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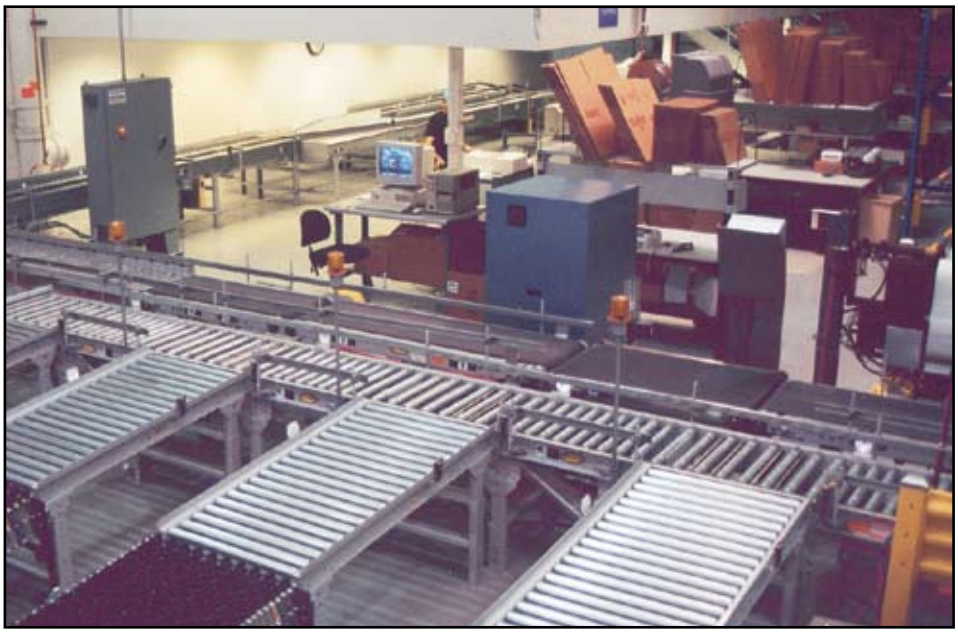
PERFORMANCE
MATERIAL HANDLING OPTIMIZATION

Fujitsu Network Communications: From 5 minutes per Order to 25 orders in 5 Minutes

"After the order is picked, we usually don't have to touch it again."

Fujitsu Network Communications, Inc., with headquarters in Richardson, Texas, is a leading designer and manufacturer of fiber-optic transmission products that deliver voice, data, and video services to residential and business users. The company has achieved great success in the telecommunications industry, and has consistently over-achieved its revenue targets—and has thus put increasing pressure on its manufacturing processes to keep up with demand. This project focused on the company's manifesting and processing area, where as much as $225 million worth of telecommunication equipment is shipped each month directly to Fujitsu's customers.



The situation

Fujitsu is a growing company. Its sales are booming—to the tune of a 30% increase over the last four years with no end in sight. And the growth is only increasing, challenging Fujitsu's processes and facilities. "We had to do something to allow us to maintain this growth," senior distribution manager Jonathan Henson said. "Our processes are sound, our people are well trained, and we have a good facility design, but the growth is such that we wanted to handle the pace with the same floor space and the same people."

In fact, the company handles a steep load of over 13,000 orders a month in its manifesting and processing area. Each order is packed into a single box, and the average order consists of four line items with 24 pieces. The system also handles larger shipments to common carriers.

Fujitsu's previous shipment process:

1. Order administration sends the order to the shipping department.
2. The order is pulled from inventory.
3. A determination is made: is this a large or small order?
4. If it is a small order, it's diverted.
5. The order is packed, weighed and pushed down the line.
6. An operator uses the existing freight computers, sets the shipment up, and enters it on the company's SAP system.
7. The order is placed on a cart for shipment.

The floor layout pushed product from picking carts onto a table for packing and weighing. From there, it traveled down an expandable conveyor line that passed in front of a bank of shipping computers, each tied to a carrier. Product was placed on carts or pallets as needed from that point.

