Distributing over 120 million pieces of mail to individual clients world-wide each year would be a tough assignment for any company. But for Fidelity Investments, one of the world's largest managers of mutual funds, handling the distribution of financial product literature from two centers across the country made the assignment even trickier. Adding to the challenge, both centers were running out of capacity due to Fidelity's rapid growth. The company solved the problem by consolidating its two printing and distribution centers into one facility located near Cincinnati in Covington, KY.

To ensure customer orders were picked accurately and shipped quickly, Fidelity chose to install a combination of carousels and flow racks in its order-picking area. To replenish the order operation, Fidelity considered using lift trucks and conventional rack storage, but realized such a system would not meet the need to pick and ship up to 1,600 customer orders the same day they are received.

### Solution Summary

Provide automated replenishment to support high-volume order picking for a mutual fund manager's printing and distribution center by integrating
- Five-aisle unit load AS/RS
- 4,320 storage locations
- Sorting Transfer Vehicle (STV) loop with four STV's
- Eight input/output aisle conveyors with an interface to the STV loop and AS/RS
- RTS-60 real-time inventory control software

### Key Customer Benefits
- Dramatically increased the number of loads that can be handled in the same building footprint
- Removed a narrow-aisle lift truck form the warehouse aisles, improving safety, productivity and uptime
- Virtually eliminated inventory errors and paperwork
- Reduced stock outs in the high-speed pick area
- Improved customer service and order quality
Integrated System Automates Replenishment
Cisco Material Handling, a Daifuku America Business Partner in Dallas, TX, proposed a fully-integrated logistics system using a Unit Load Automated Storage and Retrieval System (AS/RS), Sorting Transfer Vehicle (STV) and Warehouse Management Software (WMS). In this integrated system, WMS controls all inventory levels and locations in real time, directs replenishment of stock to the order-picking area, manages all order picking and controls the operation of the AS/RS and peripheral equipment.

Daifuku America Offers Reliable, Proven Solutions
Key factors that sold Fidelity on purchasing Daifuku’s total integrated warehouse solution were the advantages of reliable, error-free automation, real-time inventory control and quick installation with a design that uses half the footprint of conventional rack. “We needed a vendor that could come in and build the system very quickly,” said Chris Cramer, senior Vice President at Fidelity. “We couldn’t afford long delays in getting the system up and running. And we couldn’t afford unscheduled downtime either. We picked this system because it has a modular design and offered a very high level of reliability. The technology was not an untested product being customized for Fidelity, but proven controls currently in use in the U.S. and abroad.”

Fast, Flexible System Keeps Orders Moving
Daifuku’s automated material handling system gives Fidelity great flexibility in managing a wide variety of material handling tasks while controlling inventory in real-time. When printed material is needed to replenish the flow racks and carousels, or for bulk shipping of materials, Real Time Software directs the AS/RS to retrieve needed pallets and transport them via an STV to one of three replenishment pick stations. A picker takes the replenishment stock from the pallet, places it into a tote and attaches a bar code label. The tote is sent by conveyor to the correct order-picking area for restocking, and the picked-from pallet is re-stored by the AS/RS.

At the customer order-picking area, workers use a Pick-to-Light system to quickly fulfill customer orders from the flow rack and carousel. After each pick, the picker presses the “Pick Complete” button, which immediately updates the RTS inventory labels. Completed orders are sent by conveyor to packaging, where they are readied for customer shipment.

Daifuku’s fully integrated system gives Fidelity unprecedented speed in order picking, continuous inventory tracking, significantly more throughput in less space, near perfect order fulfillment and the virtual elimination of inventory-related paperwork. And the system does it all in far less space. “If it weren’t for this system, we would have had to build the warehouse twice this size,” Cramer said.