



SAP Industry Briefing

WAREHOUSE MANAGEMENT TODAY: BALANCING FINANCIAL PRESSURES AND GROWING DEMANDS

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EXECUTIVE SUMMARY

Traditional linear supply chains with sequential processes are evolving into complex global ecosystems that are highly responsive to customer requirements. These demand-driven environments - which work in conjunction with traditional push strategies - are known as adaptive supply chain networks.

An adaptive supply chain network allows all the stakeholders in the supply chain – both internal and external to the enterprise – to share knowledge, make collaborative decisions and immediately respond to changing conditions. Trading partners can avoid costly supply chain problems. Moreover, firms can enhance their financial position and improve their supply chain economics.

Without an adaptive supply chain network, the potential for growth is limited to improving linear processes and merely optimizing points throughout the network. These single optimizations rarely, if ever, affect the ecosystem as a whole.

Today, most companies work in a “plan then execute” paradigm. This has natural limitations because there is a fundamental mismatch between planning an ideal scenario and executing those plans in a real-life situation. An adaptive supply chain network can monitor changes in the real world so firms can profitably respond with timely and intelligent solutions to problems.

A warehouse management system (WMS) is one of the key technologies required to create a successful adaptive supply chain network. This system enables the extended warehouse to sense and respond to a variety of business requirements and meet complex and changing customer needs. To this end, warehouse management - and the technology that supports it - has moved to the forefront of the CEO's agenda.

A TIME FOR CHANGE

Many firms already have a basic WMS in place, but a Forrester Research, Inc. survey of about 200 supply chain executives indicates that yesterday's solutions are not meeting today's demands. Approximately half the respondents said that their WMS application was at least three years old and many of these respondents stated that they operated on five-year-old solutions. Follow-up interviews revealed that many companies customized the application to the point where an upgrade was actually a reimplementation. This phenomenon - combined with increasing inventory levels at facilities, tight margins, and

the desire for more business flexibility - is driving widespread reevaluation of WMS solutions.

To compete in today's market, warehouses need to operate in a real-time environment where functions such as forecasting, order management and transportation are tightly integrated. Also, there is also pressure to meet the demand for value-added services, such as light manufacturing within the warehouse. In fact, warehouses are beginning to resemble manufacturing sites because postponement strategies and complex value-added services are pushing manufacturing requirements toward WMS fulfillment.

As systems become more tightly integrated, companies benefit from having visibility into internal operations and the supply chain as a whole. For example, trailers can be expedited to dock doors - instead of going through a yard-management process for handling – and distribution requirements can be incorporated into planning. Processes for order management allow suppliers to see demand-based movement downstream. As a result, customers have improved visibility of their orders.

At the same time, companies stand to improve their margins through labor-performance management. Demand forecasts can be used to plan labor workloads in advance by calculating how much time will be needed for specific tasks (such as picking and receiving) and determining individual schedules based on those figures. Companies can go one step further by linking customer relationship management (CRM) and order-management systems to the WMS, which helps prioritize work within the warehouse.

WMS DEPLOYMENT OPTIONS

Once the business case has been proven for a new WMS, operators and IT managers must agree on the best way to leverage the solution to meet business requirements and lay the foundation for growth. Some of the issues that must be considered are the placement of the server, the facilities that should be involved, and the optimal deployment option. Generally, there are three deployment options for a WMS:

- **Traditional enterprise resource planning (ERP) system integrated on a central server** - Many firms choose the centralized deployment option because of the flexible configuration, risk-free integration, scalability, functionality of ERP software. A centralized deployment solution helps firms manage small warehouses with simple processes and large distribution centers with complex processes.

- **Decentralized WMS** – Other firms choose a decentralized WMS system because of its scalability. For example, one large retail company has four facilities on a single decentralized installation. The company has 500 voice-recognition appliances, 1,500 radio-frequency (RF) devices, and completes 1.2 million picks per day.

By implementing a decentralized solution, firms can fulfill the requirements of a central ERP system without breaking the close connection between the WMS and the ERP system. The company can achieve round-the-clock operation of the warehouse along with high system performance. At the same time, a decentralized installation allows firms to be independent from the release status of a central ERP system.

In addition, a decentralized WMS can be connected to several centralized ERP systems from different vendors. This means that material from various systems and its owner may be managed physically and technically in one WMS. A key benefit of a decentralized approach is that it helps firms to maintain a smooth warehouse operation for several customers or business areas and for a single facility.

- **Extended WMS** - The extended warehouse management option is built on a supply chain platform. Firms can create an adaptive supply chain network that facilitates interaction among customers and suppliers and enables trading partners. The business practices are linked to industry processes with real-time information, thus enabling a dynamic synchronization of demand-driven planning, demand-driven logistics and network execution.

The integration, automation and comprehensive functionality provided by an extended WMS enable firms to meet the challenges created by an increasingly competitive, fast-paced, and unpredictable marketplace. It improves process automation as well as provides firms with a higher quality of data and better visibility of warehouse operations. The software also allows firms to integrate business processes - no matter how complex or distributed the adaptive supply chain network may be.

DITAN CORPORATION TACKLES HIGH VOLUME AND FAST TURNAROUND

Ditan is a privately owned third-party logistics firm that specializes in direct-store retail distribution of media products including video games, movies, audio products, and small consumer electronics. The company has six regional and national distribution centers, five virtual centers and a total of 800,000 square feet under

management.

