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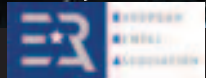
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RFID or not?

Now more than ever, rental companies are under pressure to reduce costs and increase margins. But as well as going through the obvious cost-cutting exercises of reducing payroll and eliminating discretionary spending, the smart rental companies are taking a fresh approach and realising that by taking control of the assets they have, there are significant cost savings to be made.

Using a combination of the latest technologies - RFID (Radio Frequency Identification), GPS, mobile computing and web-based applications - presents the opportunity for rental companies to track assets anywhere in real time, prevent losses and theft, deploy rental equipment more effectively and invoice customers more accurately. And in a highly competitive industry where margins can be tight, it could make all the difference.

Let's explore in more detail how, implemented properly, RFID based asset management can meet the needs of today's cost-conscious rental industry.

Where are we now?

RFID technology has been around for many years with the automotive and defense industries quietly and successfully using RFID over the last decade to track and manage their assets. However, the real buzz around the mainstream use of RFID technology began in 2003 when Wal-Mart, the world's largest retailer, mandated the use of RFID for their top 100 suppliers. This created intense media interest in RFID because it was Wal-Mart who had also pioneered the global use of barcodes back in the early 1980s.



Scanning of an encased tag on a crane.

Following the Wal-Mart mandate, much expectation was placed on the shoulders of RFID technology and subsequently a lot of money was spent based largely on hype. Compounded by the fact that at this point RFID was an unproven technology in most industries, it was bound to trip up.

The automotive industry took the right approach. Slowly introducing RFID technology to tag and track the expensive, reusable containers used in its supply chain. Seeing significant payback, the key players within the industry expanded the program to track automotive parts along the assembly line.

Slow to adopt, but gaining acceptance

RFID was seen as expensive in the early days, which clearly hindered its acceptance. The technology has come on in leaps and bounds; tags now work reliably around metal and the varying footprint and robustness of the latest RFID tags means they lend themselves to be hidden in and attached to equipment that was never possible before.

Moreover, RFID is gaining acceptance and

growth within new industries and in specific applications such as equipment rental because value-add resellers have built solutions around the technology, offering a complete solution or service rather than just a piece of technology.

For example, in the case of my own company, 4hSolutions, we offer our Assettagz RFID-based solution integrated with the COINS construction management software to maintain, track and get visibility of tagged assets.

RFID asset management - how it works

- Assets are tagged using a range of RFID tags including weld-on, adhesive and key fob style.
- Tagged assets are scanned and instantly identified using a handheld device. Inspection results and On/Off Hire transactions can be captured in real-time.
- The handheld device synchronises with a Web hosted database. Data is immediately updated and available via the Internet to authorised people.

“The audit trail that our RFID solution provides has encouraged staff to act responsibly and with accountability, and has significantly contributed to the 50% reduction in the number of lost or stolen assets we have seen in the first 12 months.”

Matthew Preston, Byrne Group

Benefits of RFID for rental

A REDUCTION IN COSTS

■ **Fewer lost assets** - RFID allows users to track all asset movements and get total visibility of their assets. Since all transactions are recorded in an event log and delivery notes are generated electronically there is a complete audit trail.

“The audit trail that our RFID solution provides has encouraged staff to act responsibly and with accountability, and has significantly contributed to the 50% reduction in the number of lost or stolen assets we have seen in the first 12 months.”
Matthew Preston, Byrne Group

■ **Fewer re-hires** - optimising on-hire rates for existing equipment reduces the need for re-hires from external companies.

■ **Lower administration costs** - automation of processes reduces headcount and logistics resources.

■ **Fewer errors** - eliminating the manual entry or re-keying of data removes the risk of human error that can cause delays, lost revenue and adversely affect customer service.

INCREASED EFFICIENCY

■ **Accurate, real-time data** - the accuracy and speed at which the data is recorded means that there is no issue with manually maintained, out of date inventory.

