Effective Warehouse Management in Challenging Times

By Jon Schreibfeder

Not surprisingly, the most pressing issue facing warehouse leaders today is the shortage of qualified and motivated employees. This shortage, combined with skyrocketing labor costs, place warehouse managers under intense pressure to improve productivity within their four walls.

Other challenges include:

- Shortage of available warehouse space in many areas
- Smaller, more frequent customer orders
- Customer demand for immediate fulfillment and shipment of orders
- Supply chain issues resulting from unpredictable delivery of replenishment shipments

To overcome these challenges, warehouse managers must develop a comprehensive and effective warehouse management plan that includes best practices and leverages technologies designed to enhance efficiency and worker safety.

The Right Person in the Right Position

To effectively manage this part of the business, we must have the right people in the right positions, and provide them with the right tools to do their jobs.

However, the critical role of a warehouse manager is often filled by a skilled yet potentially unqualified warehouse employee.

This strategy often backfires, resulting in poor performance and lackluster results.

This employee may have the longest tenure and warehouse experience but lack certain leadership skills. In addition to operational acuity, a warehouse manager must be goal-oriented and organized, possess the ability to delegate tasks, as well as support and encourage warehouse staff.

Alternatively, the most experienced people, who know your products, warehouse and markets should hold key positions in receiving, inspection and put-away.

You may wonder why.

If you receive material and it's not checked in or put away properly, it becomes hard to find — a veritable treasure hunt. For that reason, I recommend setting a growth plan for new hires. The most effective growth path is when new employees begin as order-pickers and graduate to receiving departments and beyond. This path allows managers to monitor a new employee's understanding of their role, provide deeper training and prepare them for the next step in their career.

Similarly, the people who count the inventory and make sure quantities in the computer system align with items on the shelf must have certain qualities. They should be detail-oriented. They should have adequate math skills. Finally, they should have an investigative mindset that looks to troubleshoot inconsistencies in your inventory.
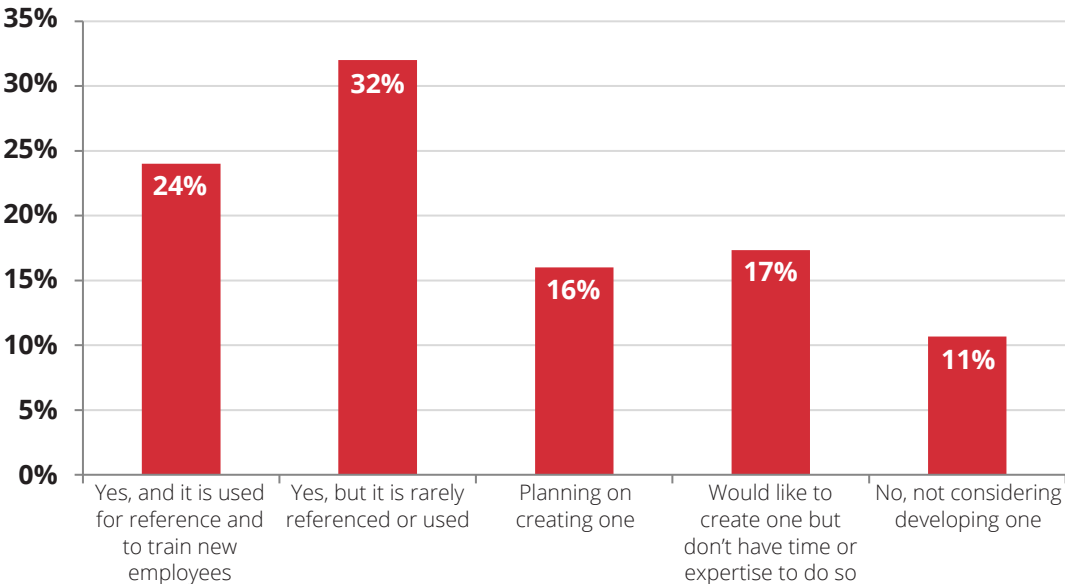
Maximize Productivity with Effective Policies and Procedures

The next step is defining and documenting company policies and procedures for all material-related movements and transactions, including:

- ☐ Receipts
- ☐ Unexpected Receipts
- ☐ Requisitions
- ☐ Picking Sales Orders
- ☐ Picking Transfers
- ☐ Assemblies
- ☐ Bin-to-Bin Transfers
- ☐ Returns to Stock
- ☐ Returns to Supplier
- ☐ Positive Adjustments
- ☐ Negative Adjustments
- ☐ Scrap

We surveyed 90 mid-sized distributors to learn more about their warehouse operations and how they processed transactions. We were shocked that only 25% regularly used a policy and procedures manual. You can have the best personnel and the latest technology, but without documented policies and procedures, you risk costly errors and miscommunication.

