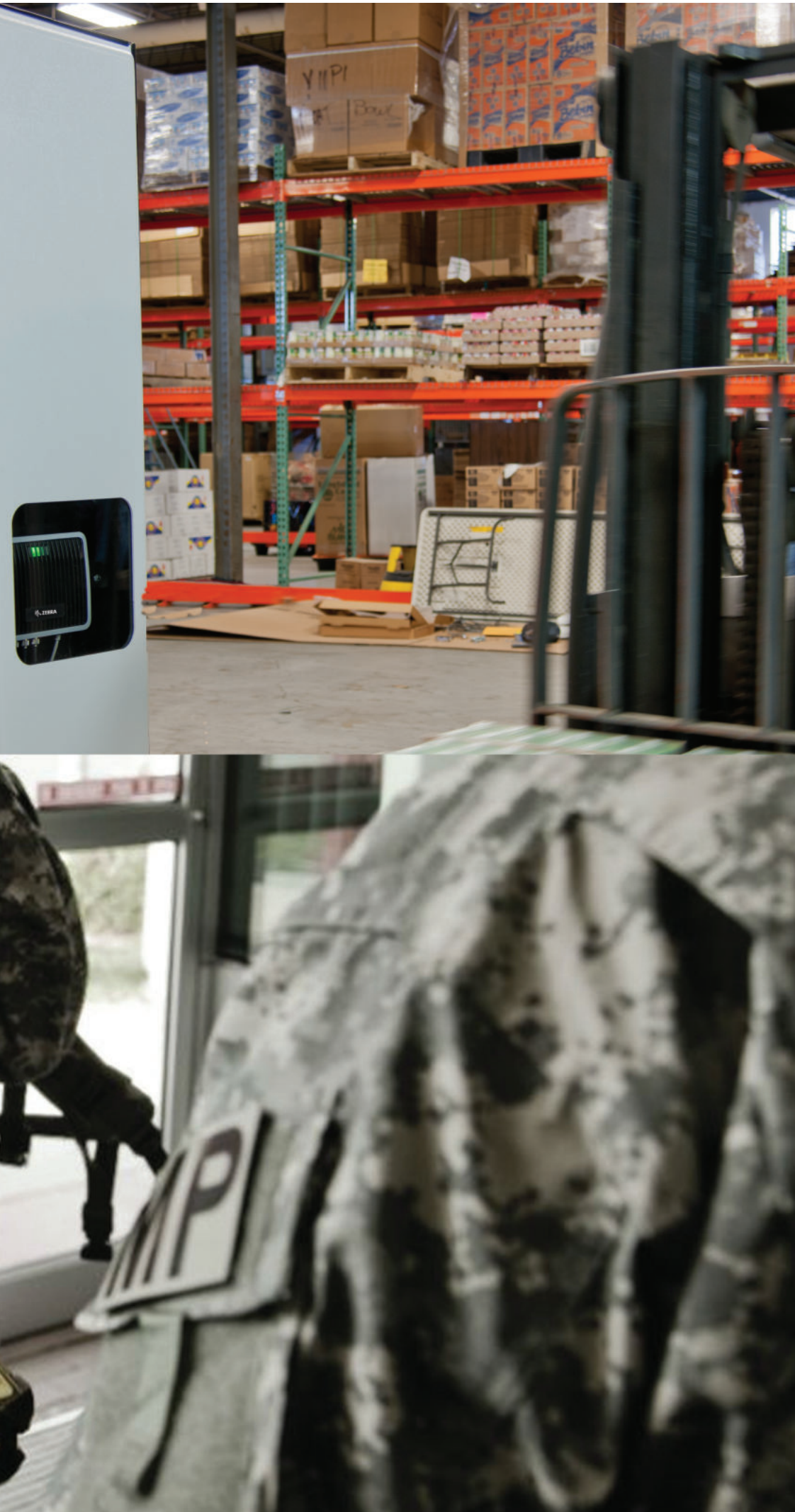
T&W's mission is to provide warehouse operators with innovative inventory solutions by utilizing emerging RFID technologies that deliver unparalleled results. Patented technologies work together to provide 100% accuracy and visibility of all inventoried assets, allowing businesses to reduce time and cost dramatically. Their suite of integrated systems includes RFID towers, portals, mobile solutions, custom inventory software, and more, providing endless applications in all fields, from warehouse inventory management to asset location. No matter your goals, T&W provides Smart Solutions that will allow you to stay ahead of the competition.

tnwops.com | 265.535.0857



Zebra has decades of expertise, design, and software development with RFID, backed by a suite of hardware options to create a consistent traceability process in your operation.

- Handheld readers for mobility and on-the-to visibility
- Fixed readers and infrastructure for pinpointing the location of tagged assets
- RFID tag printers and media to create quick, secure labels for any situation



Case Study – Military Contractor Saves Time & Money with RFID

Like many government contractors, Invariant Corporation knows the importance of having accurate, accessible inventory, but cycle counts, accountability, and discrepancies gave them “nightmares.” After switching from hand counts and spreadsheets to TIS, they’ve seen a dramatic change in their asset & inventory practices, making managing nearly 1600 items in four different locations easier.

Before

- 320 man-hours devoted to inventory each year
- Multiple personnel and several weeks to count and recount equipment
- 80% accountability for assets

After

- 30 minutes total for one person to do a complete inventory
- Savings of \$15K-20K in labor
- 99%+ asset accountability in six months

“Working with T&W Operations has turned my nightmares into restful sleep, knowing that I have **100% accountability of my assets**. With T&W’s Tower Inventory System (TIS) and RFID technology, I can account for thousands of items in a matter of minutes, saving time and man hours. Most importantly, T&W’s unparalleled customer service and expertise in the inventory management field helps us support our customers and Armed Forces better every day.”

-Tyler Norris, Principle Logistician, Invariant