

# Taking warehouse management systems to the next level:

5 Key questions to answer before you act



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# Introduction

As markets globalize, change accelerates, and customer expectations rise to new levels, the walls of the warehouse are coming down.

Now, companies must manage extended supply chains with increasing precision. They must gain clear visibility into their warehouse inventories as well as upstream and downstream logistical activities.

Unfortunately, few companies are fully meeting these objectives. Research on warehouse and distribution center productivity suggests that managers are under severe pressure to

- Reduce inventory and logistics costs to remain competitive.
- More effectively manage labor costs and challenges.
- Support business growth without additional facilities.
- Respond better to demand/supply fluctuations.
- Meet customer demands for faster and more time definite fulfillment.<sup>1</sup>

To address these challenges, best-in-class companies have invested in advanced warehouse management systems (WMSs) that automate and extend their capabilities.<sup>2</sup> Among their new strengths: bin-level location management; paperless receiving; real-time put-away; order picking with mobile devices; and cycle counting.

The payoff is clear. Top performers have enhanced customer satisfaction and contained costs by increasing pick accuracy rates, shipping order rates, and perfect order rates to more than 99 percent, all while decreasing labor costs year-over-year.<sup>3</sup>

So what does this mean for you? If reaching top performance depends on advanced WMSs, then your company may now face a critical choice: Either upgrade or replace your existing WMS platform?

Success or failure in today's increasingly hyper-competitive markets may turn on this decision. Clearly, companies will need to decide wisely if they are to remain competitive in this era of intensifying market pressures.

<sup>1</sup> AberdeenGroup, "The Warehouse Productivity Benchmark Report," October 2006

<sup>2</sup> Piasecki, Dave, InventoryOps.com, "Warehouse Management Systems," [http://www.inventoryops.com/warehouse\\_management\\_systems.htm](http://www.inventoryops.com/warehouse_management_systems.htm)

<sup>3</sup> AberdeenGroup, "Warehouse Management Software: Five Key Capabilities for Every Distribution Center," December 2007.

## Barriers to high performance and profitable growth:

Customer demands are increasing. They expect perfect order performance. They expect the right product at the right time at the right price. The pressure is relentless because you are only as good as your last fulfilled order.

In order to achieve high performance in warehouse management, you must attain top levels in today's key metrics.

- On-time shipments
- Order picking accuracy
- Annual workforce turnover
- Fill rates – line-item level
- Fill rates – order level
- Inventory capacity by dollars/units
- Dock-to-stock cycle time
- Distribution costs as a percentage of sales<sup>4</sup>

Warehouse and supply chain managers, challenged to improve performance on these measurements, must confront three key challenges.

**Supply Chain Inefficiency.** Supply chain performance is sub-optimal when there is too much inventory being carried, too many manual operations, frequent imbalances between work required and labor available, inefficient direction of workers, and a lack of finer-level visibility into shipments. Supply chain inefficiency is also characterized by the lack of visibility into the extended supply chain, beyond the four walls of the warehouse.