Do you have a warehouse policies and procedures manual?

Category	Percentage
Yes, and it is used for reference and to train new employees	24%
Yes, but it is rarely referenced or used	32%
Planning on creating one	16%
Would like to create one but don't have time or expertise to do so	17%
No, not considering developing one	11%

With a guide, you can train new hires and veteran employees, align expectations and reduce miscommunication.

However, even the best strategies need a contingency plan. There will be occasions when someone can't file paperwork or process a transaction according to the procedure guide. Perhaps it's an emergency at 3 a.m., or a salesperson is rushing to solve a customer crisis.

For those instances, we recommend placing a clipboard near every exit. In the event a salesperson doesn't have time to enter the transaction in the computer, they can note the date, time, item, quantity, employee name and reason for removing the item from the warehouse. Then, at regular intervals throughout the day, those clipboard entries can be recorded into the system to minimize inventory inaccuracies.

How to Train and Motivate Employees

Given today's labor shortage, it is far easier and more cost-effective to retain good employees than hire and train new ones. However, to get the most out of your staff, they need clear direction. Managers must lead by example, set employee-focused goals and expectations and outline a career path within their organization based on the employee's skill set.

We remind warehouse leaders to:

- Maintain a pleasant work environment.
- Pay competitive, above-average wages.
- Adequately train new employees on policies and procedures.
- Provide frequent, positive feedback.
- Expect staff to follow policy and procedure guide.
- Insist on professionalism from leaders and staff.
- Encourage suggestions for improvement.

Harness Technology to Boost Warehouse Productivity

To maximize our operational output and meet demand, we must supply our employees with tools and technology that supplement their efforts.

As technology continues to evolve, the barriers to entry shrink and solutions once out of reach to small- to mid-size distributors become more cost-effective.

That said, before implementing any technology solution, we recommend performing a cost-benefit analysis to ensure the investment matches the productivity benefits for the company.

Satisfaction with previous investments in warehouse technology
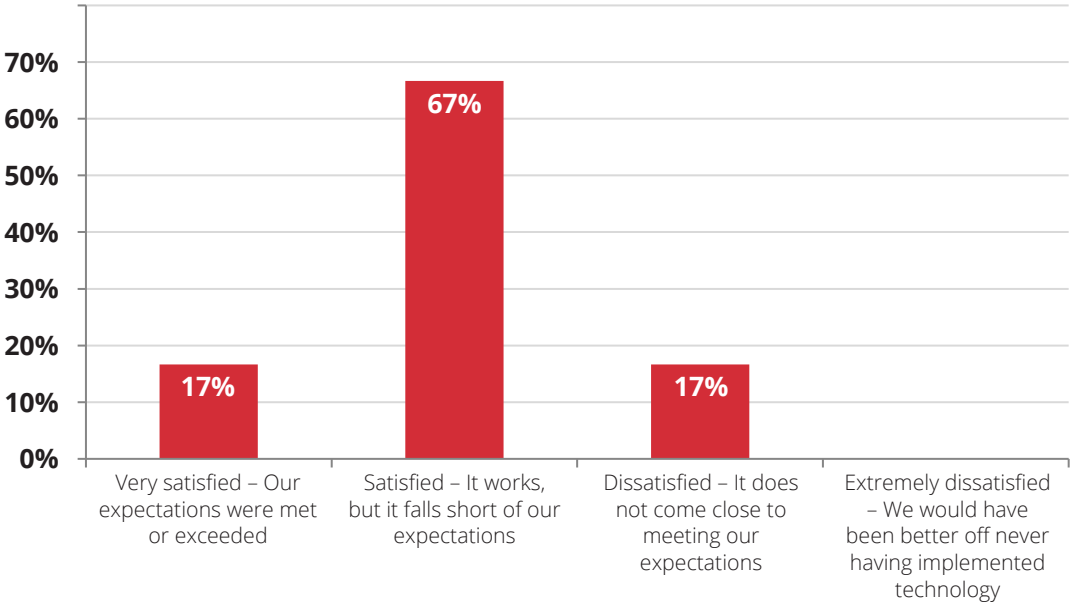
Note: Technology investments should pay for themselves within 18-24 months to achieve the best return.

