RFID Asset Management Solutions

Business challenges

Companies across a broad spectrum of industries rely on critical assets to drive their business. Manufacturing companies rely on equipment availability and uptime to keep production lines moving and meet production goals. Transport companies rely on fleets and containers for timely cargo delivery. Financial services companies depend on computer and networking systems to manage transactions and keep customer data secure. And while the asset types across industries may be varied, there is still a common need for effective management.

Any item that is a part of the work process but does not leave as part of a finished product is a candidate for intelligent asset management with RFID. RFID can help enterprises automatically track and secure these assets — with very little human intervention. This real-time technology takes asset management to the next level, providing unprecedented visibility, accuracy and security. With RFID, companies can automatically keep track of key assets as they move in and out of an area — whether it's a stock room, airport hangar, data center, or transport terminal. With clear visibility into asset status and location, companies are more likely to perform regular and necessary maintenance — from software upgrades to lab equipment calibration.

Fixed readers can be strategically located throughout the facility to automatically track the movement of tagged equipment in and out of buildings, rooms, or other sectors. Equipment movement can be automatically correlated with employee identification — enabling secure and automated asset check out from stock rooms and tool cribs. In addition, RFID can automatically alert supervisors of any attempt to move a tagged item from an authorized area, providing protection against security breaches and asset loss.

RFID also automates inventory counts, providing a complete, accurate snapshot of asset status in a mere fraction of the time it would take to conduct a physical manual inventory. To track assets with RFID, tags are attached to all assets — from servers, racks, and laptops to office chairs, carts, and kegs. To take inventory, an employee can simply roam the facility with a handheld RFID reader or a mobile RFID reader on a cart — there's no need to properly identify the asset, locate a bar code, and scan each asset one by one. Without the intensive labor, companies can afford to replace the annual audit with weekly or even more frequent inventory counts. And RFID's automation eliminates the costly errors associated with manual inventory, including missed or mis-categorized assets. The result is an up-to-date accurate picture of asset status as frequently as needed to best manage the business.

"The results have been dramatic: use of consumables such as gloves and batteries is down; the repair history of each tool can be tracked; the cost of materials is now shared by more than 25 departments according to their actual usage; and the 'always-open' stockroom allows more efficient use of people's time."

John Lottis
Vice President
Bassett Industries, Inc.

Wah Chang — automated asset management for manufacturing tools

Challenge

For manufacturers, a tool or parts crib is essential to the manufacturing process, where employees can find indirect materials like tools that are crucial components in their daily workflow. For Basset Industrial's long-time customer, Wah Chang, the tool crib also represented a major challenge in operations.

A producer of specialty metals, Wah Chang relied on a manual system for monitoring their stock room. And as a result, items weren't always checked in and out properly. The company manned the stock room during only one shift — forcing employees to find a supervisor to gain access whenever a tool was needed outside of regular hours. This not only disrupted a supervisor's workflow, but also created considerable delay in the manufacturing process. And with more than 25 departments sharing a single stock room, Wah Chang did not have sufficient data on departmental use to budget accurately.

Solution

Basset Industries, in partnership with Motorola RFID partner Winware, implemented an automated RFID portal system for Wah Chang's tool crib that incorporated automatic employee identification for access control purposes. With RFID implementation, Wah Chang realized several benefits:

- Increased cost savings with the reduction in overall use of consumables, such as gloves and batteries

- Improved tool maintenance and optimization as the repair history for each tool is now automatically tracked and recorded

- Increased efficiency and employee productivity — employees can now access the stockroom at any time without supervision

- Improved departmental budgeting as each of the 25 departments can now share material costs according to their actual usage

Virgin Atlantic Airways — asset management for serviceable aircraft parts

Challenge

Virgin Atlantic Airways launched a pilot RFID program at Heathrow Airport in London to track their inventory of serviceable aircraft parts. As a spokesperson for the airlines said, "Traceability is an enormous concern because the time spent locating

parts is an added expense for the airline." And in the highly competitive air-travel market, asset accuracy, timely maintenance and accountability are critical to success. Virgin Atlantic looked to RFID to help increase operational efficiency in servicing aircraft; reduce risk in the spare parts supply chain; and improve the ability to comply with the European Aviation Safety Agency's guidelines regarding traceability and authenticity of airline components.

