

Tool Tracking & Safety Management for Costain



RFID traces valuable tools & monitors safety training

The construction industry depends heavily on getting the right tools to the right staff at the right time if projects are going to be completed on time and on budget. Costain has worked on some of the biggest including the Thames Barrier, Hong Kong Airport, and the Channel Tunnel.

Costain chose RFID technology to help them keep track of tools and to assist them in managing health and safety training. The partner they chose to work with them in the project was CoreRFID.

Tool Tracking on the Church Village By-Pass

The Church Village By-Pass in South Wales is the largest local authority led project of its kind in the UK. Designed to provide traffic relief for three villages on the busy route from the M4 to the Rhondda and Merthyr valleys, the project was one of the first initiated by the Welsh Assembly Government and Costain was selected as the main contractor.

As at all of their sites, Costain needed to control tools used in different areas of the Church Village By-Pass project. With the site needing everything from heavy plant to office equipment, the range of equipment in use is enormous. Some tools are used by different staff and at different locations along the 7.5km route. Tools can be forgotten and mislaid. Often the problem is knowing "who had it last?" If tools can't be found new ones have to be procured or hired, incurring additional expense for the project.

CoreRFID are helping Costain to solve this with a system that identifies all capital equipment on site with electronic tags the size of a large button. Software running on a HP and Motorola portable computers is used to issue and check in tools. Staff sign for the item concerned and the software controls whether or not the staff member is entitled to have access to the item in question. Details of tool movements are recorded on a database hosted by CoreRFID. This can be accessed by authorised Costain staff, providing instant information on just where a tool should be.

By using RFID in the project Costain hoped to establish whether RFID can make a contribution to the business. Experience with the trial shows it will be worth further work to quantify benefits more robustly.



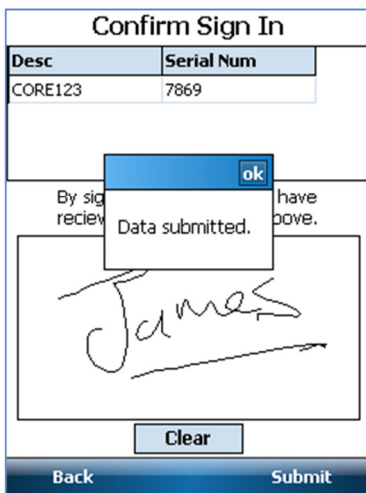
Church Village By-Pass: works include bridge and road construction, contaminated land reclamation, and reinstating natural habitats for local wildlife.

"Tracking tools and improving site safety are both important to us. The Church Village By-Pass project has been a first step for the business to see the technology potential of RFID to help." Barry Woodman, Project Director, Costain

Safety Management

The safety management solution being used by Costain provides each staff member and external engineers with a safety identity card. The RFID chip on the card allows a record to be kept of each safety briefing that the staff member has received. Safety inspectors can then examine the cards in spot checks to confirm that staff have been trained in the safety procedures for the tools or equipment that they are using. The system helps to encourage site staff to make sure that they get the right training for

the work that they are being asked to do. By ensuring that staff are trained for the tools they use, the risk of accidents is reduced.



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Signing for tools checked out helps to improve accountability.

Using Checked OK

The applications being used by Costain are both based on CoreRFID's CheckedOK, a customisable package that is used for asset management, maintenance management and personnel management across construction and many other industries. It allows information to be read from electronic tags using an RFID reader plugged into a compact hand held computer. This identifies all the tools needing to be checked at a particular location and specifies which checks are needed. Checked OK can be used with UHF or HF RFID tags. Costain is using HF tags because these have a lower cost and help to encourage positive checking because of the short distance over which they can be read.

The Benefits

Costain's RFID based tool tracking and safety management systems provide:

- Quick check out and return monitoring for tools.
- Reduces hire & replacement costs
- Immediate identification of who had a tool last.
- Control of tool check out to authorised staff only.
- Checks on safety briefings carried out.
- Consolidated information for

The information collected can be transmitted in real time or at the end of the day over GPRS or wi-fi links to the CheckedOK server where it updates a database. Information on the history of each tagged item can be accessed via a web interface.

The system speeds information collection and improves the quality of information and reporting on the use or maintenance of tools by automating the process. Recording what has been done and the staff responsible as the action is carried out helps to ensure that information is accurate and up to date. Through its detailed prompting capability the application makes it possible for staff to carry out any checks required when an item is checked out or booked in. The system records which staff member checked the item out or in, providing a complete audit trail and the essential accountability required.

For Costain, the Church Village By-Pass project is demonstrating the potential of RFID for improving information about people and assets. Further work will be needed to show how the business can benefit more widely from the technology.

About CoreRFID

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