There are several misconceptions about the use of technology in warehouses. The biggest misconception is that it will replace your employees.

Not true. Used technology can enabler greater productivity and empower employees to do their jobs to the best of their ability.

Warehouse Technology and Tools

Warehouse Management Systems (WMS)

Warehouse management software is a cost-effective solution to track materials and goods as they come in and go out of your warehouse. WMS reduces the cost of orders, streamlines the pick-and-pack process, assists with cycle counting and consolidates materials. When shopping for a WMS solution, look for a system that meets your needs and seamlessly integrates with your ERP software and other technology.

Have you implemented a warehouse management system (WMS)?
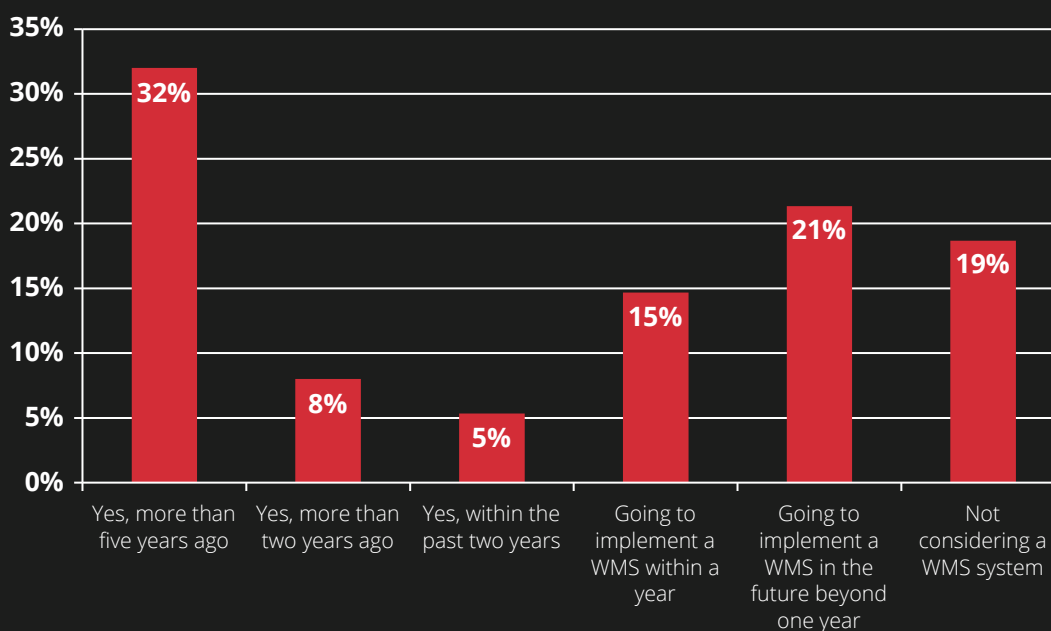
Source: Distribution Strategy Group Warehouse Management Survey, 4Q2022

Labor Management Systems (LMS)

Labor management software analyzes workforce requirements and provides labor planning and forecasting tools to help managers reduce operating costs. When used correctly, an LMS can identify areas requiring more labor, technology or employee training. I don't recommend businesses use LMS to gauge worker pay or to discipline workers. Instead, I suggest using LMS to enhance employee skills and performance.

Warehouse Shipping Management Systems (WSMS)

A warehouse shipping management system provides warehouse managers with key logistical data to improve packing and shipping. A good WSMS can:

- Find the best rates from the top shipping providers
- Direct packages to staging areas
- Use scales to intelligently verify shipments
- Create appropriate paperwork for shipments

Internet of Things (IoT)

The Internet of Things (IoT) is a network of connected, intelligent systems (i.e., software, sensors, scanners and robots). IoT is helpful in communicating real-time data between systems within your warehouse walls and systems outside of your facility. For instance, IoT can track incoming and outgoing shipments, order processing and maintenance requirements to automate processes and improve warehouse/inventory operations.

Warehouse Technology Solutions for Greater Efficiencies

It can be challenging for warehouse managers to look past their daily to-do lists and take the time to explore new ways to operate more efficiently. But when they see the following solutions in action, they are excited to implement them in their operations.

Barcode Readers

Distributors have successfully used barcode readers for decades and often integrate them with a warehouse management system (WMS). When used with a good WMS, the benefits of barcoding include:

- Increased productivity
- Reduction of misplaced inventory
- Instant ERP updates of perpetual inventory
- Real-time order location
- Elimination of order-checking tasks
- Continual cycle counting
- Elimination of annual physical counts

Radio Frequency Identification (RFID)

Barcode readers are evolving into another solution called RFID, which stands for radio frequency identification. Barcode information is stored in electronic chips and read by radio waves (up to 50 feet from the RFID reader).

