WMS challenges, trends and solutions

The more information is available to supply chain managers in real-time, the faster they can react to meet customer demands, increase efficiency and keep a competitive edge, says Gursh Atwal, Sales Manager, AEB (International) Ltd

Today's fast-paced, competitive global markets and the rise of international trade lead to more complex global supply chains involving multi-layered processes across a variety of industries, partners, countries and time zones. Paired with market volatility, economic uncertainties, shifts in demand and distribution strategies (e.g. from in-store to online), this increased complexity creates multi-faceted challenges for warehouse management systems (WMSs).

The longer and more complex a supply chain is, the more difficult it is to control. This particularly applies where valuable, transactional data pertinent to warehouse operations (e.g. order status) is captured and stored by different systems and on different platforms - either between departments or company locations or between different supply chain partners. Such systems and platforms often operate independently from each other, without links or communication. Connecting such "silos" is necessary in order to achieve real-time transparency in all warehouses and throughout the supply chain. Integration and transparency form the basis for proactive and competitive management of procurement, distribution and fulfilment networks.

In operational terms this means that WMSs should be capable of integrating upstream and downstream processes, systems and supply chain partners, while supporting a number of different distribution strategies within large networks and individual warehouses alike. They also need to facilitate different workflows, such as directing resources based on priorities, managing sophisticated packing operations and supporting comprehensive returns processes. In addition, as more value-added services such as ironing, folding, cooling, bar-coding, mixing, re-packing or labelling are pushed up the supply chain or are outsourced, WMSs have to be flexible enough to cater for all specific operational requirements, while tracking all goods movements and capturing key information along the way. The resulting visibility becomes most valuable for the whole supply chain when shared: with the master ERP system that manages the original sales order, with the customer who is awaiting a delivery, with the supplier who needs to send replenishment, with the transport service provider who must expedite the airfreight shipment, with the accounting team who wants to allocate the packing costs to the original order, etc. With storage and distribution facilities in the centre of complex, global procurement and fulfilment networks, today's WMSs must offer these basic yet sophisticated and essential capabilities to enable supply chain managers to run streamlined, time-critical, flexible, transparent, competitive and integrated supply chain operations.

Trends

"Reverse logistics" has become a "must-have" capability of modern WMSs: Returns management has evolved into a comprehensive and complicated process that each company must manage in addition to their regular warehousing and distribution operations. When unforeseen events occur – e.g. the recent horsemeat scandal - product recalls put a further strain on supply chains, consuming significant resources and storage space. Each return represents a value and

needs to be stored accordingly until it has been quality checked, destroyed, processed, returned or otherwise managed in accordance with the respective company's return policies. Today's solutions need to handle the various return strategies and comprehensive process flows including but not limited to linking returned items with their original order to initiate related financial actions in the master ERP and to maintain required audit trails.

Shifts in the source of demand from in-store to online represent another factor that significantly impacts today's warehousing and distribution networks. Due to the rise of online orders, retailers have implemented comprehensive home delivery strategies and increasingly offer additional initiatives, such as click and collect, delivering online orders to third party addresses, e.g. a local garage or convenience store. A relatively new trend is the effect of social media on online purchases which can result in sky-rocketing, overnight demand, e.g. for fashion items that were "trending" on Twitter, or reversely, a swift, sharp decline in demand when bloggers post unconfirmed rumours about a company's questionable activities. Modern warehouse solutions have to accommodate such unpredictable shifts in demand while managing inventory and distribution of both store deliveries and online orders and should offer powerful forecasting tools accordingly.

Solutions
Considering the integral position of the warehouse within global supply chain networks, companies should look for WMS providers that think far beyond the warehouse. Overarching collaboration solutions have the capability to integrate all relevant systems and business partners to streamline operations and provide full traceability. This enables companies to integrate their supply chain operations, manage their procurement and fulfilment networks more proactively, and have a clear view of all orders at all times. A careful analysis of all processes, systems and supply chain partners is required to understand which software provider offers the right portfolio to meet requirements. The right provider should offer a consultative approach and a comprehensive supply chain solution portfolio, and understand the specific needs of each supply chain sector, operation and perspective.

Ideal solutions should accommodate business growth through modular system architectures; provide flexibility to integrate with existing IT landscapes, and offer solution models that fit different financial investment options. SaaS (software-as-a-service) or 'cloud' models for example do not require significant investment, manpower or in-house server capacity, and can be used as a pay-as-you-go service with built-in maintenance. Which model fits which distribution network is determined not by cost alone, but also by the required functional depth: SaaS WMSs usually represent "off-the-shelf" solutions that are often insufficient to manage multi-layered and complex warehouse operations, but can be perfectly suitable for standard distribution workflows - so it's crucial to carefully examine investment options, functional requirements, sustainability and growth potential before taking a decision.

Whichever solution a company prefers, integration capability and visibility across the supply chain are the key to success in today's complex networks and volatile, competitive markets. Without visibility, companies are highly vulnerable to supply chain disruptions and are not equipped to manage unexpected events and shifts in demand. Collaboration between all supply chain partners is necessary to provide a comprehensive view of all goods in stock or transit, from production to final delivery. And the more information is available to supply chain managers in real-time, the faster they can react to meet customer demands, increase efficiency and keep a competitive edge.