

When the chips are down

RFID technology helps the hotel business fight back

In today's economic climate, recovery is tough for the hospitality and leisure industry. Help could be at hand, in the form of tiny low-cost 'smart' or 'passive' tags.

Radio Frequency Identification (RFID) tags can transform costly operational and logistics activities into 'touchless' processes, using wireless automation. Early adopters of the technology initially realised efficiency benefits linked to mechanical and/or repetitive processes. Hotels were among the first to recognise these types of applications in areas such as automating access to guestroom locks. But the potential for RFID goes much further than this, particularly once you start to exploit its ability to help gather real-time human activity data.

Today, the rapidly falling unit cost of tag technology is opening up new types of commercial opportunities. In particular, RFID has a great deal to offer the hotel and leisure sectors, in helping to meet the key challenges for business survival in a tough competitive landscape.

Although the hotel industry is reporting cautious signs of recovery, revenue-to-profit conversion rates remain lower than they were in the last years of the 1990s. As a result, profit per available room has fallen by over

€5,000 since its peak in 2000. Continuing global economic and political factors are also holding back recovery. The industry simply cannot afford to sit back and wait for the return of better times. It's time to be proactive.

According to the International Hotel Association (IHA), among others, the key factors that will determine the fortunes of the lodging industry into the next decade are:

- Technology and capacity control.
- Safety and security.
- Assets and capital.
- Human resources management.

There is significant potential to apply RFID technology in each of these areas, to help the industry return to a more healthy state and capitalise more effectively on its assets.

Capitalising on technology; improving capacity control

Many commentators believe that technology is shaping up to be the most powerful competitive advantage that hospitality firms

can have in the decade to come. Capacity control in the industry is increasingly negotiated through the interactive channels of the Internet, and hotel industry managers are well aware that if they are to successfully market their products and services they must navigate this virtual marketplace. Technology is already permeating customer services, information management and hotel design, and enabling the smart businesses to create alternatives to existing products and services. But the proliferation of interactive channels – the Internet, mobile phone-based services and global reservations – also means that the hospitality industry is losing control over how its inventory is marketed and sold.

Retaining customers and encouraging a return to direct bookings are increasingly important to hotel and leisure operators who want to remain in control of their own inventory and improve RevPar. So how can RFID help?

At its simplest level, RFID has obvious supply chain and logistics applications, such as tracking employee uniforms through the laundering process. Efficiencies and improvements in inventory management are also possible. For example, a number of amusement parks are already introducing central inventory management, supported by RFID tracking. The whole process of ordering, procurement, delivery tracking and storage can be substantially speeded up and automated by introducing basic tag technology.

But perhaps the greatest opportunity for RFID to add value in this area is in enhancing the customer experience. Because they can be used to automate and collect real-time individual data, RFID tags will enable mass customization of customer services. As a result, hotel and leisure operators will be able offer highly targeted preferential treatment, special loyalty perks or other loyalty rewards during the service delivery process. For instance, using smart

tag room key-cards or wristbands a hotel could join forces with a theme park to offer park entry at preferential rates and simplified payment.

Behind the scenes, using RFID tags will drive sales by providing yield management systems with real-time data during operational activities. Repeat customers will be able to re-use their smart tag key-cards or wristbands, or have them replaced at kiosk machines in and outside the theme park, to pay for admissions or re-charge their pre-paid credit. The smart tag could be programmed with the customer's preferred language when using any reader. Any remaining credit could be used during future visits... the possibilities are endless. It's easy to envisage similar RFID applications in the convention, resort, gaming and other industry sectors.

RFID technology is already being used by a number of pioneering leisure operators worldwide. One Illinois theme park gives its guests smart tag wristbands that act as secure admissions tickets that can not be counterfeited. The wristbands are used for cashless payments throughout the park and for access control to rides and attractions. The park has found that this cashless payment feature leads people to spend more during their visits and also saves staff time in balancing and cash management.

Improving safety and security

Today's travellers are increasingly confronted with potential risks to their personal safety and health. As a result, they are looking for hotel and travel operators to give them greater protection and peace of mind. On the other hand, regulatory pressures like the new EU food traceability directive and the US Bioterrorism Act are also weighing on the industry. RFID tags or smart labels can offer valuable benefits in safeguarding customers' health safety, as well as supplementing existing security measures. In the food industry, RFID tags are used to automate the tracking and monitoring of food supply chain history from field to fork, including itemising individual ingredients

used during a product's processing. Extending this tracking through to hotel and leisure catering operations is an obvious next step. The business case is clear, in terms of much improved stock rotation, ability to react to product recalls and regulatory compliance.

