Given the current economic environment hotels are looking to cut costs and create efficiencies wherever possible. The slowdown in the economy and associated budget cuts has in many cases necessitated a reduction in staffing levels across the board with particular emphasis being placed on the back of the house (BOH) department’s areas such as the laundry and housekeeping. While the reduction of BOH staffing levels will invariably impact the level of service that the hotel is able to offer its guests, the implementation of operationally focused applications like uniform and linen inventory management systems can mitigate the potential impact to guests and may even improve the overall efficiency of the hotel operations.

Depending on the size of the hotel and the number of uniformed staff, these systems offer a return on investment (ROI) that can actually be realized in a relatively short period of time. Most of the hotels that currently have uniform and linen inventory management systems installed use the traditional bar code systems. While these systems are very effective, they are somewhat labor intensive and rely on employees scanning each article of clothing individually with a bar code scanner in order to track the garments effectively. They also require an initial upfront investment in equipment such as heat seal machines in order to attach the bar codes to the garments.

**RFID Tag Solutions**

RFID solutions have also been around for quite a while, however, they tended to be somewhat expensive and challenging to implement. The earlier versions had some issues where the low-frequency tags needed to be read at close proximity to the readers (12 inches to 18 inches was the maximum distance that the readers could be from the tags for them to be energized and read). This resulted in lower accuracy readings and in some cases the system could only read one garment tag at a time. Given that the overall process was still being somewhat labor intensive and the cost differential most hotels opted to go with a bar coding method to save money on both the initial capital outlay as well as the ongoing costs for RFID chips vs. bar code labels.

Fast forward to today’s solutions. The newer RFID technology allows for the embedded chips to be read from greater distances (between 4 feet and in some cases up to 20 feet away) and their read accuracy has greatly improved. This allows employees to place soiled garments in chutes that can read the RFID tags with up to 98.1 percent accuracy. Additionally the price of the RFID chips has come down making the use of the newer technology far more achievable from a purchasing standpoint.

In April of this year Fujitsu announced the release of its new UHF-ban RFID tags. One of the key features of the new tags is that they can be read from long ranges (100cm to 150 cm depending on the bandwidth). By taking advantage of functions allowing for simultaneous readings, uniforms attached with the tag can be scanned in batches, tracked and automatically sorted, making the visualization of inventory status quick and efficient. In addition, the new tag is waterproof, durable and...
can endure exposure to heat, pressure and chemical products typically associated with the cleaning process. The tag is also about 40 percent smaller, 50 percent lighter and more flexible than the previous tag model. Initial deployment costs of the new tags are reportedly 40 percent lower, as the tag can be attached to garments and other textile products through ironing a thermal adhesive.

The biggest value proposition comes from the reduction in labor requirements. Garments can be thrown down a chute and the reader can read multiple garments at the same time. The automation of the system and the elimination of manually reading bar codes allow hotels to dramatically reduce the amount of labor required to operate the uniform departments. There is also the question of improved accuracy over manual bar codes where scans can be missed due to human error (only about 80 percent accuracy on reads). Foundation Logic Systems’ Marv Tulman said, “You can place a large amount of garments or linens in a soiled hamper and the reader will identify and read all of the tags at the same time. Previously you had to read each of the garments individually.”

As these systems become more readily accepted, uniform manufacturers are starting to place the RFID tags in the garments prior to their arrival on property.

Automated Distribution Systems

One of the big drivers is the move toward automated uniform distribution systems. These systems allow the employees/associates to have access to retrieve and drop off garments from an automated secure rack at all hours of the day. Due to the system automation the potential savings associated with the elimination of redundant an unnecessary labor can be substantial. Depending on the size of the operation, one person can maintain the entire room facilitating repairs to clothing and maintaining the loading the racks etc. Invotech’s President Harvey Welles said that many hotels can get by with having a seamstress on hand for a couple of hours a week and letting housekeeping assist with the loading of the racks. The use of automated systems becomes particularly applicable during late night or after normal operating hours where traditionally staffing the uniform room has been a challenge.

Fred Mullinux, Autovalet, said, “The trend is that people are looking to shut down at night. Whether hotels or casinos use a uniform or bag system they need to operate from 8 p.m. to 8 a.m. without anyone being there.”

Benefits of Uniform Management Systems:

Management of Employees and Associates:
Employees are held accountable for the garments that are in their possession. Upon termination of their employment these garments can be tracked and employees can actually be billed or charged for items not returned.

Additional loaner garments can be tracked and the frequency that they are loaned can be identified, highlighting any abuse that might be occurring.

The system can ensure that your employees have the correct uniforms.

