

Plans to *Improve* Warehouse Efficiencies



Introduction

The pressure to perform is on, and warehouses/DCs around the globe are playing pivotal roles in companies' ability to live up to and/or exceed customer and stakeholder expectations in today's competitive business environment. Being compliant and operating efficiently in the omni-channel retail environment, for example, requires a level of precision and attention to detail that allows shippers to respond to a wide

variety of ordering, product mix, and shipping variations. Fulfilling all orders correctly the first time, and backing up that activity with superior customer service, have become critical goals for shippers that want to stand above the crowd in their respective industries.

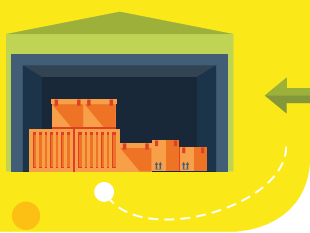
To achieve those and other goals, companies need the right mix of warehouse location/space, technology, and human support. And while the basic fundamentals of product

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distribution haven't changed much over the last two decades, with companies still relying on their warehouses to serve as storage/staging and trucks for deliveries, an increasing number of shippers are examining the gaps in their warehouse operations and finding ways to better utilize space, technology, and optimization tools to work smarter, better, and faster.

With no end in sight to the rise in customer expectations, the need for optimized, efficient distribution centers will only increase exponentially. This, in turn, will exacerbate the need for solid inventory management techniques, better supply chain visibility, and a more focused approach on exactly how products get from Point A to Point B. As one retail continuous improvement manager from the retail sector commented in a recent study conducted for Zebra Technologies Corporation by Peerless Research Group (PRG) on behalf of Modern Materials Handling, "We continually look at all processes within the DC to see where improvements need to happen."

For the study, 258 materials handling executives having management or purchase decision responsibilities for their warehouse, distribution center, or yard operations offered insights into the gaps in their warehouse operations as well as how they are assessing, targeting, and

proceeding with subsequent resolutions and improvements.

Issues and Challenges in Warehouse and Yard Operations

Managers are running their materials handling operations under decisive constraints. Within the distribution centers themselves, issues like capacity, space, inventory management, maintaining costs, having proper equipment to handle required tasks, and managing labor all play a critical role in operational efficiency. In fact, many of the same complications similarly affect yard operations. As a result, managers are increasingly finding themselves working around hurdles like controlling costs, space confinement, poor communication and ineffectual shipment tracking, and unproductive scheduling.

More specifically, the managers we surveyed say that suitable use of warehouse space and efficient utilization of warehouse assets are their most pressing issues.

Improvements Being Made in Warehouse and Yard Management Operations

In many warehouses, the materials handling function could use both improvement and optimization. Many of the managers we surveyed, for example, proclaim that their inbound, outbound, and inventory processes are less than efficient. In fact, roughly three out of four

"We are under great pressure to reduce costs, improve efficiency and accuracy, and maintain and improve customer service. We need to improve productivity of small parcel processing. We also have to better manage space utilization as some facilities are near capacity."

—Logistics Operations Manager; Wholesale; \$1B+

"Our main concerns are cost control, increasing production, and our e-commerce volume."

—Warehouse Management; Retail; \$1B+

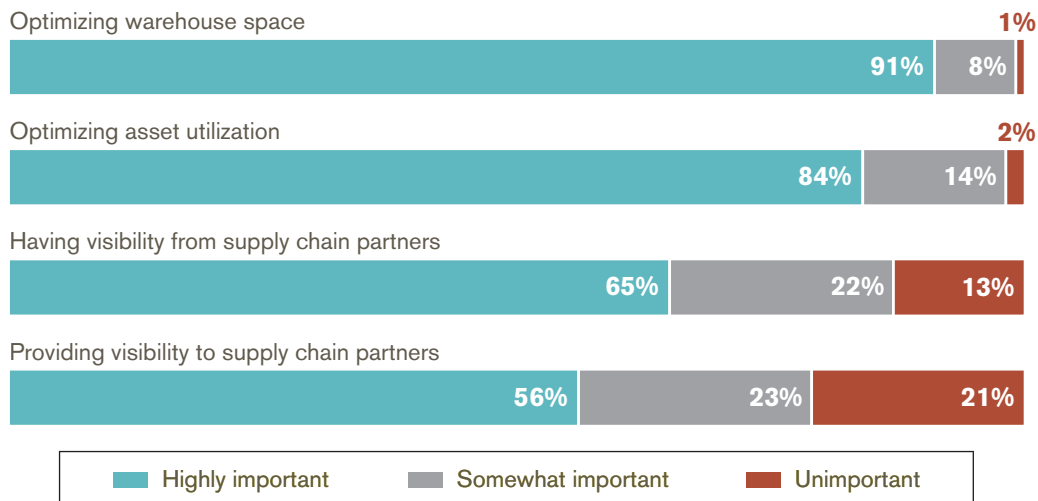
"We are undergoing a conversion from an operation that solely does live load to an operation that is primarily using drop trailers."