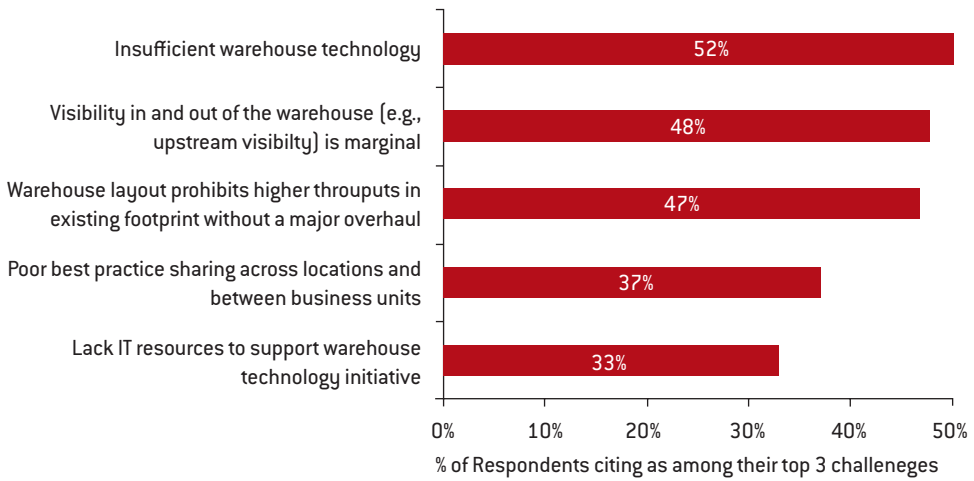
**Order Inaccuracy.** As mass retailers and other large customers increase their business leverage, they push manufacturers and distributors to meet increasingly demanding specifications, requirements, and mandates. Indeed, the perfect order is now seen as “one of the best barometers of customer service.”<sup>5</sup> Unfortunately, warehouses and distribution centers often prove to be the weak link in the global supply chain. When they lack visibility into inventories and automated capabilities, they are often unable to keep up with these increasing demands.

**Technology Infrastructure Obsolescence.** In many companies, technology platforms are aging and difficult to maintain. These enterprises continue writing custom code to meet new demands, driving up total cost of ownership in the process. As companies begin to upgrade their technology platforms or create strategies for better integration of disparate platforms, the odds are that their warehouse management applications will need to be upgraded as well.<sup>6</sup>

<sup>4</sup> Supply Chain Digest, "Digging Through the WERC Distribution Metrics Study for 2008," June 2008.

<sup>5</sup> AMR Research, "Forget the Perfect Order, It's the Imperfect Order You Need to Measure," December 2007.

Figure 6: Top barriers to better warehouse performance



Source: AberdeenGroup, October 2006

To address such challenges, best-in-class companies have invested in advanced WMSs<sup>7</sup>. These organizations have realized that such investments are critical if they are to gain visibility into their warehouse inventories and systematically automate key functions. Enterprises that intend to catch up with these top performers must actively assess similar investments.

<sup>6</sup> Aberdeen Group, "WMS Solutions for Retailers," May 2007.

<sup>7</sup> MPI Group, "Distribution 2008," drawn from the 2007 Census of Distribution Survey.

## Advanced warehouse management systems: the core lever of high performance

While warehouse management applications of the past generally improved the efficiency of operations within the four walls of a warehouse, advanced WMSs take organizational capabilities to a new level.

This new generation of warehouse management applications offers added functionality that positions companies and their supply chain partners to be more operationally efficient and responsive to customer demand. It helps companies maximize product placement strategies, prioritize tasks, implement fair productivity standards, and increase logistics efficiency.

Among the core characteristics of this new breed of WMS applications are as follows:

- **Inventory Management** – Multiple units of measure, lot control, and catch weights improve inventory accuracy and visibility to offset margin squeeze.
- **Work and Task Management** – Deep functionality for work order/location grouping into batches and waves optimizes productivity.
- **Labor Management** – Forecasting, time and attendance, assignment scheduling and monitoring, and enforcement of standards optimize labor and reduce costs.
- **Cross-Docking** – Flow-thru, trans-shipment, and opportunistic process capabilities increase inventory speed and throughput.
- **Slotting and Optimization** – The ability to arrange stock-keeping units (SKUs) advantageously within a range of pick faces/slots accommodates variable demand.
- **Yard Management** – Coordination of yard movement with receiving and order fulfillment improves visibility, productivity, and security.
- **Multiple Inventory Ownership, Billing, and Invoicing** – The ability to track multiple inventories, employ multiple business rules, and manage billing for multiple customers improves third-party logistics and distributor efficiency.
- **Voice-Directed Distribution** – Voice-enabling order selection, replenishments, put-aways, transfers, and receiving enhances productivity and accuracy.
- **Value-Added Services** – Deferred manufacturing, preparation of store-ready pallets, light assembly, and kitting enable customization of products closer to the point of sale.

