

Good ergonomics

Ergonomics is not something that retailers consider as vitally important, but, as Glynn Davis finds, this could be a mistake because there is a growing argument for the existence of a direct link between well designed, intuitive technology and increased productivity and service levels

Certainly, this is the view of Mike Inderrieden, solution engineer in the human factors engineering team at NCR Retail Solutions. He says that bad ergonomics at the checkout can lead to employee fatigue, which inevitably results in a fall in productivity. "Good ergonomics and work practices equals good productivity and service," he observes.

But don't think that ergonomics is simply about the design of equipment. The 20 NCR people dedicated to the issue in the UK and US include engineers, psychologists and health and safety experts. And when working with retailers on ergonomics-related issues, NCR breaks the task down into not only the design of the equipment but also the physical layout, the technology and the processes involved.

A typical project will involve the company undertaking a video-based time study that monitors what happens at the retailer's tills over a set period of time. This then highlights issues such as problems that cashiers have with: handling products on hangers, reaching for carrier bags and baskets; and high levels of items that cannot be scanned because of faulty labels.

Inderrieden's argument is that solving these issues will lead to improvements in productivity because they will enable the cashier to work more effectively and probably on a pain-free basis. This will then contribute to solving the number one problem for retailers in relation to ergonomics – that of reducing queuing times at the checkouts by boosting the throughput of people.

However, Tom Stewart, joint managing director at ergonomics and usability specialist System Concepts, says retailers' view of ergonomics as simply a tool to increase the speed of transactions through the tills is a mistake because it overlooks the benefits that ergonomics can bring to



customer service levels. "The big differentiator for retailers is their staff and if they do not treat them well at the checkout then they'll not treat their customers well. If the checkout is awkward for staff then it sends the wrong message back to the customer," he says.

Staff discomfort

Stewart suggests customers pick up on staff discomfort much more than they recognise a sexily designed piece of checkout technology – and this can bring a negative view of the retailer. This is something that Waitrose and Marks & Spencer have sought to address by working with System Concepts to develop new checkouts that give greater space to the cashiers (on the same footprint) and also provide them with greater opportunities for eye contact with customers.

He says this ability to make contact with the customer is vitally important, but he adds that it creates a point of tension for

retailers because they must try to be both friendly and efficient. "You have to be careful to incorporate both friendly and efficient within your technology, because if the checkout person is turning away from the customer (to perform certain tasks) this might be more efficient, but it would also be unfriendly," he explains.

Although some progressive retailers – such as M&S and Waitrose – have been improving the ergonomics of their checkouts, Stewart says one of the big ongoing problems is that many are "cobbled together", which impacts negatively on staff productivity and ultimately on customer service. "Even if it is badged as a manufacturer's own integrated (checkout) solution the printers and the podiums will likely be from somebody else. The technology is often from different people, as is the software and the furniture," he comments.

This situation is unlikely to change as there are many more new and interesting



technologies emerging in-store that are taking the focus (and investment) away from traditional checkouts – including kiosks, portable order pads and most importantly self-service checkouts.

Although self-service checkouts bring a set of new ergonomic challenges both Inderrieden and Stewart agree that their growth in the market has been helped by consumers' increased acceptance of dealing with electronic interfaces – through their use of the Internet and ATMs. Inderrieden says a critical aspect of the devices is that they are intuitive and allow customers to go down different paths to get to the same end position. "We work on interfaces, graphic design and screen lead-throughs as this is a hugely important part of the machines," he observes.

These usability aspects (that represent an increasingly important part of ergonomics) have been integrated into the NCR self-service checkouts, which have been adopted by many retailers around the world including Tesco, Superquinn and M&S.

The psychology of ergonomics also comes into play with self-service checkouts as their engrossing, interactive nature leads customers to think they are moving through the checkout process at a quicker rate than is actually the case, which

again addresses retailers' demands for faster throughput at the tills.

Belief in speed

This belief in speed, combined with the increased acceptance of self service technology in-store, is leading to the emergence of a variety of devices, according to Inderrieden, who says NCR is looking at a pre-order delicatessen kiosk that lets customers order their goods and then return to collect them at the deli counter after they have done their other shopping. Also in the development lab is a self-service returns piece of kit that lets a customer scan a returned item before it dispenses the cash back.

Tony Bryant, business sector manager at business solutions provider K3, says that the emergence of these technologies must be regarded as fundamentally good for ergonomics on a basic level as they help move staff away from sitting behind tills to doing other things in-store.

One of the other things that staff could soon be helping with is taking orders and payments through portable devices such as the OrderPad that K3 has developed for easing congestion at tills and providing customers with an alternative and more comfortable way of ordering and paying for their goods. Bryant reveals that the

company has been talking with Vodafone as the mobile retailer is working hard at reducing waiting time in its stores.

The reduction in the weight of such mobile devices through the development of smaller and more lightweight components – mainly batteries – has greatly eased the problem of staff having to deal with "huge bricks that nobody could really carry around" and suffering from bad backs.

Also getting smaller through advances in technology are EPoS devices, which is good for freeing up space at the checkout and should enable more dual-screen devices with full-size monitors to be installed. To date the screen visible to the customer has been sufficiently ergonomically-unfriendly to force many people to squint, but with new technology it should be possible to have two screens of equal size thereby allowing the customer to more easily view the purchases they have made.

Clearly there will be issues with every piece of equipment that is incorporated into retailers' stores but at least the advance of in-store technology – with the attendant improved level of flexibility in both design and usability – will hopefully enable retailers to increasingly consider the ergonomic aspects of these items