—Corporate Management; Food & Beverage; \$1B+

"We lack the capability to generate reports that would show carrier performance, such as late-for-appointments or total time spent from dock to gate."

—Director, Distribution and Logistics; Food & Beverage; \$1B+

Issues considered important in managing warehouse operations



Base: 257; Source: Peerless Research Group (PRG)



contend processes in these disciplines are either now or will soon be in need of upgrading; and among these, one out of ten feel processes are failing and need immediate improvements.

For most shippers, initiating and leveraging improved warehouse and yard process efficiencies are key focal points. To achieve these and other related goals, many organizations are putting energy

and investment into improvements such as real-time visibility, storage and space optimization, inventory management and damage prevention, shipment tracking WMS capabilities, employee performance and workforce coordination, and/or improved communication methods. Combined, these various elements go a long way in helping to improve performance in both the warehouse and the yard.

“Our major challenge is space. Because our warehouse is quite small, we very often have to devise ways in which to maximize space which sometimes is at the expense of having less essential products leave our floor.”

—Regional Manager, Logistics; Non-manufacturing; <\$50M in annual revenues

“We’ve refined product placement processes for ease of incoming and outbound, for inventory accuracy, and having a better accounting of “First-in First-out (FIFO).”

—Consultant; \$50M-\$100M

“We are upgrading our real time visibility and tracking of assets and materials loaded in and outside of the yard. We lack event tracking of international shipments.”

—Warehouse, Distribution Management; Chemicals; \$1B+

“Our current yard system is out of support. Priority shipments need some type of auto entry and exit through the system.”

—Warehouse, Distribution Management; Retail; \$1B+

“We’re improving accuracy and improving tracking of products in the warehouse.”

