From big data to smart data

The importance of systems in providing a transformational experience for consumers

WHITE PAPER

In the five years from 2012 to 2017, big data will be worth £216bn to the UK economy – or about 2.3% of projected GDP, according to a 2012 SAS report. The lion's share of that could be through improvements in customer intelligence. Indeed, data-driven improvements in targeted customer marketing, the more effective meeting of demand and the analytical evaluation of customer behaviour will deliver £73.8bn to the UK economy.

"The amount of data is significant, but if you can get down to the granular level that's where the really interesting stuff is – it's where you can unearth information to help you make your communications with customers more personal," explains Columbus Retail ecommerce manager Neil Rowett.

And it's this level of personal communication that consumers are calling out for.

"We are no longer in a transactional economy, we operate in a relationship economy, where customers demand a personal level of service and want to enter into a conversation with even the largest retailers," says Jo Causon, chief executive at the Institute of Customer Service. "Using customer data is now crucial in giving the personal service that will prove a competitive advantage."

Few would disagree with Forrester Research principal analyst Rusty Warner when he notes that embracing big data is not just something brands should do; it's something they must do to survive.

When asked for their omnichannel priorities this year, 54% of retail leaders interviewed say better leveraging of big data, while 63% are after a single view of the customer. Meanwhile, in a separate survey, retail-

ers list their top challenges in delivery of a seamless customer experience as legacy and data systems (27%), lack of investment (23%) and lack of real-time visibility of stock in all channels (14%).

The challenge for retailers is putting data analytics into practice – to improve efficiency and enhance experience. With the tide of information rising all the time – some of it structured and some of it much less so – it can be a struggle to stay afloat, particularly if all your data is in separate systems. Unpicking the wheat from the chaff is far from easy, as the commercial services director at a grocery chain explains. "We have literally tens of millions of data points that we are managing every day. And we now have to manage that hour by hour because it is growing exponentially in terms of the granularity of the detail we get into."

So, how can customer experience be improved through the efficient use of data? Which retailers are making progress and what are consumers demanding of them? And how can integrating your systems help improve the customer experience?

DEMANDING BUNCH

Customers have more power, more information and more choices than ever before. Successful brands are those who can capitalise on meeting – or exceeding – customer expectations.

"The more you know about the customer, the more opportunities there are to offer the right products. This can mean alternatives too. We can all sell, but it's whether we can sell the products with the best margins," says Columbus Retail's Rowett.

A survey of 1,000 consumers carried out exclusively for this white paper shows the usual suspects

offering 'outstanding customer experience'. More than half the respondents name Amazon (51.1%), followed by Marks & Spencer (46%), John Lewis (42%), Boots (31.9%) and Argos (30.4%) (see chart 1).

Amazon has been using big data for some time to better understand its customers. As have the likes of Asos and eBay. Ian Crawley is director of trust and safety for the latter. He says: "Think about what this means – eBay has never met the buyer, has never met the seller, and has never seen the item being sold."

"Yet, through our data and technology, we are able to underwrite over £35bn of ecommerce a year and offer our customers a simple promise: the item you ordered, or your money back. People know when they see the eBay brand, they can buy or sell with confidence – and that's a smart data," he says.

With 19 million British shoppers to 'observe' on the site each month, Crawley and his colleagues have also learnt a thing or two. "We've unearthed surprising and actionable insights such as the popularity of ski equipment with the over 60s and the lack of females skew in the purchase of baking equipment," he explains. "Retailers need to find new ways to unlock the power of their insights balancing this with a deep respect for their customers' privacy."

In a previous white paper, Columbus Retail put it like this: "You need to strike the right balance between understanding them and monitoring their every move in an unintrusive manner."

Rowett goes on to expand on this idea. "You have to be careful about control of the data. The worst thing is to let your marketing team run free with it."

Amazon, by most accounts, tends to do this pretty well, though rarely talks about it publicly.

"I've not met Mr Amazon but when I log into my account I get the feeling he knows a lot about me and I keep spending," says Thomas Arenz, head of marketing communications at Samsung Semiconductor Europe. "Retailers are walking a fine line between big brother and something that's exciting and customers want more of."

