By Jon DeCesare

Going With the Flow

How warehousing is adapting to emerging trends and the economy

The warehousing and distribution industry is taking bold steps to respond to changing economic and business circumstances. Demands to reduce overcapacity, improve speed and efficiency, satisfy concerned stakeholders and comply with emerging regulations are being met with fundamental operational changes. These include:

- The rise of transloading.
- Maximization of information technology.
- Green warehousing.

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TRANSLOADING

The use of transloading to reduce costs and transit time has been increasing since Wal-Mart and other companies introduced it in the 1980s to gain a competitive advantage.

Also known as cross-docking, transloading involves the transfer of incoming product into dedicated outbound loads, without the need for intermediate inventory storage.

Transloading has increased recently for imported cargo. A recent World Class Logistics Consulting research project for a major port revealed transloading in the Southern California area has increased from 21 percent to nearly 25 percent of containerized imports since 2007. This trend is a response to several key advantages:

- Reduced transportation cost. The ability to transfer the contents of three 40-foot ocean containers into two 53-foot domestic containers/trailers reduces the number of required outbound trips and the cost of repositioning ocean containers back to ports, which has increased recently.
- Increased responsiveness and flexibility. Transloading enables the strategy of postponing the allocation of products to specific stores and distribution centers until the product reaches the port, which would otherwise be made several weeks ahead of time. This results in lower inventory safety stock levels and better responses to changing demand needs and unforeseen supply chain disruptions.

Top supply chain companies use transloading for domestic product sources as well. All the companies achieving AMR Research's 2009 Supply Chain Top 25 list incorporate transloading operations in their supply chain strategies, including Apple, Dell, Procter & Gamble, IBM, Wal-Mart, Pepsico and Hewlett-Packard.

A recent WCL network-optimization analysis for a national industrial supply firm identified savings of more than 55 percent in transportation costs over less-than-truckload shipping for its Southern California DC by consolidating vendor shipments originating east of the Mississippi first to a Chicago facility, which then transloaded shipments to the California facility via intermodal rail.

WAREHOUSE INFORMATION SYSTEMS

The recession forced many companies to scrutinize their warehousing and distribution information system needs and to re-evaluate plans.

With expected return on investment in the 12- to 18-month range, most companies are putting off any plans for new systems unless the implementation is critical to their immediate needs. Instead, many companies are committing resources to ensure existing systems are fully utilized and integrated with internal systems and external partners, to take advantage of available efficiencies.

Several recent WCL assessments performed on behalf of prospective company buyers found their current information systems, while fully capable of meeting their needs, were significantly underutilized because of lack of training and expertise.

High-volume operations benefit most from warehouse management systems, transportation management systems, yard management systems, enterprise resource planning, global trade management systems and supply chain planning systems.

A WCL operations audit of an international third-party logistics company handling more than 50,000 import containers a year identified improvements to yard management operations, which were handling as many as 650 containers and trailers at a time. Improvements included implementation of a new real-time yard management system that significantly improved gate personnel and hostler productivity, saving 40 to 60 parking spots by reducing unit dwell time, and reduced time spent by drivers on-site by 50 percent.

GREEN WAREHOUSING AND DISTRIBUTION

Interest has grown in environmentally friendly warehousing, spurred by several recent developments:

- New and pending state and federal legislation.
- Economic pressure to reduce costs (through improved efficiencies and energy savings, for example).
- Pressures by concerned customers, investors, local community groups and other stakeholders.

The Obama administration is moving quickly to adopt national greenhouse gas cap-and-trade legislation, similar to that already in place in California, which mandates the reporting and improvement of harmful emissions.

Warehousing and transportation organizations are participating in voluntary programs as a means to satisfy pending mandatory requirements, such as the Climate Registry, EPA Climate Leaders, EPA SmartWay Transport Partnership and the U.S. Green Building Council's LEED certification program, the internationally recognized program certifying green buildings.

ProLogis, the world's largest owner, developer and manager of distribution centers, is committed to requiring LEED certification of all its new U.S. buildings under construction (currently 3.5 million square feet), which includes requirements for energy savings, water efficiency, CO_2 emissions reduction, and indoor environmental quality.

Because of the nature of warehouse facilities, warehousing is particularly attractive for such measures as solar power and energy-efficient fluorescent lighting.

WCL recently assisted a client in preparing for EPA SmartWay certification with a plan that included measuring warehouse facility and vehicle emissions footprints, an action plan and a commitment to improve over a three-year period.

More than 1,000 companies participate in the EPA SmartWay Transport Partnership program, representing approximately 600,000 trucks and 50 billion miles per year, approximately 24 percent of the industry, according to the EPA. Certified members include UPS, FedEx, BNSF Railway, Wal-Mart and Staples. Many vendors of goods and services are facing pressure to achieve SmartWay Partnership status or lose consideration of future business. Companies committed to utilizing SmartWay Partners include Wal-Mart, IKEA and Transplace.

The recession has forced many warehousing and logistics companies to streamline operations and reduce costs. Empirical research studies have demonstrated that superior environmental performance leads to positive financial results, including higher returns on assets. The return on such investments increase considerably as the cost of fuel rises, as is expected when the economy recovers.

A recent WCL consulting engagement of a national retailer's warehousing and transportation activities concluded that green supply chain strategies reduce environmental impact and costs, including distribution network optimization, vehicle routing optimization and the reduction of truck empty miles, shipment consolidation and the maximization of trailer capacity, and pallet and packaging material recycling. The result was improved environmental performance, reduction in costs and improved employee morale and community goodwill.

Warehousing and distribution companies are increasingly formalizing their environmental sustainability programs to demonstrate their commitment to the protection of the environment to concerned stakeholders. A recent study found that more than 50 percent of Fortune 500 companies have a formal sustainability program and issue a sustainability report to stakeholders on an annual basis.

WCL recently assisted a company in developing a proactive environmental community relations program to address the environmental concerns of the local community, which has resisted further industrial development because of adverse environmental impacts such as facility and diesel truck emissions, and noise. Strategies included the adoption of formalized communications and remediation mechanisms including specific actions to reduce local environmental impacts such as truck queuing and local traffic flow patterns, reduced truck idling, and cleaner technology vehicle and material handling equipment.

Such proactive environmental policies and actions help to identify and address potential problems early and foster good will with all parties concerned.

Successful adaptation requires managerial flexibility and foresight to changing business circumstances. Those choosing to do so will be in a better position to survive and thrive in trying times.

Taking advantage of the potential benefits of operational activities such as transloading, information systems and green initiatives are examples of how warehousing and distribution is responding to such challenges. As with the natural environment, adapting and going with the flow of the emerging business environment will assist in achieving results in the desired direction. ●

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