Ensuring that food supplies and other consumable products are properly monitored and utilised is a key element of the customer service experience. Using the hotel cruise ship business model as a case in point, food safety (e.g. fresh produce, perishables) and product recall (e.g. medicine) are particularly critical, due to the closed environment during long sea voyages. Here, customers do not have the luxury of finding alternative sources if food supplies become contaminated, spoiled or have to be recalled. Similarly, if customers need to buy non-prescription drugs, they have no alternative but to visit the ship's pharmacy. Using RFID may prove beneficial with cruise ships that target the older market segment, helping them to identify any particular dietary restrictions or medical prescriptions.

RFID tags can also provide cost effective extra security measures to enhance customer safety and public monitoring. In today's world political climate, hotel enterprises walk a delicate line between ensuring their customer's safety and not frightening customers with heavy-handed security measures. RFID technology can quickly differentiate resident guests from other types of visitors trying to access designated private or restricted areas of a hotel. As memory capacity continues to increase, imaging data files will enable biometric information to be captured, so front office check-in or security staff can match the guest's appearance with the image as stored on the tag.

Making more of assets and capital

Increased economic developing in emerging regions such as China, Eastern Europe, India and most of South America is leading to intense competition for capitalisation.

The result is likely to be worldwide rationing of private capital, increasing pressure in the hotel industry to leverage real estate and re-finance existing debt.

At the micro level, RFID can play a part, helping to safeguard assets and inventories. In a luxury resort, for instance, hundreds of thousand of dollars or euros-worth of assets – from valuable paintings to high-end furnishings, electronic equipment to fine china and silverware – are scattered across the premises. Using smart labels on these items, the hotel has a hidden, silent partner keeping 24/7 watch and instantaneously detecting any unauthorised movements.

Smart tags can also be used to help with maintenance and auditing activities: making sure that revenue-generating equipment, as well as lower value items, are in the right place and helping staff keep track of any items that need to be serviced, repaired or replaced. One huge 24-hour casino in Australia, with over 352 guest rooms and a large apartment complex, uses smart tags to track over 80,000 employee uniforms that have to be laundered after each use. Smart tags sewn into each outfit have greatly reduced lost or stolen garments, improved tracking and correct storage, as well as reducing laundry bill discrepancies.

The people factor

By definition, the services industry is a 'people business' resulting in significant costs being spent on human resources. As the industry matures, new skills are also required, such as an increased focus on brand, safety and security, and capital movement.

Using RFID in the HR context needs to be carefully managed, to ensure that staff do not feel threatened or overly controlled by the technology. Careful explanation of the reasons behind using tags and the benefits to the employees, as well as to the management, is essential. However, if introduced sensitively, RFID can have a significant impact on HR monitoring, utilisation and flexibility. Tags can be used to help match staff resources to

operational needs in real time, creating measurable productivity improvements. Even more positively for staff, tags can help with the delivery of incentive and reward schemes. For example, a member of staff signing off at the end of his or her shift using their smart tag could receive a message from the senior management thanking him or her for exceptional performance and productivity during that shift.

Next steps on the path to RFID

RFID offers so many potential opportunities to hotel and leisure businesses, from reducing operational costs to providing real-time resource allocation and enhancing safety and security. However, it is important to stress that RFID is simply an enabling technology: organisations will not 'install' RFID as such, but most will begin by choose from the massive range of RFID-enabled applications to help their business. This means that successful implementation of RFID applications – particularly where multiple systems are involved – depends on constructing a coherent 'RFID ecosystem'.

This consists of:

- **RFID layer:** the RFID foundation layer, including RFID tags, readers etc.
- **Enterprise application and system integration (EAI) layer:** at its core, database structures and middleware will need to be enhanced to handle the influx of the data.
- **Business process (BP) layer:** this layer should ultimately drive the decision to deploy RFID within the organisation. This is the layer at which competitive advantage will be won or lost.

In addition, the value of RFID increases depending on the number of users of the system. So, for example, the initial implementation could be restricted to the four walls of a hotel building; the second

phase could be extended to the total amusement park property; whilst the third phase could include partnerships in the retail supply network.

To start the process of transforming some of these ideas into practical actions, we suggest that hotel and leisure businesses:

- Start by assembling a project team, spearheaded by staff members involved with direct customer contact and/or revenue centres. This team must first identify the organisation's value drivers and then develop the business case for implementation. RFID suppliers can also be contacted at this time. If the team identifies enough potential benefits, they can develop a project plan identifying key factors such as the resources and infrastructure required, testing/pilot project phases and the implementation time frame.
- Identify phases to implement RFID systems. Baby steps help in controlling project budgets, minimising interference with existing operations, and measuring and evaluating return on investment (ROI). A well-developed implementation schedule should ultimately help the organisation drive processes, alleviate negative staff perception and reduce interference to internal IT systems.
- Consider developing and implementing 'mass customisation' strategies that involve collecting customer data at various touch points during the service delivery process.
- Develop strategies that do not capture immediate benefits from RFID tagging, but also allow long term operational flexibility in future innovations. ●

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