The impact

Fujitsu knew it had to devise a way to accommodate the growth. The company realized that quality in its shipping processes could erode if the number of required shipments continued to increase without an enhanced capacity to meet the need. Fujitsu plans to ship $1.6 billion over the next 6 months. Quality could suffer simply from volume, and the company found that unacceptable. "If you're overwhelmed, you can't maintain high quality standards," said Henson. With the current level of growth,

the company knew the top-notch reputation it had built would be tested.

Desired solution

"As a manager," Henson said, "there is only one thing I really want, and that's control. All companies want control of what's going on under their roof whether they realize that's the primary objective or not. I want to control my work environment, and this system helps me do it."

For Fujitsu control meant its role as a vital link in its customers supply chains could not be compromised because of problems in its manifesting and processing area. Fujitsu is a world-class manufacturer, which also means being a world-class distributor. "We make distribution a value-added part of the business," Fujitsu's Jonathan Henson said. "You can't complete the supply chain unless you include distribution."

Fujitsu needed the system to be reliable. "That is the priority," Henson said. "Conveyors have got to convey and scanners have got to scan."

"Our system was fine before. We had good processes, but they were manual. That had to change," Henson said. "If we planned to handle a continuously increasing volume with the same personnel and the same space, we had to increase our efficiency."

Added Fujitsu's Information Systems Manager Zack Butler: "We wanted to eliminate manual data entry in this area."

Solution implemented

The new material handling system combines hardware and software to dramatically increase the efficiency of the manifesting and processing area. Product is pulled from static storage and fed into the carton flow rack.

The new system for shipping an order:

1. The order is pulled from the flow rack system.
2. The operator packs the order, and creates a "license plate."
3. The operator places the packed order onto the conveyor and proceeds to the next order.

The order travels along the conveyors to be automatically weighed and assigned to one of three shipping lanes, depending on which carrier is being used. The system identifies the order so that it goes onto one of four expandable conveyor lines. There are three dynamically-assigned carrier lines and a fourth line dedicated to exceptions, special shipping instructions, and palletized shipments. The conveyors are capable of placing the packed boxes directly into a truck.

There is an exception station at the dock area, which allows Fujitsu to easily find and manually correct any orders that need action.

Freight costs, which before required use of one of several terminals, are automatically provided. Administration doesn't need to enter freight costs. "This system limits the number of chances people have to make an error," Henson commented. It is also part of the company's strategy to automate order entry and shipping processes as much as possible. To shield the hardware from any potential damage due to lift truck collision, steel guard rail was installed at various places in the facility.

The results

The previous manifesting and processing system was good, but this one is better. "It took us an average of five minutes to handle an order with our old system. Now, we handle twenty orders in five minutes—many in as few as 12 seconds—and we're more accurate than we were before," Henson said. The improvement is on an order of 25 to one.

But the processing speed isn't all the system does to help Fujitsu increase its efficiency. It generates an automatic history that allows Fujitsu to create reports with pertinent information and costs, when needed. It also eliminated a task that slowed the department down considerably. In the old system, the manifesting and processing department had to fax information to Fujitsu's order administration department once an order had shipped. Now, that's automated, sending the information in real time so that as soon as an order ships, Fujitsu is able to execute its billing process.

"We received a twofold benefit from the system," commented Zack Butler. "We got more accurate, and we removed over 90% of the manual data entry involved. We had to do a synonymous transaction on our host system. Now, it's all done by the in-motion system. "After the order is picked," Butler said, "the operators don't ever have to touch it again.

"From the standpoint of information systems," Butler added, "we're now extracting and holding data. The Ascent software consolidates all the various carrier shipping software so we're dealing with one system, not one for each carrier involved."

Henson said 20% of the company's orders are same-day shipments now, but that the trend toward same-day orders is growing and the new material handling system helps Fujitsu to meet that demand. "We want to be able to ship 80% of our orders same-day, if that's what customers need," he said.

In the end, Henson believes he was creating control by creating the new system. "That's what it's all about," he said with a grin. "It's a system that helps me get home a little earlier."