



RFID and its Impact on Retail

The retail supply chain is evolving, and a key part of this evolution is harnessing new technologies such as radio frequency identification (RFID).

Radio frequency identification (RFID) was first utilised by industry in the 1960s in livestock and automated vehicle identification. Its key advantages over other tracking technologies was that it could read information that was on the move without making contact, and in hostile environments where barcode labels would not survive.

RFID technology is an automatic way to collect place, time or transaction data quickly and easily without human intervention. Radio Frequency Identification labels – called RFID tags contain a programmable chip and a miniature antenna. They can be placed on or embedded in products, pallets or dollies and the information stored in the chip can be read, processed or changed through a hand held device emitting radio frequency signals. The data from the RFID tags is collected in a host system, which can be accessed internally within the organisation, or shared with third parties.

More recently its application to the retail supply chain has been highlighted. However, implementing RFID is not a simple undertaking.

Authors: Nicky Doyle, Jacqueline Yongo, Lian Wan
Contributor: Chris Hodge

Before embarking, organisations need to assess whether the long-term benefits of RFID outweigh the cost and effort of implementation.

It seems likely that the retail sector more than any other, will benefit from RFID. Through the real time tracking of inventory throughout the supply chain, retailers can benefit from improved control, reduced out of stock, cut thefts, enhance in-store marketing and sales, provide more accurate pricing, and improve the overall quality of inventory information throughout the store.

Companies already employing RFID in their supply chain are experiencing tangible benefits and a reduction in inventory costs. It seems likely that RFID will be of the greatest benefit to large retailers who tend to face greater issues with shrinkage and tracking product. Smaller retailers selling expensive items are also likely to reap the maximum rewards from the technology.

In this paper, Nemea examine the issues - focusing on how RFID works, its advantages and disadvantages, applications within the retail space, the business case for implementation, selection and installation issues, and the direction RFID is likely to take in the future.