

TECHNOLOGY & LOGISTICS

Technology and logistics are very important parts of our business. The Kroger Co. invests significant capital and expense dollars to ensure that our information systems and logistics network are operating as efficiently and cost-effectively as possible. We also know that such investments are critical in serving our customers better.

Investments during the past few years have included:

- Self-checkout technology
- Time & attendance systems
- Labor management and scheduling technology
- Pharmacy systems
- Voice-pick technology for our distribution centers
- Real-time warehouse management & automation systems
- Internet-based inbound freight management
- Decision support – data warehouse
- HR self-serve technology
- Customer loyalty systems
- Supply chain & transportation management programs
- Manufacturing planning & control systems
- Shrink management applications

All of these investments are producing returns above projected hurdle rates. In addition, several of these investments – such as self-checkout technology, loyalty systems, and supply chain management – are contributing to improvements in Kroger's "Customer 1st" strategy.



TECHNOLOGY

Kroger enterprise systems are now in all divisions. Business process change and operational improvements can be accelerated with the completion of this systems conversion. Kroger has two data centers, down from 18 several years ago.

Research and Development

Kroger is committed to internally-driven innovation. We carefully consider opportunities that have the potential to redefine existing operating processes while materially improving the shopping experience of our customers.

Kroger continues to research and monitor developments in RFID and related technologies. We continue to execute internal pilots with our supplier partners where we see the potential for compelling business process and operating improvements.

LOGISTICS

Kroger's logistics network has been restructured to improve efficiency, lower costs, and improve product safety and quality. Since 1995, Kroger has closed 44 distribution centers and opened or significantly remodeled 20, for a net reduction of 24.



The new centers contain state-of-the-art racking and product handling systems, refrigeration, temperature and humidity controls, and space for cross-docking seasonal and promotional merchandise. Kroger has made significant investments in leading edge distribution technology, including warehouse, transportation, and advanced material automation management systems.

Many of Kroger's distribution centers and store delivery fleets have been outsourced to third-party logistics providers, giving the Company access to evolving approaches in distribution and more flexibility to implement them. The ongoing consolidation reduces the capital needed to maintain and modernize the network, reduces working capital, and lowers product acquisition costs since larger quantity purchases are possible.

Three-Tier Distribution Network

Kroger is the only major supermarket with a nationwide three-tier distribution system. The first tier consists of local dry grocery, perishables, and freezer buildings that service stores – generally within a 200-mile radius – with quick turn and perishable products. These distribution centers also serve as the Company's cross-dock centers for palletized merchandise that is going directly to a retail store.

The second tier consists of consolidation centers that service retail stores – within a roughly 350-mile radius, for slower turn pharmaceuticals, health-and-beauty care items, and dry grocery merchandise. These regional consolidation centers allow Kroger to purchase in larger quantities at the lowest possible price bracket. The product is piece-picked, sleeve-picked, or case-picked depending on value and movement, and shipped directly to stores two or three times each week.

The third tier ships seasonal and promotional products to stores in an even larger geography than the consolidation centers.

This tiered network system is supported with new technology for improved operations and more cost-effective store delivery. "Demand Forecasting" technology utilizes certain store-specific and market data to enhance the Company's store ordering system capabilities. This capability enhancement is a reality with the creation of Kroger's data warehouse, expanded corporate computing infrastructure, and current software systems. Voice-pick technology employed in our DCs uses wireless

communication and voice instructions for picking product versus the previous paper label-based picking. Our real-time warehouse management system improves both the speed and accuracy of product assembly and shipping. The network is linked with a web-based freight management system to eliminate “empty” trucking miles and reduce freight expense through coordination with our suppliers and fleet operators. Advanced automation technology is being implemented for select case and piece picking operations, which dramatically improves store service and reduces cost.

Transportation Management

With rising fuel and operational costs, Kroger is further leveraging its investments in network-based transportation management systems to improve utilization of its store delivery and inbound fleets. Fleet capacity management across all markets and business units is being integrated into these tools to maximize coordination and utilization.