Leveraging such capabilities, companies can become best-in-class performers in distribution, warehouse, and supply chain operations. The potential benefits delivered by advanced WMS are compelling.

- **Enhanced supply chain efficiencies and performance** – Advanced solutions enable companies to increase pick accuracy rates, shipping order rates, and perfect order rates to more than 99 percent, eclipsing average and laggard companies that lack relevant WMS capabilities and perform at far lower rates.
- **Reduced inventory and logistics costs** – Goods are held for less time and move faster through warehouses and distribution centers. As a result, carrying costs are reduced. Cross docking and yard management capabilities help firms avoid the time and expense of put-away. Meanwhile, automation reduces the costs of clerical activities and administration labor.
- **Greater responsiveness to customers and regulatory entities** – As customer expectations rise, advanced WMS enables firms to ensure they are delivering perfect order performance while responding to growing demands and specifications. Meanwhile, firms gain better visibility, tracking, and traceability capabilities to support the requirements of Sarbanes-Oxley, the FDA, and other regulatory bodies. Such capabilities are increasingly important in terms of overall risk management and brand protection.

## 5 Key questions: incrementally upgrade versus “rip and replace”

If you're now contemplating an investment in advanced WMS, you may be facing a critical decision. You may have to choose whether to upgrade your existing WMS system or “rip and replace” it to obtain desired capabilities.

Here are the top questions to consider before making a decision:

- 1. What industry best practices are critical to our profitable growth?** To determine whether to make an investment in WMS, it is first necessary to recognize what performance and capability gaps exist that might undermine your ability to effectively compete. Do you need, for instance, full visibility into warehouse inventories? Do you need upstream and downstream visibility going beyond the four walls of the warehouse? Do you need new labor management capabilities? If you've identified these gaps, it is necessary to then ask ...
- 2. Does our existing WMS system have the features and capabilities necessary to address our performance gaps?** Does it, for instance, provide such capabilities as labor forecasting, slotting, and radio-frequency identification (RFID) functionality? In some cases, the existing software may be adequate. The issue may simply be that certain features or modules are underused (or have become “shelfware”). If the existing capabilities are adequate, then exploit them. If not, then the next question is ...
- 3. Can our software provider deliver the features and capabilities we seek in its latest release?** It is important to identify whether your existing provider can meet your requirements. If the answer is yes, the next question is ...
- 4. Can our software provider implement these new features and capabilities in a rapid and effective fashion?** Can your provider deliver incremental upgrades leveraging existing platforms and processes to generate the overall performance and financial impact to move you to the next level of warehouse management? If the answer is yes, you are well positioned to maximize your existing infrastructure investments. If not, you must ask ...
- 5. Should we rip and replace our existing solution?** While there is an argument for ripping out your existing solution if a particular technology is obsolete and will not be supported going forward, the reality is that most of the time rip and replace is a more complex and risky endeavor than it may seem at first. First, it turns existing systems into stranded assets. Prior investments in them must be written off as one takes a new direction. Second, there is the challenge of implementing a new system with new requirements and new interfaces. High learning curves often can lead to project failure or underutilization. Finally, when companies must revamp their infrastructure and invest in a whole new approach, they run the risk of reduced (or negative) ROI and long payback periods.

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Given the growing complexity of today's markets, the last thing managers want to introduce to their companies is more complexity and confusion. Most of the time, it is easier to look for incremental upgrades that can deliver new processes and capabilities. This approach produces clear business value and provides a superior path to performance if your existing solution provider can deliver the required capabilities for best-in-class results.

Unmistakably, companies must now begin to contemplate these key questions if they hope to remain competitive in today's markets. Your customers are counting on you to deliver the perfect order. Investigate your options with your existing provider. If incremental upgrades can put you on the path to better warehousing and distribution performance, then stronger supply chains may be closer than you think.

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