This system eliminates the need to manually scan items as they are entered or removed from the warehouse. For example, when an employee scans their badge, items moved from their location through the portal will be automatically scanned and recorded, and the material will be charged to the appropriate job or order.

Advantages of RFID systems include:

- Increased accuracy and security
- Ability to scan multiple items at once (including pallets)
- It does not require human interaction
- It does not require a direct "line of sight" to item label
- RFID tags can be used in harsh environments and reused
- Removes potential for duplicate scans

Disadvantages of RFID systems include:

- More expensive than barcode readers
- Installation can be more time-consuming
- Some metals and liquids can interfere with RFID tag functionality

Note: Hybrid solutions can read barcodes and serve as RFID readers.

Voice-Pick and Pick-to-Light Systems

Voice-pick and pick-to-light systems are standard, though more expensive alternatives to barcode readers.

A voice-pick system connects a picker to the computer system via a hands-free headset and directs them to the correct bin for item retrieval. The computer provides data on the item to be retrieved and also the number of items. The picker then acknowledges the completed pick, and the computer records that transaction.

A pick-to-light system provides a visual cue to the picker and displays the items and quantities to be picked from a limited area or station. This system may a viable solution if you have a limited number of items.

Self-Guided Vehicles

Self-guided vehicles and robots optimize order fulfillment and the put-away process and are ideal for medium to large warehouses. These robots map the warehouse floor plan, determine optimal item-picking locations and then guide pickers through the warehouse for greater efficiency and higher volume.

Unlike older versions, today's guided vehicles don't require tracks or modifications to the warehouse floor. What's more, these easy-to-implement self-guided vehicles can adjust to the pace of the picker or production needs (faster or slower).

Advantages of guided vehicles include:

- Can maneuver around obstacles
- Don't need breaks or sick days
- More flexible than conveyors
- Self-moving, freeing up pickers for other tasks
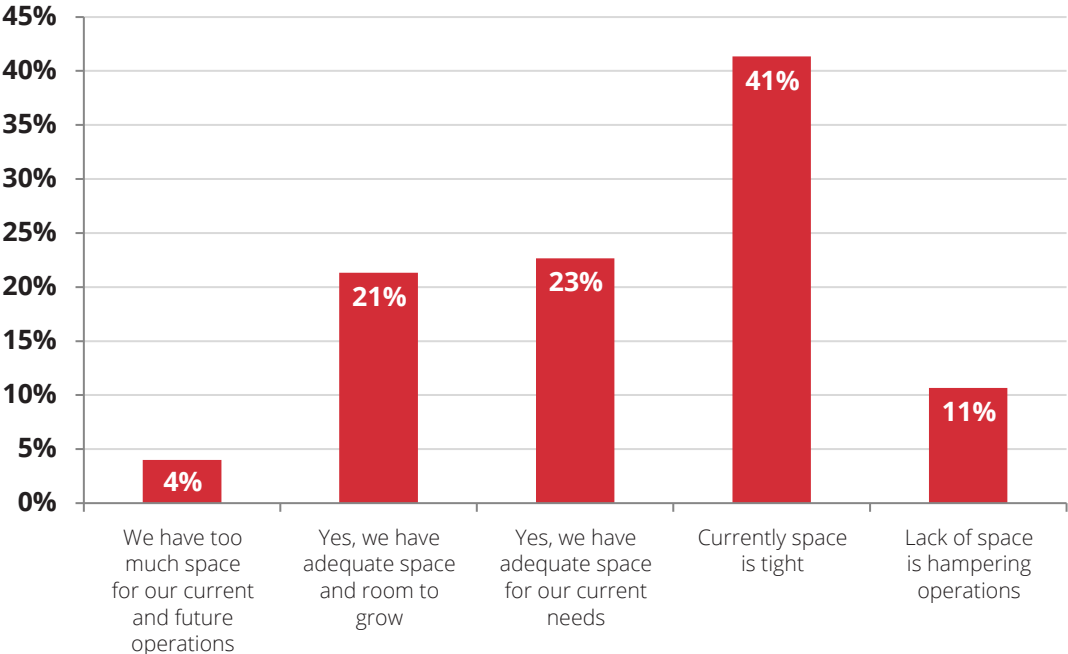- Can be rented for peak-season use

Drones

The most exciting technological innovation to emerge is the use of drones in warehouse settings. Drones can access hard-to-reach areas of the warehouse, create safer operations and reduce injury risk for warehouse staff. Instead of lifting and transporting items, the drone's camera can perform remote visual inspections, cycle counting, surveillance and security, as well as locate material stored on the highest racks.

