

Making technology in retail work

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A shop sends its valued customer, John, a text message about a sale on a brand of shower gel. It is John's favourite scent, the perfect size, priced at a discount, and timed just as John arrives home to discover he's just run out of shower gel, which means he has a few minutes to click a link, go online and order the gel before dashing off to the gym.



The shower gel is delivered by a drone just as he arrives at the gym, along with a free pair of promotional flip flops, meaning he can take a shower without having to bare his feet! All this, and John is the only human involved in the entire transaction.

Seem like sci-fi fantasy? Well, this is how retailers of the not-too-distant future will operate if they aren't already. Intelligent systems can predict customers' specific needs and meet these needs at the right time, while collecting more information about their regular activities, rate of consumption and preference channels. Gone will be the spray-and-pray approach of direct text and email marketing.

Retailers' investment in artificial intelligence (AI) is increasing exponentially as major global merchants seek to gain a competitive edge on each other. The role of big data analytics driven by AI and machine learning will be deeply embedded into every area of businesses, including sales, CRM applications, customer recommendations, manufacturing, logistics and payments services.

The better retailers use big data to optimise inventory and supply chain management, the more they can eliminate delays, reduce wastage and ensure that the right product is available at the right time to the right customer. It's already becoming commonplace for retailers to use big data analytics to better understand and service their customers, optimise their inventory levels and make improvements to their supply chains.

IT departments are slowly moving out of their historical support function to become key business enablers. They are no longer just responding to technical requests from the business but are providing more strategic input at the conceptual stage of business system planning and design. To avoid the pitfalls of unfocused investment, retailers looking for a new AI-enabled system need to take several key considerations into account.



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Skills, skills, skills

Established mass retailers are struggling to integrate advanced technology into their business models as they don't yet fully understand the skills they need to implement an actualised and integrated technology solution. For example, marketers will develop creative promotions but overlook the vital consideration of the customer experience during the purchase journey, which is vital for the IT department to be involved with from the outset.

Attracting skilled data scientists is a challenge. For example, there are approximately just over 100 fully qualified data scientists in the world (23% hold a PHD and 44% hold a Master's Degree) and a further 60,000 people working on various parts of data science and analytics (as shown on LinkedIn). The fight for these sought-after resources expands globally.

These data scientists aren't just IT technicians, but experts who understand the complex process of designing systems that continuously improve customer experiences. The complexity of data analytics arises in cleaning up the data provided to identify trends that tell a customer story.

While artificial intelligence (AI) can help in digitising the raw data into insight-driven analytics, data science skills are critical in allocating the correct resources in the right places.

Start from the ground up

A key challenge is integrating older, legacy systems into technologically-advanced systems. New technologies or systems shouldn't be a plug-in or add-on to a legacy system, but rather used in the design stage of a brand-new solution or product.

A retailer looking to develop an e-commerce platform needs to adopt system design thinking from the outset of any product development process or marketing campaign. This should take the customer's preferred purchasing method into account, as well as provide opportunities for the collection of more information about the customer.

Shopping habits are shifting

Technology has moved the point of sale from the physical store into the consumer's hand. While a lot of consumers still want the touch and feel of certain products, such as designer fashion, the commodification of an increasing list of items means people are spending less time in stores in favour of the convenience of e-commerce.

Traditional payments using cash and credit/debit cards are also making way for mobile payment methods such as Snapscan, Masterpass, Zapper and even cryptocurrencies, adding flexibility for customers and opportunity for merchants without card facilities and/or bank accounts.

This is part of the reason that major retailers such as Pick 'n Pay are exploring cryptocurrencies as an alternative payment method.



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Security risks

As more e-commerce platforms emerge, we find that retailers tend to overlook the importance of security integration. Much of the customer information sits in flat databases while security solutions don't match the investment in other areas of the IT department, meaning security is almost seen as a grudge purchase or add on.

Unfortunately, in the sprawling e-commerce landscape, security is usually the last thing retailers consider. The business is intensely focused on creating a working e-commerce solution, but security is often an afterthought. Security shouldn't be reactive – it's critical to be integrated from the beginning and not once the system is in place.

Rethink special offers

In the past, retailers would allocate vouchers to their customers based on their own inventory of what they can afford to give away, which has never been and is no longer good enough.

As consumers are inundated with an increasing amount of promotions and electronic vouchers, retailers need to use the vast wealth of data analytics available to tailor highly relevant and personalised offers aimed at building a long-term relationship with them.

For instance, should the retailer recognise poor service in a past customer engagement, the next targeted offer might refer to this incident in its communication – a personal touch that not only communicates that a lapse in service quality was identified, but that the company has taken the time and effort to address that customer's immediate and possible future needs.

The future of technology

Increasingly, we will start seeing much better use of AI applications that make data mining and data management more efficient. Machine learning and statistical algorithms will help retailers integrate customer relationship management (CRM), inventory and supply chain management systems seamlessly.

As more data becomes available these smart systems will offer better prediction of future outcomes, accurate insights and targeted promotions relevant to customer needs.

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