Forcing change

Will Hadfield finds that business process standardisation is pushing retailers to upgrade their networks

Forget IT outsourcing and enterprise resource planning (ERP) upgrades – at least for the moment. Networks are one of the priorities for retailers' IT departments when their chief executives demand multi-channel retailing or standardised business processes. Whenever senior managers demand changes to business processes, the IT department has to change applications and the technical infrastructure too. Networks have to be upgraded at the same time to support the new applications and the new infrastructure.

According to IT consultancy Gartner, the main priority for most retail chief executives over the next 12 months is satisfying customer demand. Customers want different services from retailers than they did as recently as two years ago. One of those different services is a transactional website that replicates the best bits of the High Street shopping experience online. Tesco Direct is an attempt to replicate the experience of shopping for non-food items at Tesco's supermarkets on a website. Another new service is a catalogue that matches the retailer's offering through its other distribution channels. Argos and Next have both integrated their catalogues with their product ranges in stores and on the internet. Multi-channel retail means integrating applications over a single network.

The largest retailers have had enterprise-wide networks since they first implemented packaged ERP systems in the early and mid 1990s. Smaller retailers have only introduced wide-area networks over the last five years as broadband became widely available. Improvements to the speed and resilience of networks available to all sizes of retailers have enabled head office to connect store managers to increasing numbers of applications. Retailers have upgraded their networks when they have seen a business case for applications using real-time data. "We have upgraded DSL networks in just four of our 36 clients in three years, but 75 per cent of our DSL network base has replaced PSTN and ISDN implementations that dealt mostly with batch data so that they can handle real-time data," says Mike Bielinski, managing director of networking company, Vodat International.

Networks that only handled human resources applications run from head office have been upgraded to handle workforce systems and merchandising applications. Some retailers, such as JJB Sports, even use their networks to remotely manage every aspect of their stores' computer systems in an effort to cut costs.

TJ Hughes installed a managed broadband network to reduce its telecoms costs by routing analogue calls through the network. More importantly, the new network gave their head office greater control over what happened in its stores. A TJ Hughes spokesman comments, "What was holding us back was our understanding of the capabilities of our own infrastructure and how we could stretch it to gain maximum benefit. The virtual private network is critical piece of our business that enables us to support stores with an automated back office."

The retailer uses its network, which was installed by Vodat International at the beginning of the year, to manage pricing, ticketing, promotions, merchandising and human resources processes remotely. By managing these business processes from head office, its store staff can spend more time selling to customers hopefully increasing its like-for-like sales.

Better networks

Better networks can create new opportunities for retailers to save money. Retailers can swap standard in-store terminals, which are costly to maintain, for thin client devices running on Citrix. More powerful networks can also save them from the financial consequences of failing to comply with new regulations. The Payment Card Industry (PCI) regulations, for example, that came into force this summer require retailers to encrypt payment details held on any of their systems. This includes their networks. Bielinski says, "Card transaction authorisations and the advent of PCI are causing retailers to upgrade the security on their networks. In time, the need to run multi-media services across the network will create demand for networks to be upgraded."

Implementation costs can be quickly recouped by efficiencies in stores or increased revenues. The UK's largest retailer networks cover more than 4,000 sites, but most retailers need to connect somewhere between 50 and 1,500 sites. Each location costs £400 to £600 to connect to the network with running costs of £500 to £700 a year. For big retailers, extra revenue of £30,000 to £900,000 should be achievable from efficiencies made possible by better networking.

Retailers are also being driven to reassess their networks by the popularity of service oriented architectures (SOAs). Retailers can make their IT systems more responsive by implementing an SOA. SOAs enable IT departments to reuse existing applications or components of applications for different business objectives. If code is reused to launch products more quickly, retailers could benefit from extra sales.

To reuse components, retailers have to design distinct services within their existing business processes. They will also have to prepare their networks to handle reusable services and components of applications.

Sometimes projects to upgrade networks and rejig the applications architectures that they use have disappointed retailers. Gartner analyst Mim Burt says, "It is surprising that even today many major retailers do not have a written IT strategy in place to link customer and business requirements to IT requirements. Even for those do have a written IT strategy in place, the extent to which this is fully aligned to the business strategy is questionable. This is borne out by the perception in the business that IT is failing to implement projects that are timely and successful in realising the benefits of the business case."

Any complex project carries the risk of failure. Networks have become increasingly complex and critical to the success of businesses because they are being used to do more things. Retailers rely on their networks to communicate with three different groups of people: their customers (both online and in-store), their suppliers and their employees.

The technological requirements of the applications running on retailers' networks range from simple electronic data interchange to collaborative portals where retailers and suppliers work together. Asda uses a collaborative portal to create recipes for its own-brand range of foods. By working closely with its supplier, it says that the time taken to develop new products is shorter.

Retailers rely on their networks far more than they did before the advent of broadband. In fact, as they continue to standardise business processes and network infrastructure in the search for further efficiencies, retailers' dependence on their networks can only increase.