ASSETTAGZ

A mobile asset management solution incorporating RFID technology for the Byrne Group

Introduction

A difficult financial climate has put the Construction industry under real pressure so for successful companies like Byrne Group to maintain their growth, they need to find new and better ways of working to win new business and drive down costs.

The Group had already established a consolidation centre in Mitcham, South London and was one of the first in the industry to do so. The seven-acre facility serves as a hub to provide Plant and Materials, and Warehouse and Distribution facilities to most of their construction sites.

With over 1300 pieces of equipment, Byrne now recognised deficiencies in their processes that, if addressed, could improve profitability and customer service. After a careful selection process, Byrne began working in collaboration with 4hSolutions and COINS to develop a solution to address the management and control of their assets.

"Byrne Group believes that through collaboration, there are always different, better, safer and more cost effective ways of doing things; lateral thinking is never far from the agenda if it means faster, more efficient delivery of the project."

The solution

An integrated solution combining the COINS Plant Manager module to automate the Issue and Return of Byrne Group's Plant, stock and equipment, with **Assettagz** RFID (Radio Frequency identification) technology to manage, track and get visibility of these assets.

The bad old days

Asset management

- **Portable Appliance Testing (PAT) and Maintenance processes were manual and labour intensive** - over 3,200 job cards were processed per annum

- **No effective theft deterrent in place** – approximately £100,000 of tools were lost or stolen per annum

- **Re-hire from external Plant companies was taking place** – due to poor asset management of owned Plant

- **No robust method for tracking tools once issued from Stores at Mitcham** - no accurate method of knowing exactly what was where and when or if it had been returned

Approx £100,000 of items were lost or stolen every year

Over 3,200 job cards were processed per annum with an average value of £33

Requisition

- Paper based (fax/telephone) requisitions were misplaced or misinterpreted.

- Every engineer and foreman had their own way of describing what was needed which required interpretation back at the consolidation centre.

- Essential associated items - consumables such as timber and fuel and stock items such as PPE (Personal Protective Equipment) and signs - were never requisitioned.

Moving forward...

Phase one – creating the asset register using Assettagz

Byrne approached the project in two phases, the first of which was to get visibility and take control of their assets. Byrne undertook a 12 month process of tagging all their Plant, tools and equipment to create and maintain an accurate asset register using **Assettagz.**

A variety of RFID tags were used: Bins containing stock items such as PPE were labelled using plastic credit card tags, tools were tagged using glass tags, and lifting gear used moulded plastic tags attached by steel cable.

On August 1st 2008 Byrne also introduced **Assettagz** RFID enabled ID cards for every member of staff at Mitcham. The ID cards are used in conjunction with the handheld computers to assign equipment in and out to staff.

Stock bins were labelled with plastic credit card tags

The **Assettagz** web hosted application in use at the Mitcham centre

How Assettagz works

Figure 1. Assets are identified and tagged using a variety of RFID tags

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

Figure 2. Tagged assets can be instantly scanned and identified using **Assettagz** handheld computers

Figure 3. **Assettagz** software allows Byrne to manage inspection schedules for each asset, capture inspection results in the field (as seen below) and track assets through the On-hire/Off-Hire process

Figure 4. The handheld computers synchronise with the web hosted database

"Itemising everything in the COINS e-catalog and creating an asset register meant a lot of work upfront, but it is already paying off as we can react quickly to tenders and projects as we know what equipment we have and what needs to be bought in."

Phase two - The COINS e-catalog

Phase two was to improve the Plant and Stock Procurement Process. Using COINS Plant Manager, Byrne set about cataloging all of their Plant and Stock to create an e-Catalog.

