

# PUTTING MORE 'M' into WMS

By **Christopher Trunk,**  
*Managing Editor*

“Inventory tools are a dime a dozen, and they don't provide the crucial management tasks a buyer needs,” says Mark Robertson, manager of marketing, software division for Knapp Logistics and Automation. “Today, you've got to get more 'M' out of WMS with intelligent routing, cycle counting and replenishment strategies that look to solve problems,

A flurry of analysis, communications, Internet and labor-planning modules are adding management power to warehouse software.

Vizzini, vice president of corporate marketing for Optum Inc.

*before they happen.”*

“When you're talking visibility and managing across the enterprise and into the supply chain, it's not only analysis of your fulfillment operations, but also a broad look at transportation, manufacturing, customer demand and ability to meet delivery schedules,” says Kelly

## Analysis is the answer

But to analyze your business, you need to understand the historical data coming from your WMS. “You’re starting to see all these new visibility tools making good use of the pool of data being generated by WMS,” says John Clark, marketing manager for Provia Software. WMS produces monthly reports - sometimes three inches thick - but they don’t tell how many picks were made at this time last year, for example. “Now with the boon in new analysis tools, you can slice and dice that information to evaluate how your operation is running.”

Ellen Donovan, senior director of public relations for Manhattan Associates, says a WMS typically maintains a month’s worth of data. But if you want to understand trends and graph that data, you need to export WMS data to some outside analysis tool, like her company’s SmartInfo. With these tools you can compare data, like which orders arrived late and what was the common thread to those orders. “SmartInfo can highlight the two percent to three percent of your business that isn’t working right the part that can kill you if you’re not careful,” observes Donovan.

“We’re taking Web-enabling for WMS a step further to event management,” says Dan Trew, vice president, product strategy for Catalyst International Inc. “It reports exception conditions like a software error, short picks, over-receipt from a vendor.” Then you can make a quicker decision because just the right person at your operation is alerted to these kinds of events by e-mail, cell phone or beeper.

A cycle count that uncovers significant discrepancy would be noted to the inventory control manager, and a failed replenishment to the order fulfillment manager. It is these exceptions that, when caught early, can be kept from jeopardizing customer service and order fulfillment goals.

Along the lines of reporting, it’s important to share information in the right format. “You need to report warehouse business data to different people in a way each can

### Understanding WMS Project Cost

21%	WMS package
19%	RFDC terminals, support software/antenna network cabling
14%	Consulting
13%	Systems integration/custom coding
11%	New computer hardware, PCs, mainframe, network cabling
7%	Simulation modeling
5%	Software support/maintenance after install
3%	Training
2%	Other ADC equipment needed: pick-to-light, scanners, bar code printers, weigh/cube machines, scales
2%	T&E for customer to vendor site
2%	T&E for vendor to install site
1%	Reconfigure warehouse/label locations

COURTESY EXE AND CATALYST

understand,” says Matt Rife, product manager for Manhattan Associates. “For example, executives need a broader report on activity, and receiving and shift supervisors require a much more detailed report to support faster decision-making on the floor.”

### Super software

Super-sizing the management in your WMS package comes in many forms. Here are some examples:

- The Data Dr. is a software program that pulls data from the Warehouse Rx WMS from Eskay Corporation to

help managers determine which SKUs are not turning fast enough, where to slot slow and fast movers, which SKUs to put in the Golden Zone for picking, and how accurately and how fast workers are doing their jobs. “The Data Dr. lets warehouse managers develop incentive programs based on warehouse averages or on a manager’s own baselines,” says Craig Welch, product manager for Eskay.

- Manhattan Associates found its customers were being flooded with WMS data and that it was harder to sort the data into useful reports. “Our PkMS SmartInfo software has a Web-browser for Internet Explorer, which gives visibility into key performance indicators for the warehouse,” says Rife. “For example, with a third-party logistics [3PL] provider, it provides historical data on how much revenue and how many units were shipped last month, which customers did I ship to, which are my top customers, and how much volume was shipped per client.”

- Provia Software offers more advanced kitting features and better date coding. Manufacturers are moving more final assembly to the warehouse. Advanced kitting can include postponing a variety of tasks including special packaging, enclosing different language instructions, applying unique price tags for major retailers, attaching two or three different types of magnetic strips that cause store alarms to sound, coupons, and shrinkwrapping items together for a special promotion.