■ **Improved utilisation** - tracking all On/Off Hire transactions in real time ensures equipment use is maximised.

■ **Better decision making** - access to accurate asset utilisation rates, maintenance records and service history improves procurement decisions on asset inventory and new purchases. In some cases customers have been able to

make significant reductions in their inventory without impacting on their ability to meet contractual requirements.

■ **Eases inventory management** - with automation comes the ability to track and manage individual items, ensuring that demand can always be satisfied without excess expenditure. Even stock-taking is quicker as it can be completely paperless.

IMPROVED CUSTOMER SERVICE

■ **Quality and speed of requisitions** - improving the speed and accuracy of requisitions to and from customer sites improves customer service and reduces costs.

■ **End customer visibility** - giving customers visibility of requisitions and delivery timescales improves customer service and can give you a competitive differential over your rivals.

■ **Accurate billing** - RFID technology keeps track of On/Off-hires in real time so you can be sure billing is accurate.

Accuracy in billing reduces friction between the rental company and the customer. RFID enables companies to keep track of the entire hire process transparently so there are no surprises or disputes at the end of the project.

REGULATORY COMPLIANCE

■ **Inspection safety** - tracking maintenance schedules and carrying out inspections of rental equipment in the field ensures only equipment that is safe (i.e. has been inspected and passed) can be issued for hire.

■ **End to end audit trail** - having an audit trail for the issue and return of tools and for the inspection, maintenance and hire history of the asset aids Health & Safety compliance.

RFID vs barcode

Asset management is compatible with both Radio Frequency Identification (RFID) and barcode technology. However, careful thought and consideration should be applied when deciding on the correct tagging option for your environment and business application.

Manually locating and scanning bar codes that can also be easily damaged and tampered with can prove costly and time consuming.

In addition to being more durable, RFID tags are also reusable, making them a reliable and cost effective solution. For higher value, critical assets that require tracking, tracing, authentication and security, RFID tagging is a far more robust and reliable option.

Two examples of hand held readers, one from Motorola and the other from Psion.



ADVANTAGES OF RFID TAGS OVER BARCODES:

■ **Robustness** - RFID tags are much more robust and can withstand harsher environments than barcodes, operating in temperatures ranging from -25° C to 70° C.

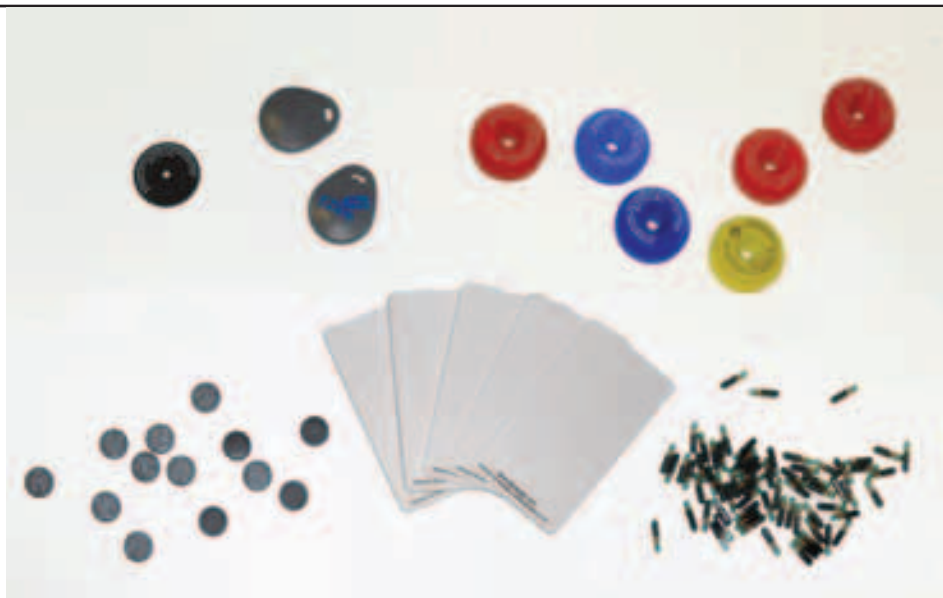
■ **Size** - RFID tags range in size from a postage stamp to a book. The aspect ratio of an RFID tag's length versus width is very flexible and not a significant factor for the Reader. Barcodes are larger than the smallest tag and very sensitive to the aspect ratio for scanning.

