# **Material Handling Application**

## **Automated Pallet & Cart Transport**



SGV drops off load at conveyor

### **System Description**

The SGV System operates 24/7 and facilitates the movement of plastic and cardboard recyclables within a retail distribution center. The SGVs are controlled by SGV Manager software, which sends pickup and delivery requests by communicating with the facility's network.

The plant's WMS triggers all order requests for each location, and SGV Manager dispatches vehicles to these pickup points. As the SGVs complete tasks, SGV Manager monitors vehicle traffic in order to optimize vehicle flow and prevent deadlocks or collisions. It also tracks the location of each SGV within the facility.

The system operates as a "taxi" system, as the SGVs deliver requested loads to/from the facility's system. The WMS controls the 4,000 pick pallet locations, the 200 AGV drop off locations, the 40 pallet packing stations, and the 150 buffer locations. SGV Manager interfaces with the WMS and provides real-time updates to the system.

16 flatbed lift deck AGVs perform these tasks. Each SGV contains one battery required for on-board charging.

#### **Features**

Location: Wath upon Dearne, England

Number of Vehicles: 16

Vehicle Type: Flatbed Lift Deck

Load Description: Product Pallets & Recycle Carts

Industry Description: Retail

Guidance Method: Laser Guidance

Vehicle Capacity: 500 kg

SGV Host Controls: SGV Manager – Windows XP

Battery Charging Method: Opportunity Charging

#### **Benefits**

- Significantly reduce pallet and product damage
- Track inventory throughout the system
- Flexible solution for plant's changing production demands
- Safe, reliable delivery of pallets
- Exceeded financial targets generating a 37% ROI based on labor savings



Picking up empty pallet at Pickup Location



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