Figure 5. The COINS e-catalog is simple to use and searching for Plant & Stock items is quick and easy
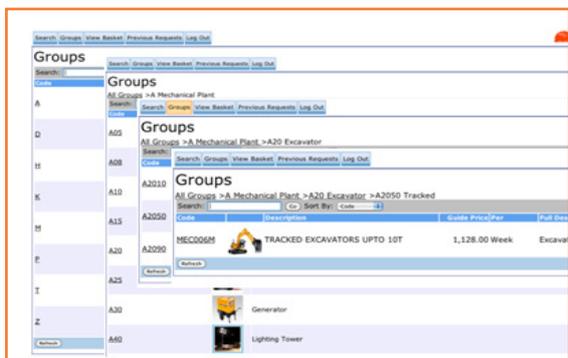

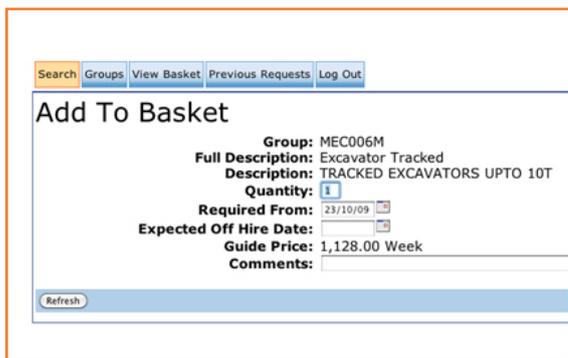Figure 6. Select an item by simply adding it to the basket

Figure 7. Associated items are linked in with major Plant items, including: Consumable items (such as timber, fuels and oil) and Stock items (everything from PPE to boots, drills and warning signs)
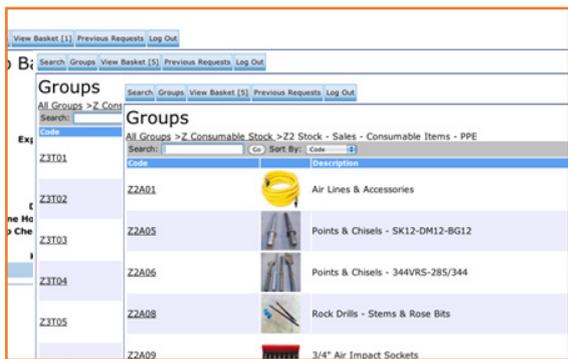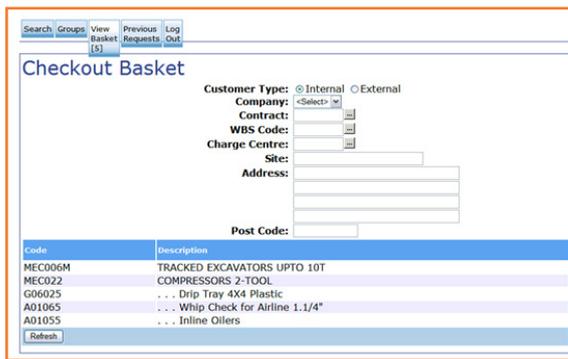

Figure 7. Once the items are checked out, the requisition is generated for the Hire Desk at the Mitcham centre to process

*"Training on **Assettagz** proved easy. Staff adapted to the new way of working with ease, even the die-hard ones found **Assettagz** easy to use and efficient. Feedback from the yard on the new system was very positive."*

The outcome

Byrne Group's new integrated requisition and asset management process:

1. The Hire Desk within the consolidation centre processes requests within COINS

2. Picking lists are created in COINS and passed via the **Assettagz** web application to the RFID enabled handheld computers within Stores

3. Stores use **Assettagz** to identify and pick the required items using the handheld computers

4. Stores also use **Assettagz** to record the results of inspections and ensure that certification is up-to-date, for example PAT tests (Portable Appliance Testing) for electrical items or LOLER (Lifting Operations and Lifting Equipment Regulations) inspections for lifting equipment

5. Upon the completion of picking, a dispatch is generated, the 'on-hire' is confirmed and a delivery note is created

6. Logistics department collect from the consolidation centre and deliver to site

7. On site, RFID enabled ID cards are used to assign equipment in and out to staff

8. Once item is no longer required on site a return request is created by the site Foreman

9. The Logistics department collect from the site back to the consolidation centre

10. Once the item is returned back to the consolidation centre, **Assettagz** is used to identify and Off-Hire the item and then update COINS automatically

We can see the benefits of the integrated COINS and **Assettagz** solution within four key areas of our business: A reduction in costs, more efficient processes, better health & safety compliance and improved customer service

Impact on the business

A reduction in costs

Less theft - using RFID enabled ID cards has encouraged accountability which has reduced the number of lost or stolen assets.