—Company Management; Furnishings; <\$50M

Process efficiency for outbound, inbound, and inventory operations

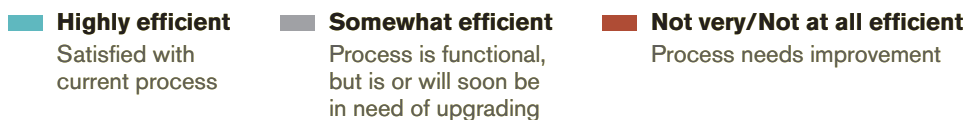
Outbound processes



Inventory process

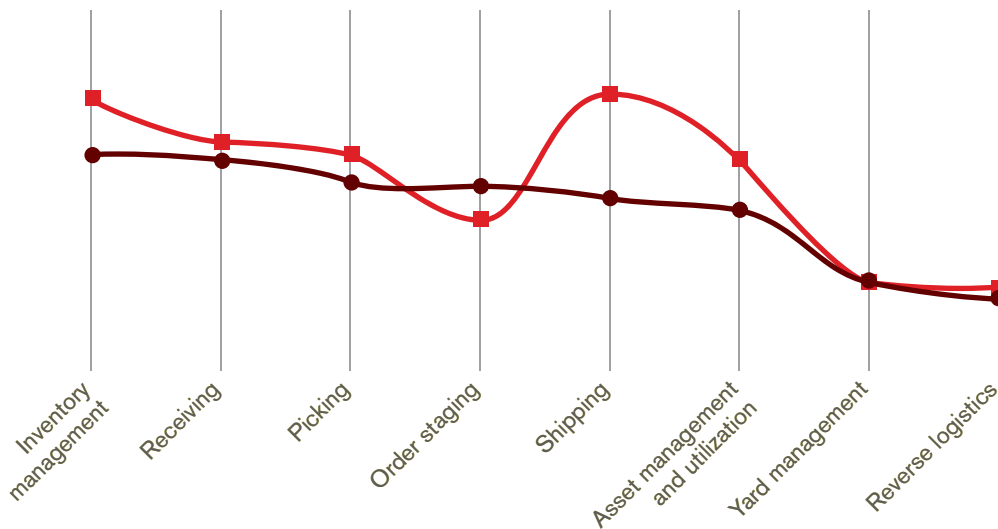


Inbound process



Base: 207; Source: Peerless Research Group (PRG)

Areas in need of improvement and areas that are greatest cost to company



Base: 193; Source: Peerless Research Group (PRG)



In particular, the tasks that are ripe for improvement include inventory management, receiving, picking, and staging. Correspondingly, and not surprisingly, many of these activities are also identified as being the greatest drains on warehouse and DC expenses and resources. In addition, the most costly functions to operate include shipping, inventory management, receiving, and picking.

Warehouse and Yard Priorities

Warehouse, DC, and yard managers are focused on lowering operating costs and improving customer service – issues that are likely to persist as main priorities over the next few years. Increasing supply chain visibility, a top issue for about one out of

four operations in 2014, will become more of a focal point in 2015. Complying with mandates and labor management will also grow in importance to warehousing and DC operations in the near future.

In assessing the main points of focus among today’s warehouse managers, it’s clear that widespread implementations of mobile devices (i.e., smartphones, tablets, and label printers) are seen as the keys to better handling process change, upgrading worker efficiencies, and improving productivity both in the warehouse and in the yard. In return for their efforts, organizations are gaining from lower operational costs, improved customer service, and better end-to-end supply chain visibility.

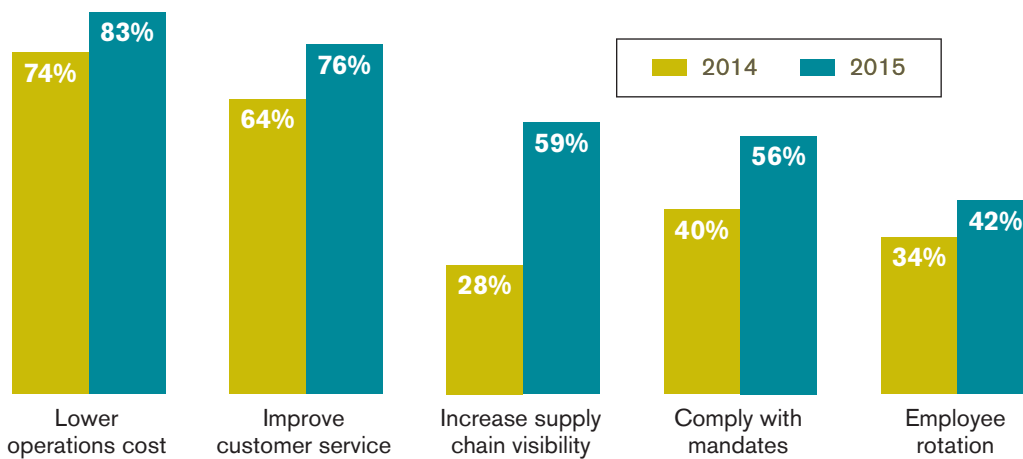
“We are looking at Kaizen and continuous improvement process to determine how we can better utilize space, equipment and personnel.”

—Distribution Manager;
Agriculture;
\$250M - \$500M

“We’re improving our use of barcode scanners to help automate the receiving and tracking of inventory.”

