

WMS



The mature technology has evolved with enhanced functionality, better integration and new methods of delivery and use. Here are the five trends driving the evolution of WMS.

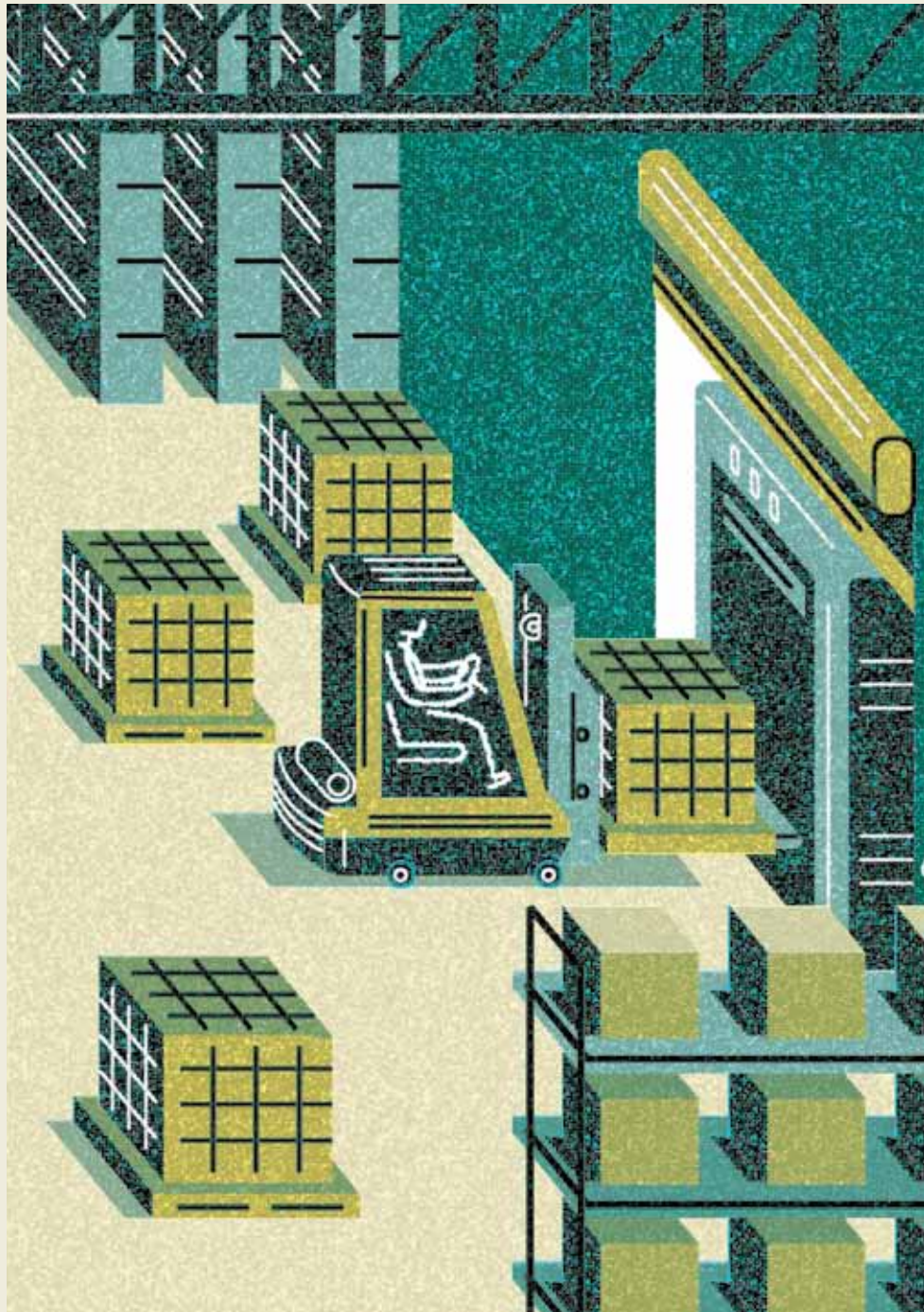
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METAMORPHOSIS

Since it's such an established technology, you may be thinking that there's absolutely nothing new going on in the warehouse management systems (WMS) space. Well, you'd be wrong. Although the developments haven't been as dramatic as they were 10 years ago, much progress has been made to enhance operations and reduce cost of ownership—and more warehouse/DC managers are beginning to make the move to upgrade.

"The WMS market is going through a metamorphosis," says Steve Simmerman, director of business development for Next View Software (714-881-5105, www.nextviewsoftware.com). "Users have systems that are eight-plus years old and too expensive to maintain and upgrade, too difficult to configure, and have outdated functionality. The solutions have matured, and that's why we're seeing more replacements."

While the changes have been more evolutionary than revolutionary, they range from enhanced functionality and better integration with other supply chain systems to new modes of delivery and use. Here's a deeper look at the top five trends that are the driving the evolution of WMS.



1. Cloud-based computing

One of the hottest developments in WMS has to do with where the system is hosted. Users no longer have to administer and maintain their own system—instead they can take advantage of software-as-a-service (SaaS) arrangements, where the WMS is hosted by a third party and accessible through the Internet.

Also known as cloud-based hosting, this methodology reduces the cost of



ownership, particularly in information technology (IT) administration, says Chad Collins, vice president of marketing and strategy for HighJump Software (800-328-3271, www.highjump.com).