BETTER TOGETHER

How to tie data together is a constant challenge. There is so much of it, and from so many different sources: sensors used to gather climate information, posts to social media sites, digital pictures and videos, purchase transaction records and cell phone GPS signals to name just a few.

"Having lots of data in different pots makes life hugely more difficult when it comes to using it effectively," says Mike Thornhill, chief executive of sports etailer ActivInstinct.

But when data is brought together in one place and analysed with the customer in mind, the results can be extremely positive for retailers and their bottom lines.

"You make information from all areas of the business available for meaningful, comprehensive business reporting and analytics. You stand to gain what many companies struggle to achieve, the complete, 360-degree view of your customers," says Columbus Retail's Rowett.

ActivInstinct, for example, chose to build a single solution for all customer-facing applications so that "we would have one single data repository for everything from browsing behaviour to purchases, which makes analysis much easier. We'd probably still be trying to work out how to do it and scale it if we had data sitting in lots of different systems," Thornhill explains.

With its data agency, Fifty-Five, ActivInstinct combined and mined three years of existing customer data – orders, basket-level data, returns, browsing behaviour, pricing, margins and so on. With the new capability to analyse and activate this data in one place it has developed an algorithmic merchandising tool for the running shoe store.

"We can now showcase customers the running shoes that they will most likely want to buy, when they need them, helping them shop more efficiently, and improving our income and margins at the same time," Thornhill adds.

The simple and agile aggregation of back-end and web data was also the genesis for changes at US-based retailer LuckyVitamin. "Because we can draw on our enterprise resource planning data for product, pricing and other structured information, we can run extensive reports on shopper behaviour and continually

14% say lack of real-time visibility of stock in all channels is a challenge
Source: SAS

54% of retail leaders say leveraging big data is an omnichannel priority this year

44.3% of retailers feel they would benefit from a means to automatically combine different DATA sources to measure demand

52.4% of consumers surveyed value clearer stock visibility online

Retailers list their TOP CHALLENGES in delivery of a seamless customer experience as legacy and data systems

27%

54% of retail leaders say leveraging big data is an omnichannel priority this year

Source: Accenture poll, 2013

1 Which retailers do you think offer outstanding customer experience?

amazon.co.uk
M&S
John Lewis
Boots
Argos
ASDA
TESCO
Sainsbury's
DEBENHAMS
next

0% 10% 20% 30% 40% 50% 60%

2 What do you value most from a retail brand online?

Able to find what I want
Being personally addressed
Click-and-collect
Consistent stock availability
Customer service
Delivery option choice
Ease of ordering
Free returns
Mobile-optimised site
Product range

0% 10% 20% 30% 40% 50% 60% 70% 80%

"Retailers need to find new ways to unlock the power of their insights, balancing this with a deep respect for their customers' privacy"

Ian Crawley, eBay

evolve the webstore to ensure that we are always responding to our customers' shopping needs," says chief executive Sam Wolf.

UP CLOSE

Relevance is a key ambition for those leveraging big data. "If you make cross-sell and upsell suggestions, they need to be meaningful in the context of customers' interests and order history," Columbus Retail's Rowett explains. The combination of structured, transactional data with unstructured, behaviour information can thus be a powerful marketing tool.

Personalisation, and more recently contextualisation, have attracted considerable interest as retailers look to differentiate themselves online. Ankush Matta, partner at Kurt Salmon, suggests that with prices already so low, retailers will be "looking to lure back customers who have defected to cheaper rivals with localised assortments and personalised offers".

Research by *Retail Week* this year shows that the majority of consumers (60%) are influenced by recommendations based on previous browsing and purchasing history.

Data will be vital to drive better action on this from retailers. Charlie Harrison, marketing director of Furniture Village, expands on the idea: "For us, as well as many other retailers, further integration across market-

ing channels will feature in plans for 2015, with web-browsing behaviour and social media interaction playing an increasingly important role in driving relevant, personalised marketing communications."

Big data can enable retailers to better understand customer segments – and the selections they make in their channels of choice. Offers can then be made more relevant and personal, thus generating sales.