—Sr. Quality Manager;
Aerospace; \$500M - \$1B

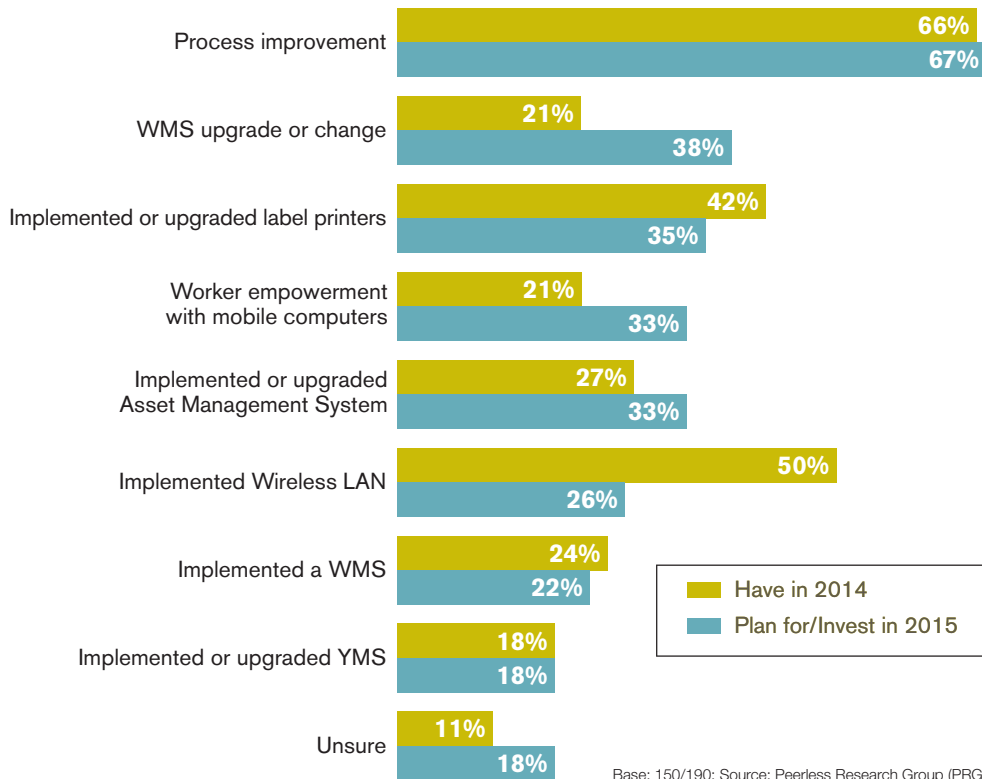
Main points of focus among warehouse managers



Base: 158/197; Source: Peerless Research Group (PRG)



Solutions implemented/plan to consider/invest during next few years



Solutions and Technologies for Improving Warehouse and Yard Operations

Today's supply chain managers increasingly see mobility as an enabler of their overall business goals and objectives. In addition to desktop PCs, the technologies used most commonly in materials handling environments are barcode scanners, thermal printers, and mobile solutions. Looking to the future, warehouse managers are particularly interested in implementing mobile technologies, barcode scanners, thermal printers, and PCs.

Seeing mobility as a chief business enabler, and in an effort to improve warehouse and yard efficiencies, organizations are most likely to invest in WMS upgrades, mobile solutions, label printers, process improvement applications, and asset management systems over the next one to two years. In fact, the largest increases in investments from 2014-2015 align with the typical organization's goal of lowering costs, improving processes, and improving

resource (both asset and employee) management. With the right combination of technology, processes, and procedures, organizations will be well equipped to tackle the challenges being put in front of them today, plus any future hurdles that may stand in the way of success.

Conclusions

Trends and realities continuously challenge warehouse operators, emanating the pressures to operate efficiently and deliver optimal service levels – investment in robust warehouse management platforms and related technologies is a must in 2015. Add omni-channel retailing strategies, more discerning customers, and the need to replace aging equipment and platforms to the mix, and it's clear that warehouse and DC managers really do have their work cut out for them. As they tackle the challenges discussed and highlighted in the Zebra Technologies Corporation study, one by one, shippers will be able to better

"We continually look at all processes within the DC to see where improvements need to happen."

—Continuous Improvement Manager; Retail; NA

"We're going through a modernization upgrade—adding bar codes and bar code scanners."

—Plant Management; Iron & Steel; \$50M - \$100M

"We're upgrading and integrating our WMS system with our SAP system."