“Some of these solutions are the full, best-of-breed WMS, and others offer more limited functionality because they were built specifically for SaaS use,” Collins notes. “The delivery methodology provides more flexibility since there’s only so much capacity in an IT organization. So, if your software provider can give you all the business value in the system and reduce the impact on IT, that makes it easier to get into these systems.”

Additionally, cloud-based WMS enables companies with complex networks to complete the task of gaining full inventory visibility by adding small size inventory depots—including third-party logistics providers (3PLs)—into the network at a very acceptable cost, adds Scott Zickert, distribution products product manager at RedPrairie (877-733-7724, www.redprairie.com).

“The on-demand WMS works collectively with hosted WMS to provide streamlined visibility across a network,” Zickert says. “Benefits include a gain of efficiencies, better understanding

of inventory levels and allowances for hold executions and recalls. Providing a single collaborative view into the entire supply chain permits better forecasting for a reduction of overall supply chain inventory levels at all warehouse sites.”

2. Platform integration

It’s rare for a company to purchase a standalone WMS today. In response, many WMS vendors have evolved into supply chain solution providers, offering

yard management (YMS), transportation management (TMS) and labor management (LMS) systems in addition to warehouse management. These components form a complete, integrated package with complementary functionality and consistent appearance.

“That’s exciting for users who are mature enough to understand how to use that data effectively,” notes Don Benson, managing partner at Warehouse Management Systems Support (503-296-7249, www.wms-support.com). “As the market becomes more dynamic, companies have to start thinking about agility and responsiveness. To get information sooner and massage it through the WMS filters lets managers have a better understanding of how to gear up for today differently than yesterday.”

Load planning, in particular, is an area where many companies can benefit from systems that deliver enhanced efficiency, observes Steve Banker, ARC Advisory Group’s director of supply chain management (781-471-1000, www.ARCweb.com).

“Load planning shows how to load the trailer, the order in which loads should be placed inside and stacked, and correct balancing,” Banker says. “In

the past, there were workflows between TMS and WMS, but load planning—which sits in the middle—was kind of a black hole. Now, certain vendors have pulled that aspect into an end-to-end process for better integration.”

Additionally, enhanced communication between LMS and WMS can offer a significant return on investment, says Next View Software’s Simmerman. “Labor is the untapped savings area in a DC, and many companies’ old WMS systems don’t address labor management. The latest developments in WMS have integrated labor management and visualization that can take users to the next level of operational efficiency.”

3. Customization

The vast majority of WMS solutions now offer improved functionality through customization capabilities. Understanding that there are a multitude of underlying business processes, materials handling practices and product characteristics unique to each DC and its operation, WMS vendors are incorporating tools that enhance the flexibility and adaptability of their solutions.

“The traditional approach to enabling uniqueness had been a modification of the underlying source code,” notes HighJump’s Collins. “Other vendors have taken a tool-based approach, enabling users to modify their WMS for greater control over their systems and the ability to tailor their processes to their DC without returning to the vendor.”

As a part of this customization, says RedPrairie’s Zickert, the screens displaying information have evolved. “For usability, it’s important to make screens more intuitive, with easier-to-find workflows and configurability that enables them to be manipulated by users so they can immediately find the information they need,” he says.”

That task-based approach stretches from what management sees on a desktop computer down to the hand-held screens of radio-frequency (RF) directed

mobile devices. The goal is to promote efficiency and usability by role—ensuring that a picker selects the right line items to fill an order, or that a manager gets only the information needed to complete their assigned tasks.

4. Visual cues

To gain higher efficiencies and accuracy in picking, graphics can now be integrated into the instructions sent by a WMS to the hand-held RF device of an operator, says John Reichert, director of product management at Tecsys (514-866-0001, www.tecsys.com). The graphics range from a photo of the item to be picked, a visual representation of a box versus an each, to a warning about a unique picking exception—picking two units instead of the usual one.

“Image-enhanced picking makes it easier and faster for the operators,” Reichert explains. “It particularly helps companies that bring in temporary labor for peak periods because it enables them to train a new operator very quickly through a visual conversation that’s not based on specific terminology or a unique naming scheme.”

Additionally, the graphics can be used for cluster picking into boxes on carts, highlighting the correct order placement for the pick. Animated graphics can also be dynamically generated to warn an operator about a hazardous or delicate item that should be handled with extra care.

5. Mobility

With 70% to 80% of a facility’s workers directed by RF mobile devices these days, more WMS vendors have introduced workflow capabilities throughout their applications, says Eric Lamphier, senior director of product management at Manhattan Associates (770-955-7070, www.manh.com).

“Because these users infrequently look at a full screen or Web user interface, the personalization of the RF screen flows for mobile users is very important,” says Lamphier. For efficiency and accuracy, he adds, directives from WMS to an RF device must be intuitive and not distracting in order to promote productivity.

To make that happen, WMS vendors “have introduced a full workflow enablement for all those functions in the RF area, allowing high-level personalization, rewiring of screens together and redesigning of screens without any underlying code changes through an open source technology,” says Lamphier.

Also in the mix, many WMS suppliers have incorporated real-time interfaces with voice recognition systems for more timely responses to changing trends. Going forward, WMS vendors anticipate adding expanded capabilities for deployment to other mobile devices—including smart phones like the iPhone and the Droid—to permit users to leave their desktops yet still be connected as they work from the warehouse floor. □