Provia also offers more options for expiration dates. “Multiple levels of dating greatly affect international shipments, including ‘expired by,’ ‘best by,’ ‘best if be

### Timing a WMS Project

25%	Software coding/customization
19%	Develop interfaces with ERP, TMS, MH systems, order management software
15%	Testing
10%	Conference room pilot, including preparation
10%	Reconfigure warehouse (bar code and reslot inventory)
9%	Training and documentation
6%	Sizing/configuring computer hardware
6%	Sizing/configuring RFDC network

COURTESY ESKAY, SWISSLOG AND EXE

fore,” says Clark of Provia. Clark tells of Toll Logistics, a major Australian 3PL that ships foodstuffs to Australia, New Zealand and Japan. “Imagine the difficulty of shipping

product to these countries by boat so that shelf life remains the same in each country,” muses Clark. Provia’s ViaWare WMS with enhanced date coding makes it possible.

## WMS for Tier 3: The Undiscovered Country

The Fortune 500 list has been well covered by WMS vendors. Tier 3 sites are their new prospects. WMS vendors categorize Tier 3 companies by a range of criteria:

- Less than \$10 million-\$25 million in revenue for a third-party logistics provider and less than \$250 million for a manufacturer;
- Probably less than 1 100,000-square-foot warehouse;
- 10 or fewer RF users,
- Relatively low volume orders/day;
- Probably not listed in the top 100 of its industry.

Steve Banker, director of supply chain solutions for the ARC Advisory Group, sees the movement of WIVIS into the Tier 3 market following a standard pattern in the software industry. Banker says that when WIVIS software was new, its first buyers were large Tier 1 companies. Buyers typically didn’t find all the features needed in these early software releases, so vendors added broader functions. Those functions were copied by other vendors. “Overtime, the time to implement WIVIS decreased along with its cost. These factors reduce the risk of buying WIVIS to both Tier 2 and Tier 3 companies, making WIVIS more available to the modest buyer,” says Banker.

“We’re helping smaller, Tier 3 companies find WMS,” says Mark Wulfraat, partner with KOM International Inc., a material handling consulting firm. “They know it’s risky and have some fears about implementing WMS. These companies need help finding the right vendor.”

Wulfraat says that a Tier 3 WIVIS likely runs on either a standalone PC or is directly interfaced by PC to the host software. If it’s a standalone unit, then receipts must be entered into the ERP manually.

He warns that though the cost of a Tier 3 software license is much less, around \$75,000, the cost of interfacing with a host ERP system may be just as expensive and just as much of a challenge as integrating with a Tier 1 or Tier 2 ERP. “Sometimes tremendous heart surgery is required to make the process work, and the more home-grown your ERP is, the more costly and difficult it is to integrate with WMS,” observes Wulfraat.

In response, Jeff Perry, vice president, alliances for EXE Technologies, counters, “I think that as a consultant, he’s hoping the integration will be that tough. We have developed the EXceed Data Exchange software to handle the interface between

business software and EXE’s WIVIS package. It allows for ASNs and EDI transactions and, at the Tier 3 level, makes for simpler inputs that don’t require a systems integrator to do the work. Even the staff of the Tier 3 buyer can handle the integration,” says Perry.

Manhattan Associates offers the PkMS Pronto software for the Tier 3 warehouse. “The WMS costs less because fewer functions are required. We complete the systems integration work ourselves, and the cost for that effort is scaled back alongside the cost of the license,” says Ellen Donovan, senior director of public relations for Manhattan Associates. While PkMS Pronto is less configurable and less complicated, the software rescues buyers from their manual data and order entry systems for handling incoming shipments.

“Just because you’re a small company doesn’t mean you have small problems,” says Richard Sherman, chief marketing officer for V3 Systems. “These small firms must still have forward deployment of inventory to meet time compression, must compete globally with distribution strategies and meet high standards for customer service, orderfilling accuracy and more electronic communication with customers.”

V3 Systems offers a Tier 3 product that is priced at about \$50,000 for fewer than five R/F users and about \$100,000 for fewer than 10 workers. Tier 3s need very tight inventory control by storage location and parts counts. “They must receive inventory automatically via ASNs from their suppliers and communicate with their customers about specific shipments,” says Sherman.