Retailers can also use data to impact every area of their offering – pricing, promotions, new product launches and level of service within their stores. Jonathan Vardon, former chief information officer at Boots and now global head of retail at UST Global, says retailers cannot underestimate the need to truly understand what their customers want, when they want it and how they want it. Bring that together and they will increase the overall shopping experience and drive greater brand loyalty, he says. But how?

Using a single system to integrate all of these data points can simplify the process for retailers, and lead to deeper customer understanding.

"Organisations must tie together the value strands of data and insight that is already at their fingertips – from their online, mobile and in-store sales, footfall traffic, coupon redemption, email responses, store layout and location and, of course, customer feedback into contact centres and increasingly online through their social media channels," Vardon adds.

FAR FROM FULFILLED

Part of tying these strands together is investing in new systems, but for retailers it can be all too easy to get carried away with the potential of new front-end technology, which is useless without a robust back-end operation.

"Retailers normally invest in the front-end systems which are customer facing," says Kurt Salmon's Matta. "However, a well-integrated back-end system is the backbone of a seamless customer experience across different channels."

Consistent stock availability, for instance, is among the things that shoppers value most about an online brand (see chart 2). "Stock accuracy is a real advantage for us and it's essential if you are going to do any in [real time]," says Argos supply chain director Graham Barnes. "Immediacy is important but as, if not more so, is consistency."

The pre-Christmas IT fulfilment wounds suffered by Sainsbury's and Waitrose, which is part of the John Lewis group, are still fresh. The spending binge on Black Friday through to Cyber Monday also created havoc, with retailers including River Island, Currys PC World, Shop Direct and Debenhams admitting there was disruption to their delivery networks. Even Amazon had issues.

Reflecting on what occurred, head of customer experience at North Highland Alex Iles says retailers who succeeded in delivering their customers' expectations had efficient distribution centres, making sure their inventory was ready so they could effectively cope with peaks in traffic.

"The key when altering back-end systems is ensuring that incremental, more tactical improvements are also made visible to customers," he explains. "This will have the positive effect of building goodwill with your customer base."

Indeed, confuse customers and you'll lose them. Research by JDA and TNS last year, in which 3,000 UK shoppers were surveyed, found that 61% would switch retailer based on an unacceptable online shopping experience.
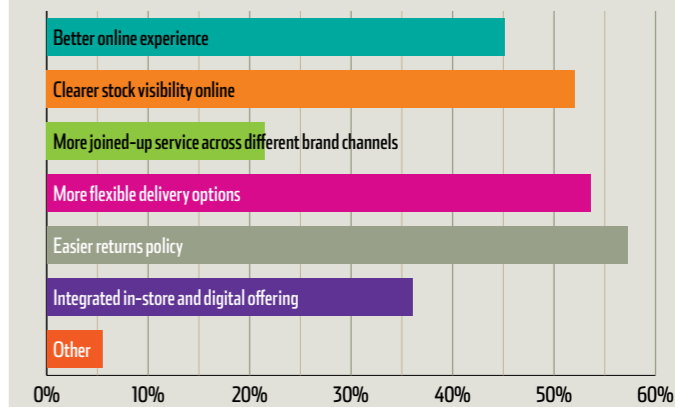
Our new research suggests fulfilment needs to remain a top priority for retailers; delivery option choice (55.3%) and click-and-collect (35.6%) are valued online. Shoppers also provided insight into how retailers could improve their experience. An easier returns policy comes out top (57.2% mention it), followed by more flexible delivery options (53.6%).

