

# Plant Services

# 2010 BEST PRACTICES AWARDS

## MANAGEMENT

The Plant Services Best Practices Awards recognize management techniques, work processes, and product and service implementations that exemplify the definition of a Best Practice according to the Society of Maintenance and Reliability Professionals (SMRP):

“A process, technique, or innovative use of resources that has a proven record of success in providing significant improvement in cost, schedule, quality, performance, safety, environment, or other measurable factors that impact the health of an organization.”

Entries must demonstrate how to implement a best practice, show the potential payoffs in both qualitative and quantitative terms, and provide inspiration for those who must overcome cultural inertia and make effective changes. Entries may be submitted by plant personnel, vendors, engineering firms, consultants or anyone who is familiar with the application and has permission to make it public knowledge. Our categories also include Equipment, Reliability, and Energy Efficiency, but this round's focus is on Management.

Every contender offered an impressive management

practice that can increase productivity, improve efficiency, or reduce costs. Judging criteria included percentage reductions or cost savings, return on investment and broadness of applicability, with recognition given for innovation and creativity.

The winning practice was submitted by Matthew Preston, director, Byrne Group PLC, and Kate James, marketing manager, 4H Solutions. The concept of using RFID to track assets, tools, and materials is no longer new, but Byrne overcame significant challenges by implementing it on a wide variety of items, many of which are mobile, over a large geographical area. Add in the fact that they tagged virtually everything and everyone, and the challenge of a long history of doing things the old-fashioned way, and Byrne Group's successful implementation won the votes of our judges to become this round's Best Practice in Management.

More information about this round's entries, past entries and winners, how to enter, and the Plant Services Best Practices Awards in general may be found at [www.PlantServices.com/bestpractices](http://www.PlantServices.com/bestpractices).

## CONTENDERS

### VIDEO GAME TEACHES RELIABILITY LESSONS

ABB turns entertainment into training in the Reliability Challenge video game. The interactive maintenance decisions reveal how choices affect customer satisfaction, equipment effectiveness, morale, and profit. It highlights the dangers of firefighting and unplanned maintenance. Employees compete against one another for the bragging rights to the top score while increasing their maintenance knowledge and validating expertise. The ROI is infinite: a free training exercise that requires little time, develops new workers, offers training for plant personnel, and gives an understanding of reliability basics that can be applied immediately.

[www.abb.com/service/us/9AAF0000112.aspx](http://www.abb.com/service/us/9AAF0000112.aspx)

### PHONE SYSTEM AUTOMATES VERBAL COMMUNICATIONS

The 4,000 employees at Bosch Limited, Adegodi, Bangalore, India, manufacture automotive fuel injection equipment in six buildings. The maintenance crews were always on the move and unable to access the system as frequently as desired, which caused delays in reacting. After an SAP implementation, the plant realized that oral communication was still needed. So, it installed digitally enhanced cordless telephone (DECT) and mobile phones to communicate breakdown information quickly. It used the paging functionality, and leveraged and customized interactive voice response technology for automatic transmission of voice messages

over mobile phones. The mean-time-to-repair dropped from 4.84 hours to 3.39 hours, a 30% decrease in the two years. The enhancements to the plant's existing communication system cost 750,000 Indian Rupees (\$16,000).

[www.boschindia.com](http://www.boschindia.com)

### OIL FILTER YIELDS 400% ROI

Färjerederiet is a common carrier in Borlänge State, Sweden. When it began using rape seed oil in its engines, it ran into problems because this oil is more hydroscopic than mineral or synthetic oil. After investigating different filters, Färjerederiet installed units manufactured by Europafilter, Göteborg, Sweden. The filter element removes water and 0.1-micron particles. After four years with no oil change, there was no need for engine repair and the engine was still in like-new condition. The increased interval saved 100 oil changes (50 liters each) each year for a cost of about 120,000 Norwegian Kronas (\$20,000), giving a ROI to date of 400% and pay-back time of one year. The engine has operated for more than 30,000 hours without an oil change. It needs five liters of oil each week and the engine is still in good shape. Since 1998, the engine has used about 900 liters. Consumption would have been about 4,000 liters. In the aggregate, Färjerederiet uses 78,000 liters of oil each year. Simple math implies this consumption could be reduced to less than 20,000 liters.

