

AUTOMATING INVENTORY IDENTIFICATION TO IMPROVE IN-STORE CUSTOMER EXPERIENCE AND STOCK EFFICIENCY

Situation

Over 300 retail stores in the UK selling a mix of clothing, homeware and food. As with many retailers, they suffer from lack of real-time visibility of stock and its location, resulting in a poor customer experience in terms of finding the item you want in the right size in the place you expect it to be. Poor synchronisation between store stockroom and central distribution resulted in a 'leaky' supply chain (lost merchandise, over/under stocking etc.) and theft from stores.



Some RFID technology already in place, however stock checks performed manually with a handheld reader.

Task

Investigate the possibility of using 'store wide' RFID capture to:

- Remove/reduce the need for manual stock check. Staff can be better allocated serving customers.
- Provide an enhanced customer experience by adding automation to make sure stock is in the right place and does not get depleted.
- Provide an enhanced customer 'check out' experience by removing the need to barcode scan each item, to reduce purchasing process time by 50%, reduce queuing and potentially require fewer staff.
- Provide improved stock intelligence to central distribution to optimise stock levels across the business. Reduce delivery of items when a store already has enough and reduce likelihood of running out of stock completely.
- Understand customer buying habits more accurately as they relate to demographics, geography, product, store layout and customer service. Which stores, catering to a certain demographic, are the most successful and how can this be replicated to less successful stores to improve profitability.
- Reduce shrinkage from theft

Action

RFID hardware provided high level of accuracy when installed in a trial store with 90%+ of items were identified. However, this generated very high levels of data, in excess of 5Mbytes/second and existing networks were unable to cope.

Edge-based technology was proposed to drastically reduce the volume of network traffic and provide 'business event' data to a central server for further analysis and action, for examples 'specific item moved from shelf and sold', 'item moved to changing room', 'item moved from stock room to shop floor', 'item in the wrong location on shop floor for an excessive period of time'. Each event had a corresponding action to replenish shelf from

the stock room, return changing room items back onto the shop floor or order more stock from central distribution.

A prototype 'store' was built with zones, stock, business process automation to record and action the events and management dashboards to show how the solution could work in a real store.

Results

The customer is building a business case to look at initiating a pilot across one or more stores to test both the technology and the business case for greater adoption.