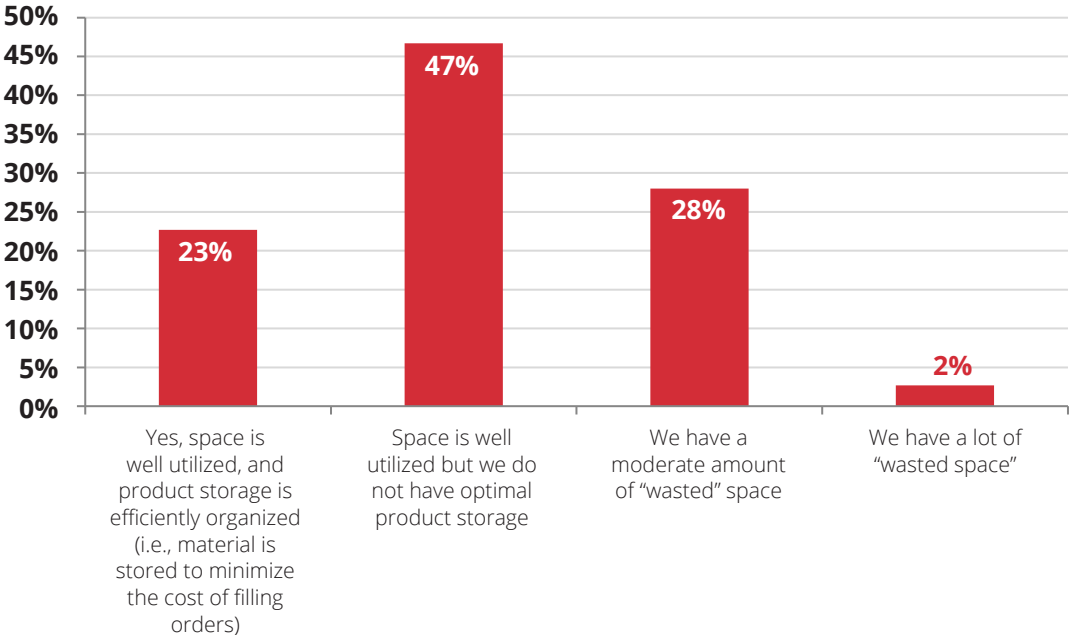## Why Effective Space Planning is Critical to Warehouse Performance

Most business owners struggle with inadequate warehouse space. In fact, 52% of those we surveyed reported having a significant space shortage, and another 74% reported having ineffective warehouse space.

Do you have adequate space to store products, stage incoming and outgoing orders, and perform other material handling tasks?

Bar chart with the following values:

Category	Percentage
We have too much space for our current and future operations	4%
Yes, we have adequate space and room to grow	21%
Yes, we have adequate space for our current needs	23%
Currently space is tight	41%
Lack of space is hampering operations	11%

Is space well utilized in your warehouse?

Bar chart with the following values:

Category	Percentage
Yes, space is well utilized, and product storage is efficiently organized (i.e., material is stored to minimize the cost of filling orders)	23%
Space is well utilized but we do not have optimal product storage	47%
We have a moderate amount of "wasted" space	28%
We have a lot of "wasted space"	2%

The truth is, warehouse space is finite and expensive. Rising costs of renting warehouse space coupled with a shortage of commercial real estate mean you may have to make do with the space you have.

If your warehouse lacks space, start by analyzing your current storage units. How much of your warehouse is filled with "air" (unused space)? Do you have:

- ✓ Empty "face" space on shelves/racks?
- ✓ Empty visible space on shelves/racks?
- ✓ Empty hidden space on shelves/racks?
- ✓ Wasted floor space?
- ✓ Unused space from shelves to the ceiling?
- ✓ Aisles that are too wide?

You can create narrower aisles by swapping out traditional forklift trucks with standup lift trucks. Traditional forklifts typically require aisles to be 12 feet apart to accommodate the turning radius. Standup lifts only require 8 feet of distance between aisles. Turret trucks only need 5.5 feet of clearance but often require wire or rail guidance.