[www.energiokonomi.no](http://www.energiokonomi.no)

# RFID EMPOWERS MOBILE ASSET MANAGEMENT

**Taming tools and materials promises five-year cash flow of \$350,000**

With more than 1,300 items of plant, tooling, and equipment, UK construction services company Byrne Group addressed its processes to improve profitability and customer service. Working with 4hSolutions and COINS, it addressed the management and control of Byrne's assets.

It had already established a consolidation center in Mitcham, South London. The seven-acre facility is a hub that provides plant and materials, and warehouse and distribution facilities to most of its construction sites. Asset tracking for portable appliance testing (PAT) and other maintenance processes was performed manually and was labor-intensive. Each year, more than 3,200 individual job cards were processed at a cost of about £33 (\$50) each. There was no effective theft deterrent, resulting in about £100,000 (\$153,000) worth of tools lost or stolen each year. In addition, the Mitcham site lacked a robust method for tracking tools once stores issued them. There was no accurate way to know what was where, and when or if it had been returned.

The situation with requisitions wasn't much better. It was paper-based via fax and telephone, resulting in requisitions being misplaced or misinterpreted. Every engineer and foreman had their own way of describing what item they needed, which then required an interpretation back at the consolidation center. And consumables – timber, fuel, and stock items such as personal protective equipment and signs – showed no record of ever having been requisitioned.

Combining the COINS Plant Manager module to automate the issue and return of Byrne Group's plant, stock, and equipment with Assettagz's radio frequency identification (RFID) technology made it easy to manage, track, and get visibility of these assets.

A variety of RFID tags were used. Bins containing stock items were labeled with plastic credit-card-sized tags. Tools got glass tags. Lifting gear had molded plastic tags attached with steel cable. On August 1, 2008, Byrne issued Assettagz RFID-enabled ID cards for every staff member at Mitcham. These ID cards are used in conjunction with handheld computers to track any equipment issued to the staff.

Phase two was to improve the plant and stock procurement process via the COINS e-catalog. Byrne used COINS



Tagged assets can be instantly scanned and identified using handheld computers.

Plant Manager to e-catalog its plant and stock.

Byrne Group's new integrated requisition and asset management process featured several useful improvements. The Hire Desk in the consolidation center processes requests using COINS. COINS generates the pick lists, which the Assettagz Web application passes to the RFID-enabled handheld computers in stores. Stores use Assettagz to identify and pick the required items using handheld computers.

Stores also use Assettagz to record the results of inspections and to ensure that certification is up-to-date. After picking, a dispatch is generated, the "on-hire" is confirmed, and a delivery note is generated.

The logistics department collects material from the consolidation center and delivers it to where it's needed. The site staff uses RFID-enabled ID cards to assign equipment in and out. Once an item is no longer required on-site, the site foreman generates a return request and the logistics department collects the material and returns it to the consolidation center. Once the item is returned, Assettagz identifies it, tags it as "off-hire," and the automatically updates COINS.

Using Assettagz to track maintenance schedules and perform equipment inspections in the field ensures that only inspected equipment is requisitioned. Having an end-to-end audit trail for the issue and return of tools and for the inspection, maintenance, and hire history of the asset aids health and safety compliance.

Improved customer service comes from better quality and speed of requisitions to the site. The end users have visibility into the requisition and delivery timescales.

Ultimate benefits include control, accuracy, and profit. The bottom line is an 87% reduction in job cards processed at Mitcham with data now recorded at time of test. Theft was reduced by an estimated 50% and the investment paid for itself within one year. In fact, it's expected to produce a £229,000 (\$348,999) positive cash flow within five years. ©