These companies typically have at least one IT worker. Microsoft products are inexpensive, so Sherman says it will likely be a Windows 2000 or XP computer platform and server - with a total cost less than \$10,000 for the network.

“We’re working with some buyers interested in digital phone networks with wireless warehouse operation rather than RF terminals. Phones with built-in bar code scanners don’t require you to install an antenna network,” says Sherman. He finds that the wireless technology is not quite ready for warehouses and that some Tier 3 users choose an intelligently directed paper pick list over an R/F network to reduce cost further.

Of potential interest to Tier 3 users is myWMS, an open-source WIVIS product. It is comparable to other open-source projects like LINUX. The software is free if used for non-commercial purposes or with a small fee for commercial use. For more on myWMS, e-mail to [info@myWMS.de](mailto:info@myWMS.de) or visit [www.myWMS.de](http://www.myWMS.de).

•Swisslog Software USA Inc. flies out with new WarehouseCockpit software that seeks data on key performance indicators and reports it back to the WMS and then on to managers. “We provide a unified view of inventory across the buyer’s entire network, showing in-transit inventory,” says Steve Simmerman, chief operating officer, Swisslog Software USA.

## Standards and WIVIS communications

Standard communications protocols are also adding more “M” to warehouse management software. “Business collaboration and better management of your warehouse

operations are being made possible with wider use of standard communication,” says Greg Wandrei, regional sales manager for irista. XML and business object document (BOD) are standard communication protocols that simplify and speed data transfer between vendors’, suppliers’ and customers’ WMS, ERP and transportation management software.”

### Windows NT Makes Its Move on WMS

Stan Chew, director of industry solutions for HighJump Software, has some strong things to say in support of the Windows NT computer platform for WIVIS.

“The facts are that you can now buy off-the-shelf Windows NT software and hardware with transaction speed and volume that just six years ago was provided on an AS-400 computer or mainframe,” says Chew. Unix, AS-400, Windows NT and mainframes are all competing platforms for WIVIS use.

“There’s demonstrable evidence that Windows NT can handle the high-volume transactions for even a Tier 1 customer, and at a much lower software and hardware cost.”

Chew says that buyers should look at their existing computer platform and decide whether the future of platform research and development lies in their current platform. “Windows NT easily connects with Microsoft programs used by the buyer’s business executives. When buying a new WIVIS, you’ve got to look to the future - to what platforms college graduates are studying. If you’re not in Windows NT now, you’re behind the times,” chides Chew.

But not everyone shares Chew’s passion for NT. “From irista’s point of view, we don’t care about platforms,” counters Greg Wandrei, regional sales manager for irista. “Our software runs on all platforms, and we don’t want to tell our customers how to run their business software. I don’t know if Microsoft will prevail over UNIX, but it’s not our choice. It’s the buyer’s.” Wandrei adds that he comes to a buyer with his system on either a UNIX or Windows NT disk and asks the buyer to run it on his system to see irista’s software perform.

### Getting Beyond le Pain

Making the decision to buy WIVIS is sometimes the hardest part. “The challenge for buyers is that they aren’t buying unless they’re suffering from some acute pain,” says Kelly Vizzini, vice president, corporate marketing for Optum Inc. These companies are considering WIVIS because they don’t ship product on time, inventory shortages are habitual, or there’s idle labor time on the warehouse floor.

“I’ve been to customer sites where forward pick areas were coated in dust,” says Art Fleischer, sales and marketing manager, WIVIS group for Ann Arbor Computer. “Maybe at some time that SKU was a hot mover, but not for ages.” Fleischer says that businesses, once they’ve made the leap to WIVIS, need the software to track inventory on a historical basis to avoid these slotting problems that plague warehouses.

One way to convince buyers to choose today’s more powerful WIVIS is to measure critical performance factors to make a convincing case to upper management. “We’re benchmarking best-of-breed numbers for a variety of industries,” reports John Jazwiec, company results leader for RedPrairie (formerly McHugh Software International). “If a client is at a value 7 for a key performance indicator, the industry average is 10, and the leaders hit 15, then we’ll tell the client how to hit that 15.”