Other options include reimagining your warehouse design by:

- Liquidating dead stock
- Removing unnecessary items from the warehouse
- Installing a mezzanine
- Installing temporary storage containers or trailers on your property
- Moving slow-moving or dead stock to off-site storage

Improper Warehouse Planning Leads to Poor Performance

Sit down with your warehouse management team and warehouse planners and take inventory of your available space.
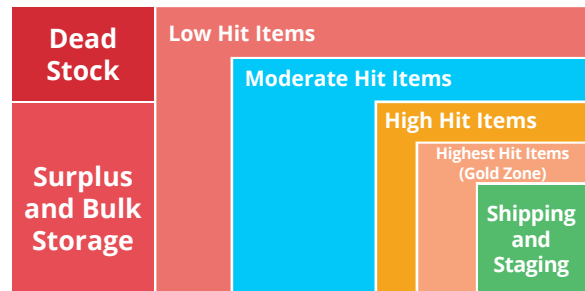
Start by touring your warehouse and map out your current floor plan. How accessible are your most commonly picked items? How often do you see warehouse personnel walking around without anything in their hands? We call this "deadhead" time. Like a big rig carrying an empty load down the highway, deadhead time in a warehouse wastes time without completing any value-added tasks.

Often, the biggest driver of non-productive deadhead time is missing, misplaced or inaccessible inventory. Distributors tend to organize their warehouses in such a way that creates inefficiencies from the start, storing all product lines or product types together.

Traditional Warehouse Layout

Plastic Fittings	Bryer Products	Murphy Products	Cates Products
Clairmont Prodcuts	Wedge Products	Smith Products	Jones Products
Tubing and Brass Fittings	Chemicals	Shipping, Staging and Receiving	

Rank-Based Storage Warehouse

Dead Stock | Low Hit Items
Moderate Hit Items
High Hit Items
Highest Hit Items (Gold Zone)
Surplus and Bulk Storage
Shipping and Staging

However, this strategy combines fast-, moderate- and slow-moving items with non-moving items, making it a time-consuming nightmare for pickers. Instead, I recommend products be stored in such a way that minimizes the cost of filling orders and reduces unnecessary foot traffic.

I call this rank-based storage. Rank-based storage places items picked most often in the most accessible locations, closest to your shipping and staging areas. Slower-moving items are placed in pick bins or racks further away. As a result, rank-based storage eliminates deadhead time and maximizes productivity while making the worker's job easier and safer.

? *Did you know products stored above eye level take 3X as long to pull and increase the risk of worker injury?*

Remember that when planning your new warehouse space, you'll want to consider designated locations for inspection, quarantine, staging, picking and packing, as well as your office, restrooms and break areas. The better you plan, the more material you can store, and the more productive your employees will be.

About the Author

Jon Schreibfeder is president of Effective Inventory Management Inc., a firm dedicated to helping manufacturers, distributors, service centers and large retailers get the most out of their investment in stock inventory. Over the past 40 years, Jon has helped over 2,000 firms improve their productivity and profitability through better inventory management.

He is the author of numerous articles and a series of books on effective inventory management including the recently published "Achieving Effective Inventory Management – Sixth Edition" and the National Association of Wholesaler-Distributors' "Guess Right - Best Practices in Demand Forecasting for Distributors." A featured speaker at seminars and conventions throughout North America, Latin America, Europe, Asia and the Pacific Rim, Jon has been awarded the title "Subject Matter Expert" in inventory management by the American Productivity and Quality Center and is an advisor to Purdue University's University of Innovative Distribution Program.

DISTRIBUTION STRATEGY GROUP

About Distribution Strategy Group

Distribution Strategy Group's thought leadership, research and consulting services are provided by a team with decades of experience in the distribution industry. They have helped more than 70 distribution companies build a solid foundation to win in today's changing market.

Distribution Strategy Group offers strategic guidance for distributors in the face of disruption, including:

- Independent expert content
- Digital and ecommerce strategy
- Customer lifecycle management strategy
- Customer analytics

Contact us:
distributionstrategy.com | 303-898-8626 | contact@distributionstrategy.com

Thank you to our sponsors:

infor.com

distributionstrategy.com/customer-experience-analytics/

Infor a "Leader" in 2022 Gartner® Magic Quadrant™ for **Warehouse Management Systems**

Infor has once again been recognized for its ability to execute and completeness of vision.

Learn how Infor continues to enhance existing functionality, expand its extended WMS capabilities, and achieve its cloud vision and strategy.

Download Report