



# RFID in Linen: It Can Work

*GBS Linens in Southern California proves that Radio Frequency Identification (RFID) chips can generate a strong ROI for the tracking of hospitality flat goods*

**By George Ferencz**

*GBS Linens in Anaheim, CA is one of the nation's leading suppliers of party linen. The company, founded in 1984, carries more than 40 different styles in 300 colors. Each rented tablecloth and chair cover has an RFID chip to help the company track its valuable inventory.*

Since RFID technology began to enter into the industry's consciousness about a decade ago, the belief has been that these tracking chips could benefit the uniform supply sector of the business but not linen supply. Skeptics argued that the cost of implementation compared with the payback in better inventory control would not be worth it for linen suppliers. Since then, that philosophy has held, but now the industry is beginning to see some evidence to the contrary.

A case in point: GBS Linens in Anaheim, CA. The company, which began in 1984, is one of the country's leading providers of party linen, with five locations throughout the United States—Anaheim, CA, Hayward, CA; Las Vegas; Phoenix and just recently Dallas. It has more than 40 different styles of table linen in stock in more than 300 colors. What they don't have in stock, they make, as GBS Linens Vice President of Finance and Administration Tony Poploskie notes.

"Our philosophy is that we give anybody what they want when

they want it," he says.

Managing such a vast inventory certainly makes RFID more attractive to companies like GBS. But even more traditional linen suppliers should take note of GBS' accomplishments and explore if advanced tracking technologies can enhance their profitability as well.

### **The argument for chipping**

Poploskie has been with GBS Linens for more than 13 years, and for almost all of that time sorting, counting and managing linen was a manual and tedious process. Color-coded systems were established to help keep everything organized, but as the company continued to grow and its workload increased, company founder Pravin Mody believed there was a better way, and charged Poploskie with finding it. There were some solutions GBS considered throughout the years.

"Pravin had been considering since the beginning how to better track our inventory," says Poploskie. "We looked at barcoding, but

## Plant Technology



GBS Linens' headquarters is in Anaheim, CA, but the company also has locations in Hayward, CA; Las Vegas; Phoenix and Dallas.



A GBS employee feeds one of the company's largest sizes of table linen through the flatwork ironer.



Table linen inventory is sorted by using man-readable, color-coded tags indicating the item's size as well as an RFID tag.

because we are unique and hang and bag each item, the barcode would not have been a viable solution for us.”

In the mid-to-late 1990s, GBS also looked at laser thread technology. Laser thread is used in several industries, and is the technology that allows the tracking of U.S. currency—it's the strip in larger bills that you can see if you hold it up to the light. Research was done in the 1990s to bring that technology to the linen supply sector. The advantage over RFID chips was that the cost for the laser thread itself would be much less than that of a launderable RF chip. However, the scanners for laser thread were very expensive and laser thread was restricted to about 20 SKUs while RF offers unique identification for unlimited SKUs and identification of individual items.

“So, we began to look at RFID,” says Poploskie. After interviewing vendors for the project, GBS would select Positek, which has gained a reputation in the industry for being able to customize an RFID system to a particular company's needs.

“We looked at some inventory management systems; they could

not handle our (vast) inventory or our (business) model in which customers can order any item in our inventory at any time. We do special events; not a fixed contract business,” he says. Positek proposed a system that would work within GBS' business model, yet greatly improve its inventory controls and productivity.

The cost of the project would be significant—about \$300,000 for the chips and another \$400,000 in hardware, software and installation. Such an investment, of course, raised questions from GBS' ownership, chief among them are how fast would the ROI be on the project and how would that ROI be achieved. Ownership, Poploskie notes, wanted to improve their operations, but they didn't exactly want to be pioneers either.

“We are in what is traditionally a low-tech industry. But Pravin Mody comes from an engineering background, and has always been a great believer in technology,” says Poploskie.

Positek argued that an ROI of less than three years was achievable, and the company had industry evidence to prove its point. Other companies that have adopted RFID technology have been



*Tony Poploskie, vice president of finance and administration at GBS, shows how RFID chips are scanned at the soil station. The RFID system records customer information and marries data to the item. Afterward the goods are moved by vacuum tubes to one of 16 bins that are sorted by different colors.*

able to reduce their merchandise costs by better controlling their current inventory, provide evidence of customer losses, and speed up production in the soil room and in route make-up. However, these successes were almost exclusively in uniform and mat rental. Would a similar ROI be possible on table linen? GBS owners and management believed it could.

### **ROI right from the start**

GBS would chip its rental inventory of tablecloths and chair covers, which accounts for between 50%-60% of total volume in the 56,000 sq. ft. Anaheim, CA plant. Implementation also included determining the points within the plant that items would be scanned.