To relieve the pain of paying for WIVIS, Jazwiec has instituted a new gainsharing plan that moves payment to the end of a successful project. “We are tying our software payment into measurable changes in the client’s business, requiring no payment up front,” says Jazwiec. The company benchmarks key performance measurements right after the software is implemented and tracks the process for a year. A percentage of improved profits and savings go back to RedPrairie when the year is over. An example was provided of either a \$750,000 upfront software license or paying a 25 percent fee taken out of measurable, increased profits that might range to \$10 million. The company’s fee might be \$2.5 million.

Wandrei says the Open Applications Group ([www.openapplications.org](http://www.openapplications.org)) is a consortium of business and software leaders that has defined a number of BODs for use in the supply chain. "Irista has adopted these standards, and BODs reduce the cost of doing business. That's new for ERP and WMS vendors," Wandrei adds.

Latest news on standards includes the UCC EAN 128 label format. It's being developed by a U.S. and European standards association as a one-scan bar code label. "The bar code has embedded fields that include product, lot, quantity, package type - all in the same label," says Art Fleischer, sales and marketing manager, WMS group for Ann Arbor Computer. With this new label, the bar code terminal won't ask the worker for each piece of data separately. It automatically scans the code, and the scanner sorts out the data to the proper database location.

"A lot of large corporations with international operations will find this a valuable tool. While current scanners can handle it, WMS must be adjusted with some leading character to identify the label as EAN 128," says Fleischer. Today, warehouses have to print out and apply their own labels on incoming product. "The standard will eliminate all that duplicate labeling," adds Fleischer.

## Web-enabled WMS and Visibility

Everyone is talking Web-enabled when it comes to WMS. Robertson says the days of confining WMS to the warehouse are over. "Everyone wants a clear pipeline, and the Java language our WMS is written with makes it much easier to create e-commerce catalogs and allow queries into warehouse inventory. And multiple foreign languages make it easier for 3PLs to do their



Today's warehouse software can track worker productivity, allow for drill-down visibility into warehouse inventory over the Web and communicate faster and more reliably with trading partners. Eskay Warehouse Rx software.



Swisslog has partnered with Locanis AG to offer a WMS for the beverage industry. The software combines the WarehouseManager software with G-Track, an RF-based tracking system using a transponder tag. Unlike a global positioning system, G-Track works both indoors and outdoors, and does not require inductance loops. The software uses point-to-point navigation and inventory control. It combines range of measurement and angle of rotation definition with help from sensors attached to lift trucks. Swisslog Software USA.

business."

Here's another example. "This morning we were visited by a 3PL looking for a Web front end to our i-Series pcAIM WMS product," said Fleischer at the recent DC Expo Show. "They're in Miami and distribute flowers from around the world. The 3PL needed to let its global customers see what product was available in the warehouse, follow tracking numbers for shipments and see what orders have been placed." Fleischer says that buyers are looking for a self-serve Web-front that requires a user name and a password for access. The iSeries software from Ann Arbor allows access to multiple warehouses and also takes the user to the UPS Web site or other carrier site to track a shipment.

Vendor-managed inventory (VMI) comes out the winner with Web-enabled WMS too. "We've added the EXceed Portals product for our WMS," says Jeff Perry, vice president, alliances for EXE Technologies. "It lets our clients and their vendors and suppliers access the WMS with an Internet browser for VMI applications. It lets smaller-sized buyers use automatic shipping notices [ASN] via the Internet and helps users print compliant labels. Then when product is received, there is an ASN in place and labels are already printed to speed receiving."

## Labor productivity makes its debut

Nearly everyone at the recent DC Expo show in Chicago was talking about how WMS software can handle labor measurement, planning and productivity.

"WMS is branching out into work measurement software and workcell re-engineering for best industry practice," says Jim LeTart, director of marketing communications for RedPrairie

(formerly McHugh Software International). The firm has partnered with eight major consulting firms to help put the right procedures and labor practices in place for its clients. That includes industrial engineering like ergonomics, safety, product weight and more. “Engineered standards can also add goal time factors to standardized jobs that take into account distance, product weight, correct slotting and use of the Golden Zone for orderpicking fast movers,” adds LeTart.

Speed isn’t the top goal, for if laborers work too fast, they get tired, guaranteeing problems with quality and safety. The goal is for workers to move at a comfortable pace and root out inefficient motion and unsafe methods.