"You have to be sure the products are going to be in store the next day to collect," John Lewis chief information officer Paul Coby told *Retail Week* in the autumn. "This is a very immediate, customer-facing measure of how effective your systems and processes are working together."
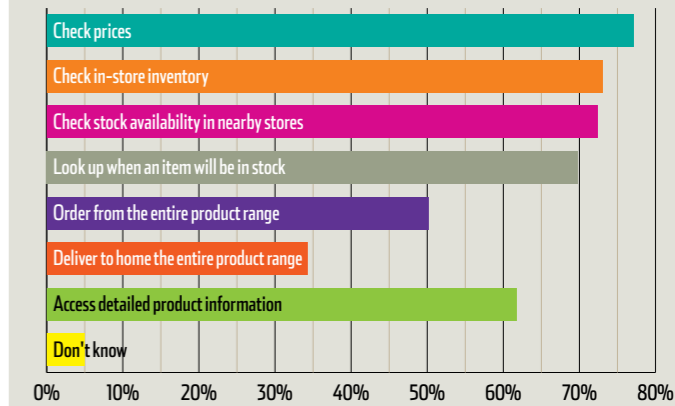
With fulfilment a competitive advantage, rather than simply a cost of doing business, retailers are looking to see how big data can help, not least in terms of better management of the inventory and anticipating customer needs.

The power of social media in forecasting needs and desires is becoming an area of interest in a bid to understand not only who bought what, when and how, but also why. This can then be used to

3 What are the key opportunities for retailers to improve your customer experience?

Better online experience	
Clearer stock visibility online	
More joined-up service across different brand channels	
More flexible delivery options	
Easier returns policy	
Integrated in-store and digital offering	
Other	

0% 10% 20% 30% 40% 50% 60%

4 If a shop assistant is equipped with a mobile device or tablet, what do you expect them to be able to do for you with the device?

Check prices	
Check in-store inventory	
Check stock availability in nearby stores	
Look up when an item will be in stock	
Order from the entire product range	
Deliver to home the entire product range	
Access detailed product information	
Don't know	

0% 10% 20% 30% 40% 50% 60% 70% 80%

"Mass marketing no longer works in the way it once did and now that we have so much data and such powerful analytical tools on offer, there is a huge opportunity for retailers to create individualised offers. However, it is also critical to ensure that those offers expand sales and are not margin dilutive rather than just drawing forward sales"

Ray Eitel-Porter, Accenture Digital

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anticipate and accurately set inventory levels.

Understanding and data analysis is in its infancy given the 'messiness' of the information.

"An integrated system can bring all of this data together in one place, meaning data can be used to second guess customers and upsell. It also means all of your information on customers is in one place, to better serve their objectives and allow you to make better business decisions," says Rowett.

Understand consumer behaviours and retailers can use it to increase order size, which in turn reduces shipping costs and improves supply chain efficiency through consolidation.

FREEDOM TO MOVE

Understanding how consumers use websites during their path to purchase is another way retailers can use data to improve the customer experience. Websites are no longer static pages, they are dynamic browser-based experiences. But many remain uninspiring according to consumers: 45.1% of those surveyed say a better online experience can improve their shopping experience, and even more (52.4%) value clearer stock visibility online (see chart 3).

For LuckyVitamin, with 30,000 products, the ability to assess customer data to ensure the right products are filtered to the right people and quickly is essential. Ease of ordering is what shoppers value most from a retail brand online (67.2%), while many simply want to be able to find what they are looking for (60.7%) (see chart 2).

Given that shoppers jump around websites – John Lewis, for example, has discovered that customer journeys through its website were not as linear as it thought – channels, keeping track of where they are, what they want and acting when they need, will be another area in which data analytics will help second-guess shoppers.

Predictions are, of course, a dangerous game: the

THE POWER OF PREDICTION

Christmas demand is notoriously difficult to forecast: 44.3% of retailers feel they would benefit from a means to automatically combine different data sources to measure demand. In the analysis by SAS, 35.6% of retailers are using external retail, consumer and economic data in their forecasting, but only 17.8% analyse social media conversations.

surprise in our research was that just 15.8% of consumers place a mobile-optimised website among their top five values (see chart 2). And yet smartphone penetration has reached 65%, according to mobile insight specialist Mobile Squared, while sales through mobile now account for 43% of online transactions in the UK, according to the quarterly Mobile Payments Index, published by Adyen.

Perhaps retailers are getting it right? *Retail Week*'s *Retail 2015* report found that investment in mobile and multichannel integration are rated as the most important business priorities for 2015 by retailers, with value, convenience and personalisation identified as the key consumer drivers.

Advances in in-store technology will allow retailers to offer a truly personal experience, recognising and rewarding repeat customers at the point-of-purchase to ensure a seamless omnichannel approach. But they will have to tread carefully.