The first scan point is in the soil room, which includes sorting tables with an RFID scanner built in below the table. For RFID-enabled goods, sorting is as simple as running the item across the table, and if the item is chipped, tossing it into the vacuum chute. The system will immediately record the type of item and marry that

data with the customer number. Now, GBS knows that customer returned that item.

In addition, Positek has created a “flagging” system that can be used to attach a message to individual items or entire orders. Using this, the company can flag linens if a customer calls from their site to report damaged or faded linens. This helps the company by removing substandard inventory, increasing customer satisfaction. The flags also mark long-overdue goods never returned by the customer. Finally, GBS can also flag items necessary for pending orders, “fast tracking” their processing and increasing inventory turnover.

“There are reports in the system that lets us know, for example, that a customer rented 10 table cloths but only eight came back,” says Poploskie. That allows GBS to go back to the customer and be able to prove that items are missing and justify a loss charge.

An Automation Dynamics vacuum sort system moves large banquet table tops and skirts at over 700 items an hour into one of 16 laundry carts, which are segregated by color types that determine

## Plant Technology



The RFID chip is sewed into a 2-inch by 2-inch piece of fabric on the back of the table linen.



TRSA President and CEO Roger Cocivera watches GBS' Tony Poploskie demonstrate how the RFID antenna scans table linen.



The soil station has an RFID antenna beneath the sorting table to read the chips before they are sent to bins to await washing.

the formulation needed to wash those items. Employees move the carts into the wash aisle, where goods are processed in conventional Milnor washers. Once the items are finished, they are then placed on hangers and bagged. Each hanger has a color-coded tab noting the size of the tablecloth. While the RFID chip has this information, the tab serves as a man-readable identification to assist production employees.

The second sorting station is located in this area. Employees pass the linen in front of a two-by-three foot antenna as they are bagged to record that this particular item has been washed and is now available for rental to customers. They are then returned to the warehouse.

As rental orders are placed, items are pulled in bulk and make their way into the route-make up area where they begin an automated sorting process. CA-SORT is Positek's specialized sorting system that utilizes RFID and automated rail systems to break inventory down by routes and customers. This system has been used by many textile service companies to aid them in sorting

industrial, hospitality and healthcare garments. Though GBS is processing table linen, the system doesn't much care about that since each item is on a hanger. When the item makes its way to the first sorting station and is scanned, the system instructs employees to divide goods onto one of 12 different rails. These rails take the items to another scanning station, where employees are told how to further divide each rail by customer. The end result is linens divided by route and customer and ready for delivery.

Even with an advanced technology like RFID, there are exceptions. Some items may not have been chipped and others chips may need to be "re-baptized" into the system. When an order is not completely filled, a fourth Positek scanning station called CA-FILL enables GBS employees to marry an item to an existing order. This station also allows orders to be modified, making last-minute additions or deletions to meet the customer's needs.

Through these four stations, GBS now knows where virtually every rental tablecloth and chair cover is at any time—whether it is at the customer location or where it is in the plant. That level of

detailed information, which GBS shares with its customers, serves to raise the confidence of customers in GBS' ability to track its inventory. So when GBS has to charge for a lost item the customer is more likely to pay the charge, knowing that GBS is tracking its goods to a very precise point.

### The ROI on RFID

Since it began using RFID technology, GBS has been pleased with the results. Poploskie says that the company believes a faster ROI

than projected may be possible. This is occurring not only because GBS can now more accurately charge for linen losses, but also because it has begun reducing the amount of labor necessary to sort its inventory.

"When we begin chipping NOG goods coming into the plant, we'll be able to see an even greater savings," says Poploskie.

Poploskie is also happy with the viability of the chips. Pointing to a jar on his desk containing about a dozen RF chips, he says, "That's all that have failed out of hundreds of thousands."

Also, when a damaged or faded product is removed from inventory, the RFID Tag is removed and used in a new item. In this way GBS can get thousands of scans out of a single RFID tag, making the cost per scan a fraction of a penny.

GBS Linens is one of the emerging examples of how RFID can be adopted by linen suppliers. True, GBS has more colors and styles to manage than typical linen suppliers and it hangs its linen. But before other linen suppliers write off the relevance of GBS' success to their operations, they should consider that:

1. Table linen losses can be documented by using RFID.
2. Losses can be recouped because of the documentation provided by the RFID system.
3. Improved inventory controls ensure fewer linen losses and therefore reduced merchandise costs.
4. RFID can speed soil sorting of table linen, which can lead to reductions in labor in the soil room.
5. Chipping speeds order fulfillment by letting operators know where items are located in the plant.

As with any innovative technology, operators need to do their due diligence and determine the ROI they can get from a specific system. But when it comes to RFID in linen, as GBS is showing, no longer should linen suppliers simply dismiss the technology

out-of-hand as irrelevant. **TR**



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