Working with Tompkins Associates as the consultant, RedPrairie suggests relaying out picking areas for one client that had positioned dead ends at the end of each aisle. Only one lift truck at a time could service the aisle. “We recommended cutting holes in the wall to allow trucks to improve workflow pattern,” says LeTart.

Making these kinds of physical changes to layout and workflow is critical to a more effective WMS. What sense does it make to dramatically increase data speed and directed picking just to have a pre-existing bottleneck glue up the works?

“Our next i-Series WMS module will manage labor, allowing users to take a group of incoming orders by truckload and compare the amount of work that must be done against a configurable table. The table stores the amount of time it takes to execute a pick, putaway or other function, and then calculate a headcount,” says Fleischer. Fleischer’s software will generate a graph showing how long it will take to work that shipment.

“This is especially helpful to companies that hire temporary workers at peak times. The software

can indicate when to hire extra workers or when to break down loads differently to get the job done quicker.”

## The WMS industry

The past one-and-a-half to two years have been tough on the software business, and WMS is not immune. “We’ve seen consolidation among vendors and the erosion of viability of some WMS vendors,” observes Simmerman. “Now ERP vendors are offering their own WMS software, which makes it even harder on WMS vendors to maintain marketshare.” Simmerman doesn’t think you’ll be seeing larger WMS vendors gobbling up as many smaller ones, as most of the small WMS vendors with exciting marketshare or technology assets have been snatched up already.

These downward market trends run counter to the 10 percent growth in the WMS market recently forecast by the ARC Advisory Group, says Vizzini. “The Tier I and Tier 2 market will be flooded with WMS.”

At the same time, the WMS marketplace is maturing. “When it comes to WMS vendor financials, roughly a third of revenues are driven from software sales and two-thirds from service,” says Trew of Catalyst. “I expect this mix will change in favor of more service as software license fees come down and cheaper software is offered.”

Trew maintains that the only surviving WMS vendors will provide not only software but also material handling consulting, initial analysis audits of your firm, implementation service and ongoing software maintenance.

Look for more advanced planning modules and vendorrating software in the near future. “Vendors will be rated bronze, silver and gold - - evaluated on how well they ship what you requested, including high ASN compliance rates. Delivering on ASNs can significantly reduce

### Tap the Experts

Contact these sources for your questions on what’s new in WMS:

Banker, ARC Advisory Group,  
sbanker@arcweb.com

Chew, HighJump Software,  
stanley.chew@highjumpsoftware.com

Clark, Provia Software,  
john.clark@provia.com

Donovan, Manhattan Associates,  
edonovan@manh.com

Finkel, VoxWare, kenf@voxware.com

Fleischer, Ann Arbor Computer,  
afleischer@jerviswebb.com

Jazwiec, RedPrairie,  
john@redprairie.com

LeTart, RedPrairie,  
james.letart@redprairie.com

Perry, EXE Technologies,  
jeff.perrygexe.com

Rife, Manhattan Associates,  
mrife@manh.com

Robertson, Knapp Logistics and  
Automation, mrobertson@montillc.com

Sherman, V3 Systems,  
rsherman@v3systems.com

Simmerman, Swisslog Software USA,  
steve.simmerman@swisslog.com

Stachowski, Lilly Software Associates,  
jstachowski@lillysoftware.com

Trew, Catalyst International Inc.,  
dtrew@catalystwms.com

Vizzini, Optum, kvizzini@optum.com

Wandrei, irista, greg.wandrei@irista.com

Welch, Eskay, craig-welch@Meskay.com

Wulfraat, KOM International Inc.,  
marc.wulfraat@komintl.com

inbound receiving costs,” adds Trew.

## Powerhouse functions

Getting more out of your WMS translates into more and smarter functions.

One example is eliminating idle time from a worker’s day.

- Time spent getting up and down from a lift truck to read a sign or find a location;
- Traveling to the office to clear up a question about a pick list;
- Searching for items up and down an aisle.

Simmerman says WMS interacts with the worker, telling a person where to travel and accepting feedback from the worker in real time. “The point is not to burn out the lift truck operators, but to make better use of their workday and eliminate common problems that drive workers crazy,” observes Simmerman.