Considering the size of the company, Ditan handles a high volume of goods that have a short product lifecycle. In the last fiscal year, Ditan processed 118 million units of interactive products and shipped those products to about 26,000 direct-store locations. During the holiday season, Ditan produces and ships approximately 150,000 orders per day directly to store locations. Given this scenario, a tightly integrated, highly adaptive warehouse management and distribution environment is critical to the success of the company and its customers.

Ditan needs a well-developed warehouse management and distribution IT infrastructure to meet its customers' needs. Since first-day sales are so critical in the sale of media products, customers expect Ditan to accommodate same-day, next-day and two-day order-to-delivery cycles. About 70% of all video games sold in the United States are purchased by the consumer within 14 days of initial distribution. Therefore, it is critical to make first-day sales and replenish inventories as quickly as possible.

It is also essential to maintain end-to-end visibility of the entire supply chain, so customers can track the order-to-delivery process every step of the way. Most importantly, customers need to be able to change orders at the last minute – requiring Ditan's systems to be extremely flexible.

Ditan had several requirements when updating the company system. To accommodate customers' needs, Ditan wanted a highly automated warehouse management and distribution solution that could handle extremely high transaction volume and electronic data interchange (EDI). Ditan's system needed to be tightly integrated with the subsystem so it could easily move directly from a manufacturing environment to a distribution environment with minimal touches. It also had to integrate with a range of other environments including RF, shipping, sales and transaction, financial and transportation systems. Ditan wanted to minimize its software development, training and other incidental costs involved in the implementation. Most importantly, Ditan needed 100% uptime – and help from SAP.

Implementing a new WMS from SAP has become a source of competitive advantage for Ditan. The company can now analyze its performance across multiple facilities and its entire environment without having to create different standards for each facility. Ditan is confident that the information produced by its systems is consistent and correct.

A key measurement for Ditan is total cost of fulfillment. The new WMS has enabled Ditan to reduce its per-order basic-fulfillment force by 20% over a three-year period. This reduction has translated into a higher return on investment. It has also allowed Ditan to maintain stable prices and improve its top line margin. The company has achieved better integration in assembly and has almost eliminated retail-compliance failures.

Customers have benefited from lower inventory-management costs and improved order throughput. They have real-time, glass-pipe visibility into the entire order-to-delivery lifecycle. Customers have a consistent, standardized view of the relationship - no matter where the products are shipping from or how they are being shipped. This is critical especially when orders are being fulfilled at multiple facilities. Shipping information is available in real time on the Web, where customers can also obtain customized reports.

Thanks to the SAP warehouse management and distribution system, customers have dramatically reduced the amount of inventory needed in Ditan's facility. Ditan provides customers with information based on its distribution pattern. This information allows Ditan to replace their original manufacturing orders on a much tighter basis and replenish inventory at an appropriate level. Improved customer satisfaction has helped Ditan retain customers in the long run.

AMER SPORTS BECOMES AS FLEXIBLE AS A PROFESSIONAL ATHLETE

Amer Sports is a holding company for several well-known sports equipment brands including Wilson, Atomic, Solomon, Precor, and Mavic. The company has several manufacturing plants and major warehouses in the United States. Amer Sports' customers range from large retailers such as Wal-Mart, Target and K-Mart, to big-box sporting-goods stores and small retail outlets.

Amer Sports relies on its WMS from SAP to meet customer demands and understand how cost structure is affected by these demands. When Amer Sports was looking for a new WMS, flexibility and the ability to configure the system were the company's top considerations.

Larger retailers are demanding services - such as labeling, smaller shipping, and repackaging - that help them gain operational efficiency. Amer Sports is facing a growing demand for radio-frequency identification (RFID) from this segment and plans to comply with retailers' current

and future mandates. RFID yields benefits as the tags on products and pallets feed the WMS. With RFID technology a retailer and its suppliers know exactly where products are at all times.

Big-box sporting-goods stores are demanding price-sticker services. Details are printed to the label, and the WMS from SAP has the flexibility to change the labels up to the last minute. Meanwhile, small retail outlets want the ability to automate small package shipping with carriers, such as FedEx and UPS.

SAP's WMS functionality helps Amer Sports turn a profit, despite these constantly changing demands. Amer Sports understands where it can be flexible in these processes and how some processes can be postponed to avoid tying up additional inventory and internal manpower. Each request is analyzed for profitability to ensure there will be a return for the extra effort.

SUMMARY

In today's fast-paced environment, companies need full visibility of their goods at all times. Operational efficiency and tight inventory management are key to combating tight margins. At the same time, companies need the flexibility to satisfy a wide range of customer demands while still turning a profit.

Next generation WMS technology from SAP helps companies put an adaptive supply chain network in place. This network allows companies to share knowledge, make collaborative decisions, and sense and immediately respond to changing business conditions. Ultimately, SAP's technology is the foundation for future growth.

POWERED BY SAP NETWEAVER

SAP for Wholesale Distribution is powered by the SAP NetWeaver, the integration platform that supports both SAP and non-SAP systems. The open architecture of the SAP NetWeaver platform lets distributors transform their business processes incrementally, with step-by-step migration, to achieve fast return on investment. The highly intuitive, role-based environment of SAP NetWeaver lets users access information from different sources through a single interactive format.

For more information on the many ways that SAP for Wholesale Distribution can help your business, call your SAP representative or visit us online at www.sap.com/usa/industries/wholesaledistribution.