Return on Investment:
Reduction of lost garments. Savings resulting from knowing exactly which employees have which garments, and holding employees accountable for garments they lose.

Reduction in purchasing. Savings made by keeping the inventory at optimal levels and not purchasing more garments than needed.

Vendor accountability. Savings resulting from knowing which vendor has which garments, and holding vendors accountable for garments they lose.

Labor reduction. Savings through RFID-driven automation of uniform processing and accounting tasks. Customers report thousands of hours in reduced labor each year.

Reporting Analysis:
Analysis of inventory can help determine the correct quantities of garments and stock levels that should be carried. PAR Levels can be effectively managed and controlled. Properties can optimize their inventory levels, to employ just-in-time inventory management techniques and determine life expectancy of each garment. Excess inventories can be exported or sent to another property.

System Automation:
A reduction in labor costs provided by an automated drop off and retrieval of garments.

Interface to laundry systems and conveyor racks

RFID chips dramatically reduce the amount of labor required to scan the garments into the system

Ability to integrate into automatic storage and retrieval systems

Management of Vendors:
Provide accurate tracking of garments and linens to ensure accurate count being sent and returned from cleaners and suppliers. Issues with quality and damage to garments can be identified.

Streamlining the Cleaning Process:
Garments can be identified and sorted expeditiously. Garments can be tracked, leading to a reduction of lost items.

The cleaning time can be identified and managed.
Infrastructure / Design Considerations

Obtain a design and equipment specification brief from your provider in advance of the construction or remodeling efforts.

Ensure that all of the required low voltage communications cabling and infrastructure is determined and installed during the construction or remodeling of the room. Communications is essential to the successful deployment of these systems.

Work with the construction and design team to place the required equipment (workstations, RFID readers, garment/linen chutes etc.). It is imperative that the room design be considered well in advance of the equipment placement.

Make sure that the room flows from an operations perspective. Are employees able to drop off (and in some cases pick-up) their uniforms and garments after hours or without assistance?

From an integration standpoint, ensure that the conveyer rack and system are able compatible.

Work with garment and linen manufacturers to have the RFID tags attached or embedded during the manufacturing process so that they do not have to be attached at the property.

It should be noted that the upfront costs associated with the fully-automated systems can be considerably more than the standalone systems. However, the ROI returns are far greater due to the reduction in labor savings.

One of the added advantages of automated systems is the ability for those hotels who have limited employee locker room space (which is just about most hotels), to allow employees to store and retrieve their “street clothes” in their garment bags. Employees are able to retrieve their uniforms when they arrive on property from the automated system and once they have changed they can place their “street” clothes into their garment bags and store it back on the rack on the automated system.

The Green Initiative

Welles also highlighted the green aspect of these systems. While the earlier systems relied on a fair amount of manual reporting and hardcopy employee signatures, the newer technology allows these systems to be energy efficient and reduce the amount of hard-copy reporting that was typically required. Today’s systems use electronic signature capture and e-mail reports in PDF or other electronic formats. The reports can also be pushed to management staff on a scheduled basis. The result is that reports are only printed when required.

Linen Tracking

There has been a great deal of emphasis recently placed on the ability of hotels to now track their linen on a real-time basis using RFID tags embedded in the linen. Recently the LA Times reported that a company appropriately called Linen Tracker is using “high-frequency ID tags to pinpoint the location of every towel, sheet and pillowcase in a hotel.”

While most hotels are probably not going to place transponders at every entrance to the Hotel to thwart would be guests from removing towels and linens, they are placing them in linen rooms and store rooms in an effort to gain better controls over their inventories. Additionally tracking systems can determine the number of times that linen has been washed in an effort to determine its life expectancy and when it needs to be replaced. Tulman explained that with the average cost of high-end linen being around $20 per item, hotels are focusing on the overall replacement cost and inventory levels. Being able to scan their stock on a real-time basis allows hotels to manage their stock more effectively. Additionally they can identify how often the linens are being laundered and which brands have the best durability vs. price.

Uniform and linen inventory tracking systems allow hotels to know their uniform and linen status and availability at all times. In addition to having a dramatic impact on the reduction of labor, they also provide an effective and streamlined method of controlling and managing the overall BOH operation.

Most providers that we spoke with are focusing on providing solutions that will allow them to address all market segments of the industry. This includes providing lite versions of their applications and ASP-based options for those properties that are not able to make the initial capital investment or who are simply too small to host their own solution. Some providers also offer options to manage multiple locations from a single site. Given the operational advantages and potential savings that these systems could bring to hotels, resorts and casinos, organizations would be well advised to consider the benefits that implementing these systems could bring to their operations and bottom line.

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