Software now offers advanced drill-down menus, pop-up calendars, checkboxes and more. “We offer software that eliminates the five to six screens it once took to navigate a task on WMS. Now it’s done in just two screens,” says Vizzini. This adds up over a day’s time to significant labor savings with Optum’s software.

Voice software has an important place in today’s warehouse. “It’s passed the test of working in noisy places and with workers having heavily accented speech,” says Ken Finkel, vice president, business development for VoxWare. The company’s new VoxView Management Console lets you configure and see a picking area, whether it’s a U-shape pick, batch pick, consolidation or circular picking. The VoxWare Webbrowser lets multiple warehouses be overseen by just one manager. Finkel emphasizes that voice isn’t just for orderpicking anymore. “You see it used effectively in replenishment, too,” offers Finkel.

When it comes to replenishment, Robertson of Knapp Logistics says today’s WMS doesn’t wait for bins to be empty. He says, “No, our WMS looks at all the orders for the day as they are released. It orders replenishment in advance of stockouts by interleaving tasks.”

## Mop don’ts

WMS vendors warn about the following WMS snafus:

- Don’t underestimate the commitment time of your WMS core team members. “Every buyer tries to cut, and he cuts in the wrong area,” says Joel Stachowski,

senior account manager, distribution for Lilly Software Associates. “And if you can’t spare your team’s time, then hire a project manager to tackle the job.”

- Don’t forget the three key words: training, training, training. Donovan says, “I’ve found the most frequently on-time and on-budget WMS installs are those where a highly educated WMS team took the time to train their warehouse workers up front.” Rollouts are smooth with well-trained workers.

- Don’t assume your software will perform some task without first clarifying it with the vendor. Fleischer emphasizes, “This is a key conflict between vendor and buyer. We’ve helped to cure this problem through biweekly conference calls with buyers that examine details as the project proceeds.” Fleischer has seen buyers get confused between the functions they saw in another vendor’s brochure as buyers become muddled when looking at so many vendors’ material. A conference room pilot is key to sorting out all those differences. “But some buyers either won’t take the time or don’t have the budget for a pilot,” concludes Fleischer.

- Don’t try to solve yesterday’s problems and don’t ignore changes in your industry. “Sometimes buyers don’t have the vision for what will happen next month or next year,” says LeTart. Now *don’t feel bad if forecasting the future isn’t your forte, because several WMS vendors I asked about the future of WMS bailed out, saying too many changes have happened in recent years to even contemplate an answer.*

LeTart warns against buying software or material handling systems that are inflexible, ones that need to be replaced rather than adjusted as business changes. “For example, the value of some material handling hardware and software is diminished when you move from the maketo-stock to the make-toorder environment,” says LeTart. You need WMS that’s more configurable than in the past.

- Don’t over-automate the WMS. Welch says a lot of buyers think they need grandiose data to be stored in their WMS. “But after using the software for a few months, they find they didn’t really need that feature after all. And sometimes a worker can perform that less-frequently needed function manually, saving on automation and programming costs,” continues Welch.

All these sources agree that there is much more management in warehouse management software today. That makes WMS your best tool to keep and increase marketshare in today’s tough business environment.

**MHM**

## WMS Case Histories

### WMS Fits "Totes" Just Right

Totes Isotoner is a world-class marketer of umbrellas, gloves, raincoats and rubber overshoes. The company was faced with combining a purchased business with its current inventory into one, fully automated, 450,000-square-foot warehouse.



The company needed a WMS to keep track of its 4,500 SKUs. It chose PkMS WMS from Manhattan Associates. The software tracks all goods from receiving to shipping and is tightly integrated with the company's automated material handling system of transport conveyor and sortation system, in-line scales and checkweighers, man-aboard lift trucks, automatic data collection equipment and wearable hand scanners.

Returns handling was a headache for the company; with WMS it reduced per-unit cost of handling returns by 67 percent. The software is integrated with a parcel shipping system, transportation and freight management software.

Seventy percent of the company's business falls within the 15-week period prior to Thanksgiving. That means the software and workforce must be flexible enough to respond to these dramatic changes in order volume.

To accommodate complex order management, the WMS permits last-minute changes to customer orders as well as split-case picking of just one item or several cases of mixed product. The automated split- and full-case picking operation maintains a daily pick rate of 200,000 items in peak season.