Fewer consumables used – personal accountability has meant that use of consumables, such as PPE, has also dropped considerably. See figures 9 and 10.

Fewer re-hires - optimising on-hire rates for existing equipment has reduced the need for re-hires from external Plant companies.

Lower administration costs - automation of processes has reduced headcount and logistics resource.

Figure 9. Cost savings on consumbles were seen within one month. Chart shows PPE issued from Stores in July and August 2008 (ID cards were introduced on 1st August)
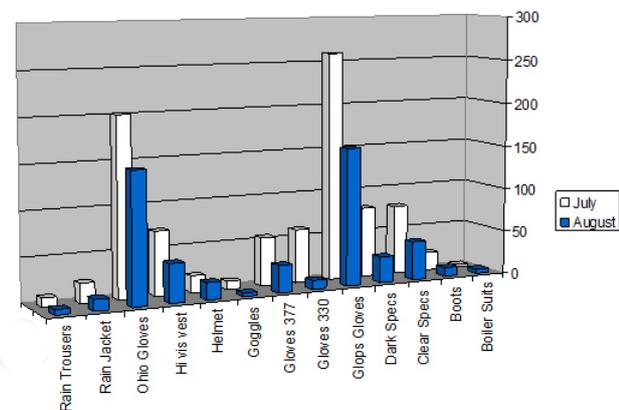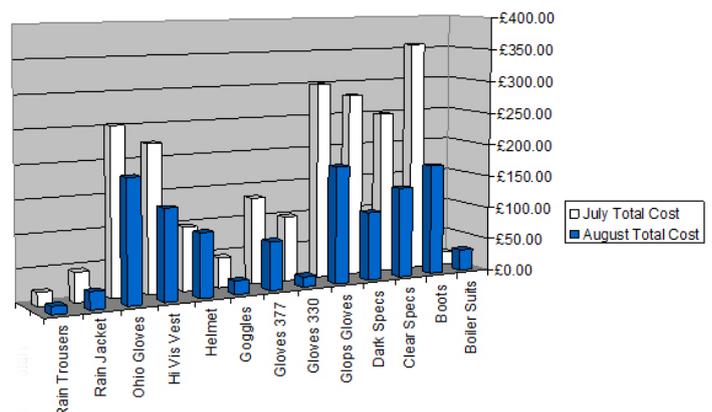

Figure 10. PPE Cost comparison for July and August

Ultimate benefits

Control, Accuracy and Profit

"The fully integrated COINS Hire Desk and **Assettagz** system has vastly improved the control of assets, the accuracy of requisitions and ultimately the profitability of the business by saving us time and money." concludes Matthew Preston, Director at Byrne Group.

Increased efficiency

Accurate, real-time data – the accuracy of the **Assettagz** data and the speed at which it is received back into COINS means that there is no issue with a manually maintained, out of date asset register.

Improved utilisation – automation ensures that on-hire rates for equipment are maximised

Better decision making - access to accurate asset maintenance and history improves procurement decisions on specification

Integration – one view now gives accurate reporting on asset lifecycle data

Fewer Health & Safety risks and better compliance

Inspection safety - using **Assettagz** to track maintenance schedules and carry out inspections of equipment in the field ensures only equipment that has been inspected is requisitioned.

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

> **"Using Assettagz to track maintenance schedules and carry out inspections of our equipment in the field ensures that only inspected equipment is hired out."**

Improved customer service

Quality and speed of requisitions to site - improving client service (both internal and external) and reducing costs

End customer visibility - construction sites have visibility of the requisition and delivery timescales

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The bottom line

87% reduction in job cards processed at Mitcham with data now recorded at time of test

Theft dramatically reduced by an estimated **50%**

Payback on Investment in **1** year

Projected **£229k** positive cash flow within 5 years