■ **Readability** - RFID tags offer a range from centimetres to hundreds of metres and can be read through many materials including dirt, paint, grease, snow and even metals. In addition they do not require direct line of sight, unlike barcodes. Some RFID tags also have an anti-





RFID tags can store data relating to health and safety inspections.



Clockwise from top left: coin tag with hole, Keyfob tags, Intrinsically safe tags, Glass tags, Plastic credit card tags, Stick-on tag.

- **Automatic updates** - certain RFID tags can have on-board memory that can store information, such as calibration history and preventive maintenance data, and updates can be made automatically without human intervention. Once a barcode is printed it remains static.
- **Traceability** - The combination of a unique identification code, user data, serial number and on-board memory makes it possible to track, recall, or document the lifecycle of a single item. Barcodes are limited to an entire class of products and unable to drill down to a unique item.

Is RFID right for my business?

Rental companies, along with the rest of us, are still suffering in the current financial climate and any investment in IT will clearly be scrutinised very closely for payback potential and cost savings. It is no wonder that they are skeptical about investment in what is seen as 'new' technology at this time.

Questions that need to be asked when balancing the spend on RFID are:

- Do you know where each and every one of your assets is?
- Is every asset being used to its maximum capacity?
- Is the turnaround for hire as quick as it can be?
- Do you know which contract the asset is on and at what point it is returned in real-time?
- How much administration and paperwork can be removed from the process by using automation?
- Do you know the real-cost of maintaining your assets?
- Is the asset safe for hiring?

These costly issues and processes can be reduced or even eliminated through automation.

RFID must be applied in a balanced way that takes into consideration a company's objectives, without being carried away by the hype of RFID. Here are two key company-wide considerations that will determine success:

Consider your key business indicators: Look at the overall business, the rental industry at large and existing technology options. RFID offers significant potential benefits, but you must consider the entire picture of your organisation in order to see the greatest benefit.

Consider your business processes: RFID is not an

IT issue. It is a company-wide opportunity. Business processes will and should shift. Automation will and should occur. People's responsibilities and knowledge must change. New methods of analysis may be employed and new data may even shift the way that your company measures success. Capitalising on RFID investment requires a shift in thinking, and making (albeit) simple changes to the way things are done today.

RFID - who could benefit the most?

The applications where RFID is the best choice are critical assets that require tracking, maintenance, authentication and security. Items where 'line of sight' scanning isn't possible are ideal candidates for RFID. And anyone operating in harsh environments such as construction, equipment rental or rail locations can reap the benefits of durability and robustness.

Further advantages can be experienced from electronic documentation that is instantly available via the Internet. In addition, the health and safety benefits of a fully automated and transparent system can be significant to both the hire company and its customers.

Conclusion

Start small - use RFID tags in one area first and start the culture change of using handhelds instead of paper. Track, measure and document benefits and roll out to other areas of your business step by step.

Depending on the size and requirement, different companies will reap different benefits from RFID. For some, reducing theft and losses and making an immediate impact to the bottom line will be the key drivers.

For others, having access to key information to aid better management decision will be the driving force. Ultimately though, it all equates to significant cost savings, and in a highly competitive industry where margins can be tight, it could make all the difference.

Implementing RFID-based asset management is challenging and requires both creative vision and careful execution. But nothing worthwhile - in life or in business - is without its challenges. And, when properly approached, that little RFID tag just might be a catalyst that takes your company into a state of profitable bliss.

IRN