Manager, Operational Excellence; Retail; \$1B+



position themselves for success in the changing environment.

Research Methodology

This research was conducted by Peerless Research Group (PRG) on behalf of Modern Materials Handling (MMH) for Zebra Technologies Corporation. The study was executed in December 2014, and administered over the Internet among subscribers to MMH. Respondents were pre-screened for being involved in decisions pertaining to their company's warehouse, distribution center, or yard management operations.

The findings in this brief are based on information collected from 258 materials handling professionals. Respondents' job functions are predominantly

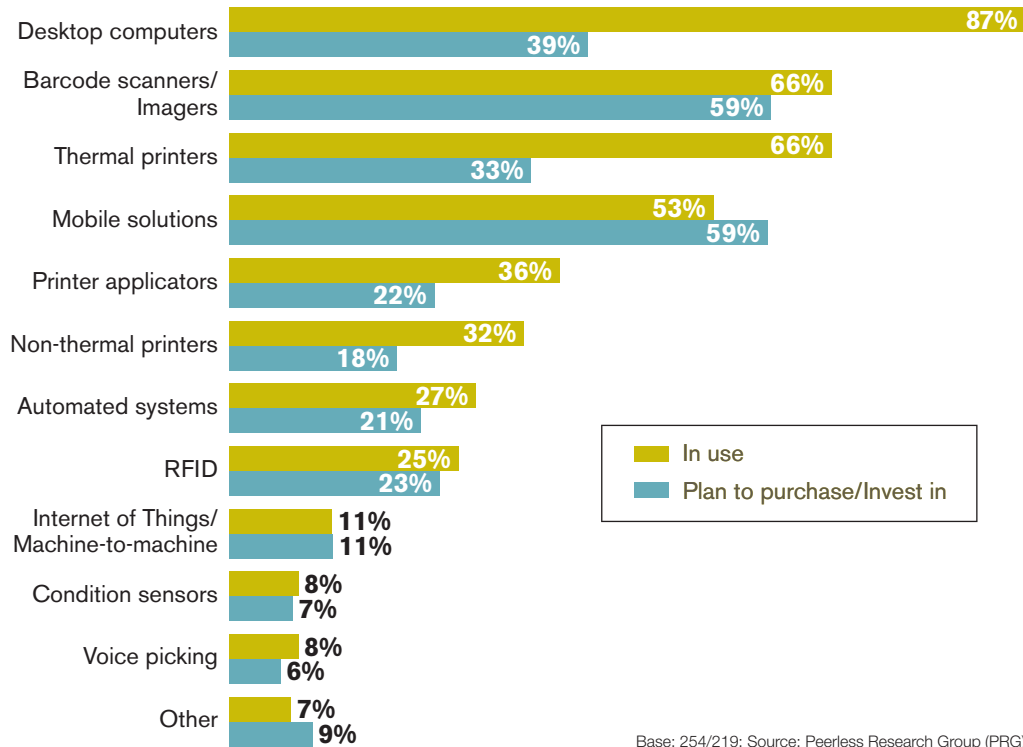
Warehouse Management (42%), Corporate Management (29%), and Plant Management (13%).

A range of manufacturing industries and non-manufacturing businesses are represented. Manufacturing businesses include food and beverage, automotive and transportation, pharmaceuticals, etc. Non-manufacturing companies are mostly wholesale and retail trade, and transportation and warehousing services. The research also encompasses a breadth of company sizes: 43% report their 2014 revenues were under \$50 million, 28% work at businesses with revenues between \$50 million - \$500 million, and 29% had sales of \$500 million or more in 2014.

About Zebra Technologies Corporation

Zebra builds tracking technology and solutions that generate an enormous amount of actionable information and insight, giving companies unprecedented

Technologies currently in use/planned for purchase for use in warehouses



Base: 254/219; Source: Peerless Research Group (PRG)

visibility into their businesses by giving physical things a digital voice.

Zebra's extensive portfolio of solutions give you real-time visibility into everything from products and physical assets to people, providing you with very precise operational data not only about where things are, but what condition they are in. This allows business leaders to use data to make better, more informed decisions, respond in real-time and ultimately, help businesses understand how they work, and how they could work better.

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