*PkMS WMS, Manhattan Associates; conveyor and shipping*

*sortation equipment, Buschman; print-and-apply printers, Zebra Technologies; RF scanners, Symbol Technologies; lift trucks, Crown; and in-line scales, Mettler Toledo.*

### Warehouse Software Seals

#### Success for Bearing Distributor

Transcom, a Minnesota-based distributor of seals and bearings, needed a WMS to integrate its legacy ERP software with increasing order volume in its warehouse operations. Transcom manufactures and distributes more than 12 million seals in 7,000 sizes. The company was using time-consuming and error-prone manual keying for its 380,000-square-foot manufacturing and storage facility. Transcom installed WarehouseAdvantage software with a Web-portal module, Advantage Dashboard - a Web-based visibility software that gathers real-time data on inventory levels, order volume and order status.

Before the WMS was installed, it took up to four days to receive a container for shipment and move it through the system.



The WMS integrates with a carousel housing 9,000 SKUs. With the former system, it took two or more people a day to prepare about 300 orders from the carousel. Now it takes just 60 to 90 minutes with fewer workers to move all the carousel orders out.

With the Advantage Dashboard, managers can watch all orders move through the system, monitor how much time it takes to process a specific order and check the status of all open orders. Transcom now guarantees same-day shipment for its

300+ daily orders. The WMS also reduced line picking costs by 50 percent, and lets managers know where all inventory is located. The WMS intelligently directs warehouse workers to the right pick location where pick orders are generated, items are scanned and sent out the door.

*WarehouseAdvantage WMS by HighJump Software.*



## WMS Case Histories



### WMS Handles 380,000 SKUs at Avnet

Avnet is one of the world's largest distributors of semiconductors and other computer components for industrial, commercial and military customers. Like other hightech companies, Avnet required special temperature controls to store and preserve its computer components as well as a staging ground for many value-added processes.

The firm ships as many as 10,000 line items per day from a single distribution center, and decided it could do better with a WMS. It chose Optum's MOVE WMS because of its ease in integrating with Avnet's host ERP and automated material handling equipment.

Since deploying MOVE at the Chandler, Arizona, facility, the company has been able to:

- Substantially increase orderpicking efficiency;
- Stock product by commodity type more easily;
- Enjoy better visibility into 3,000 orders and 10,000 order lines per day across its amazing number of 380,000 SKUs.

*MOVE WMS software from Optum Inc.*

### WMS Handles the Heavyweights

BAX Global provides worldwide service in transporting heavyweight packages and cargo. It also provides warehousing, kitting, light manufacturing,



brokerage and regulatory service for a wide range of B2B customers. The company accumulated five different legacy warehouse and stock control software systems over

time, and its warehouse grew to more than 25 million square feet with more than 750,000 SKUs and an average of 50,000 orders a day.

To replace its mix of warehouse programs, BAX chose EXE's EXceed Fulfill software to provide advanced shipping and receiving notices, inventory management, RF data communications, task management and task reporting. It integrated tightly with BAX's MRP distribution resource planning and sales order software.

With the WMS, the company's inventory accuracy increased to 99 percent while reducing carrying costs by increasing turnover. BAX now better manages its seasonal variations in distribution volume, and managers have real-time access to WMS data.

*EXceed WMS software from EXE Technologies.*

### Sony Plays WMS Like a Song

Sony Music Distribution sends CDs, DVDs, audio tapes and videocassettes through four distribution centers, totaling more than one million square feet of warehouse space. To keep up with its ever-growing volume, Sony chose Catalyst WMS to handle the distribution of finished goods destined for retail distributors as



well as raw material to support manufacturing.

Sony needed a real-time WMS to handle its high volumes of orders and a system that could rapidly adjust to its quickly changing business environment. The WMS had to interface easily with the host ERP.

Sony installed the WMS at all four distribution facilities and realized a distribution savings of 23 percent across the board. The facilities were able to eliminate an entire work shift, going from three shifts a day to two. The warehouses can meet same-day shipping goals on case lots and 48 hours or less on piece and order shipments. At the largest warehouse, staffing was reduced 30 percent with continued growth in order volume and order accuracy to 99.9 percent.

*Catalyst WMS from Catalyst International Inc.*