Solution
Oracle and Tata Consultancy Services deployed an RFID solution using Motorola's MC9000-G RFID handheld readers to service aircraft parts as they passed through the company's Heathrow warehouse. Employees can now locate and identify needed items in the warehouse by simply scanning the RFID tags located on containers or bins. According to Graham Holford, senior system analyst at Virgin Atlantic Airways, "The trial received positive feedback from the users involved, as well as offering some measurable benefits. We were able to demonstrate that, should the RFID/mobile technology processes replace Virgin Atlantic's existing ones, then task time would be substantially reduced." Benefits realized include:

• Ability to quickly and easily locate the right part at the right time

• Availability of additional data, such as the length of time certain items have been in the warehouse

Canadian National Railway Company (CN) — asset tracking for truck chassis
Challenge
CN Rail deployed an RFID-based asset tracking system at its Brampton, Ontario intermodal terminal. The largest of its kind in Canada, the Brampton terminal is a flurry of activity, with intermodal containers in transfer around the clock to and from rail and trucks. The company previously relied on a manual system for recording chassis identification numbers — resulting in data errors and difficulties trying to pinpoint the status and location of a specific chassis. In addition, the company also wanted to lease chassis to customers as a new service, but was concerned about the ability to track and manage these high-dollar assets.

Solution
With an RFID solution provided by Bell Canada using Motorola RFID products, CN is able to automatically and accurately record identification numbers as chassis pass through the Brampton entry and exit gates. Said Remy Benmiloud, CN Manager IMX (intermodal excellence), "Since the implementation of this RFID solution, we have experienced near-perfect read rates with readers and tags, which has resulted in increased efficiency of our chassis fleet, improved productivity and cost savings." In addition, RFID prevents asset loss, enabling CN to easily track and manage loaner chassis. And the success of this implementation already has the company examining future applications for RFID to further leverage this valuable technology. CN has realized several benefits from their RFID-based asset tracking system, including:

• Increased visibility of asset status and location

• Reduced asset loss

• Improved productivity and supply chain efficiency

Motorola — automated asset management for test equipment
Challenge
Motorola engineers in the Global Products Group rely on a wide range of over 3,000 pieces of high-value test equipment, including gauges and oscilloscopes. The completely manual tool management process required engineers to request a tool through a supervisor, who would then access the tool crib for the needed piece of equipment. Depending upon the supervisor's availability, engineers could wait, minutes, hours or sometimes an entire day to obtain access to the needed tools. In addition, since tracking information was logged manually into a spreadsheet, frequent data entry errors and omissions led to poor asset visibility — equipment was often lost; high-value engineers lost what should have been productive working time to locate needed equipment; and Motorola often resorted to purchasing or leasing a replacement to ensure that engineers had timely access to mission-critical equipment — all are workflows which negatively impacted customer service.

Solution
To resolve these issues, Motorola and RFID partner WinWare, implemented an automated RFID-based asset management system consisting of stationary readers at the entry and exit points of the tool room. This system automatically reads and correlates equipment tags with employee ID badges, eliminating the need to keep the tool room managed at all times — the system provides a

completely accurate and up-to-the second history of who has which tools, when tools were checked out and when service was last performed on the tools. "One of the biggest hurdles the system has solved is getting access to equipment that is already checked out of the tool crib," explained Ray Madaia, Manager of Engineering, Engineering Shared Services, at Motorola. "Now we can identify the person who has the piece of equipment, and email or call him. And if a tool needs scheduled, routine calibration, we can alert the person who is using it."

Recent improvements include the deployment of RFID-capable handheld mobile computers, which enables employees to program a tag or assign a new one without removing the tool from the shelf.

This system has delivered numerous business benefits, including:

- Maintaining required security while enabling self-entry into the equipment room — saving an estimated 10 to 17 man hours each week

- Increasing productivity by enabling rapid access to needed test equipment

- Enabling accurate tracking of the issuance and return of test equipment

- Improving inventory accuracy for engineering test equipment

- Ensuring adherence to test equipment calibration schedules

- Reducing costs by eliminating rental or purchase of duplicate equipment

RFID solutions and benefits:

Diverse companies have deployed successful pilot and first-stage implementations of RFID applications for asset management with tremendous success. Regardless of what type of asset you use in your business, RFID can automate and error proof this critical business process, delivering a wealth of benefits to the enterprise:

- Increased productivity — employees spend less time tracking down missing or misplaced equipment

- Improved asset maintenance and assured adherence to critical and routine maintenance procedures such as calibration

- Secure, around-the-clock access to stock rooms for improved efficiency — without human intervention

- Increased utilization — improvements in asset visibility and utilization reduce the need to purchase or lease spare parts and equipment

- Reduced capital and operational costs — the reduction in the loss of assets reduces the need to purchase and manage additional assets

For more information about how RFID can help your organization improve asset management, please visit us on the Web at www.symbol.com/rfid or access our global contact directory at www.symbol.com/contact

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