

PRESS INFORMATION

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MAKING THE RIGHT MOVES ACROSS THE BOARD

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Changes in supply chain practice are presenting some interesting challenges to suppliers of warehouse management systems (WMS) as we try to keep up with evolving market requirements. The parameters for success are moving and the pace of change shows no sign of slowing as emerging technologies are taking the WMS beyond its traditional role.

When we introduced our first system twenty years ago the emphasis was on eliminating manually intensive record keeping and getting systems to place and locate stock automatically. These are now given and the latest version of our Empirica application is all about real time, operational flexibility and added value. Efficient utilisation of space remains important as new functionalities such as pick slot optimisation illustrate but performance is now measured in dwell times and stock turn rates rather than occupation levels. The trend has always been to maximise stock availability and the latest WMS technologies aim to support the rapid throughputs that minimise inventory, and hence capital, tied up in the warehouse.

The best WMS now interface with a much wider range of supply chain devices. Voice based solutions are an established enabler of ultra high picking accuracy and efficiency that promotes better first time pick rates which means fewer missed orders and lower levels of returns. A good example of voice delivering real benefits is our customer Whitbread Supply Chain. Picking errors were cut by 50 per cent at the company's depot in Reading following the introduction of wireless voice controlled order picking and radio data terminals (RDTs). They have also reduced costs significantly, eliminated vast amounts of paper from the picking process and improved allocation of resources. The solution we implemented utilises Empirica software to provide an interface between the new wireless facilities and an upgraded version of the warehouse management system we supplied to Whitbread in the 1990s.

Jonathan Friedlander, operations support manager at Whitbread Supply Chain, says that halving errors has resulted in improved service to customers because fewer items are lost or delivered erroneously. They have also moved to real time operations so they know exactly where they are, have an instant view of productivity, and can manage and allocate tasks more effectively. The solution we devised was based around Empirica Task-RF software with provision for 45 wireless voice kits plus 10 hand-held and eight truck-mounted RDTs.

Whitbread Supply Chain's in-house logistics operation distributes food items to concepts within the Whitbread Group - including TGI Friday's, Beefeater, Brewers Fayre, Brewsters, Marriott Hotels, Travel Inn and Costa Coffee. More than 24 million chilled, frozen, ambient and fresh food items drawn from 4000 lines are delivered each year.

RDTs are better for managing pallets and receipts because they can handle more information simultaneously according to Jonathan Friedlander. He says that using them for incoming items guarantees the accuracy required to get the most out of voice picking. But they do not leave your hands free so voice is a better option for picking.

With voice picking, staff wear unobtrusive headsets and follow audible instructions issued directly by the WMS. Operatives respond by speaking into the headset's microphone with information such as check digits, to confirm the completion of the pick or to request instructions to be repeated. The WMS issues instructions in sequence and only authorises a new pick when the preceding action has been confirmed. Picking efficiency is maximised because staff work hands-free at all times and do not need to worry about reading paper or on-screen instructions. Picking errors are minimised because staff follow clear and unambiguous instructions.

From the outset, Whitbread's focus had been on improved stock accuracy. The halving of errors was a goal that added benefit to the Whitbread brands, improving the ability to deliver a full menu at all times. Jonathan Friedlander says that his company can provide a better service to its customers because fewer mistakes are made.

The other technology that everyone is talking and writing about is RFID. It's important to understand that RFID is simply an information enabler. What matters is how this information is processed and that comes down to the WMS and wider enterprise systems. With the latest version of Empirica we introduced a new feature to enable users to integrate more RFID-based processes with warehouse and supply chain operations. For example, a new recognition function ensures 100 per cent product identification and accurate loading of pallets using RFID tag-labels and despatch bay scanners. The ability to embrace all key supply chain technology, in addition to RF and voice which are already supported, is a cornerstone of Empirica's development plan.

Demand for value added process activities is growing as manufacturers continue to reduce direct costs and third party logistics companies offer a greater range of services to extend their basic 'sheds and wheels' facilities. We have responded by adding features to Empirica's Processing module to deal with sub-kit assembly, process identification and back-flushing of donor pallets. These activities are typically carried out on paper, but using Empirica to manage the complex processes of stock withdrawal, modification and return with all of the correct confirmation and audit trails offers the prospect of paperless operations and productivity benefits.

Value added functions enable customers to analyse stock information to improve business performance. They can, for example, assess fast and slow moving stock independently of sales data and allocate areas of the warehouse accordingly, perhaps bringing faster moving lines to zones closer to the loading bay to reduce lift truck movements and consequent handling times.

Improved links to back office and customer-facing applications place the WMS at the heart of the supply chain and enable new ways of engaging with customers. This means, for example, that customers can exercise real time, web enabled control over their own inventory. One of our customers does this to monitor the progress of its marketing campaigns and reallocate unused and returned stock to its overseas businesses for use in local initiatives.

Better handling of returns is a major issue, especially in the retail sector where the growth in online and home delivery has created many more points of contact with the consumer. A good WMS supports accurate and productive returns handling and adds value by providing real time information to the customer. For example, WMS data could provide the first indication of a problem with a product if returns received are above average. The progress of returns during a product recall can now also be monitored in real time. This may have an impact on quality control or compliance issues within a wider business context.

Another operation supported by the latest WMS is kitting where the objective is to ensure that sufficient components are available but without too much surplus. One Chess customer uses Empirica's kitting features to support the preparation of promotional items by ensuring the availability of a large number of components that are combined into single packages for delivery to retailers. Online retailers who consolidate orders for home delivery would benefit from similar techniques.

Dynamic task allocation and management by the WMS is vital for optimising resources, especially in the same-day-pick facilities required to support lean supply chains or online shopping. Work in progress and outstanding task reporting enables users to allocate resources in real time in response to changing demands during the shift. Support for novel processes such as consignment switching, de-picking and temporary putaway with improved capacity planning and load build visibility are in demand. Our customers are increasingly interfacing WMS functions with their load management and delivery routing and scheduling applications to take the WMS beyond the loading bay.

As a good warehouse management solution, Empirica already supports all key warehouse processes. The mark of an advanced solution is its ability to support a wide range of variations. But placing the WMS at the heart of the supply chain also increases the importance of its performance. This is why we believe a specialist application is superior to the functionality supported by even the best ERP systems.

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