FEET ON THE GROUND

Causon at the Institute of Customer Service says: "If we look at what consumers value most when visiting an online store, being able to find the products they want and ease of doing business are key.

"But in order to deliver a genuinely personalised service, retailers must understand why a customer is visiting their store and what they want to get out of their visit. This requires a personal relationship with the customer built on trust, whereby customers are prepared to give information about themselves and trust that organisations will use it appropriately to provide information about relevant products and services."

Asked whether there is enough consistency between most retailer websites and their physical stores – in terms of pricing, branding, customer service levels and product – under half of those surveyed here say yes (44.4%).
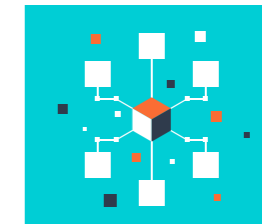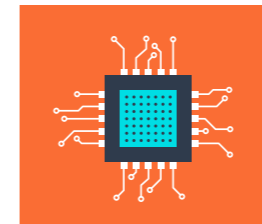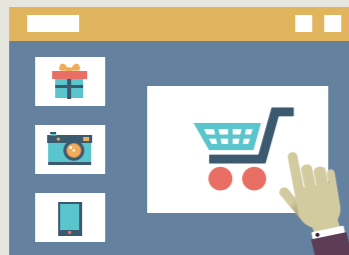
In-store staff need to be empowered to provide personalised offers and discounts that can help make a customer feel like an individual. Cosmetics retailer

Is there enough consistency between most retailer websites and their physical stores (in terms of pricing, branding, customer service levels and product)?

Yes
44.4%

No
37.7%

Don't know
17.9%

"You make information from all areas of the business available for meaningful, comprehensive business reporting and analytics"
Neil Rowett, Columbus Retail

"Helping customers find the products that are most relevant to them can drive up sales by 3% to 10%"
David Selinger, RichRelevance

Lush, for example, arms staff in the warehouse and on the shopfloor with big data feeds so they have real-time sales statistics at their fingertips. Say two items are selling well together; staff can re-organise the store in real time to make the most of an upselling opportunity that, without the data, they might not have been aware of. But retailers must have appropriate data collated in one place to be able to offer such services.

"It's pretty easy to track shoppers online, but when they enter the store it's sometimes like they become ghosts. You need to be able to track them across every channel – that's what will give you a single view of the customer," says Columbus Retail's Rowett.

Click-and-collect services are another area where retailers are looking to exploit big data to enhance experience. Bluetooth beacons, for instance, can be used to alert staff when a customer enters the store so the items are picked and ready; this can be combined with relevant in-store promotions and a "passive upsell". But don't make it too complicated or overwhelm them, warns Tony Mannix, chief executive at logistics company Clipper. "You don't want to take away the good feeling that the click-and-collect experience is meant to offer."

BIG INVESTMENT

More data encourages better service, it seems, and examples of the benefits to the bottom line are beginning to emerge. A recent study of 179 companies led by an economist at the MIT Sloan School of Management suggests that data-driven decision-making is leading to productivity levels 5% to 6% higher than can be explained by other factors, including investment in technology.

Accenture has found that 56% of retailers report some degree of satisfaction with analytics; but that leaves 44% that don't. Some could be focused on the wrong results, while others claim to be waiting for the day that everything becomes streamlined. "One wonders what the timeline for that actually is," the Accenture study notes.

Previous studies have highlighted some of the

issues large retailers have in terms of their legacy systems, but the budget and the data don't always have to be big.

"While the leaders in this area have invested large amounts of money, it is equally clear that substantial benefits can be realised through relatively simple measures in the short term," says LCP Consulting technical director Emile Naus.

"In this respect, the term 'big data' has probably not been helpful; relatively 'small data' implemented quickly can be delivering substantial customer insight," he adds. ActivInstinct is a case in point with "rapid income returns" providing the confidence to invest in larger and more advanced data projects.

CONCLUSIONS

A golden rule of retail is 'know your customer'. In the digital era it would be accurate to say: 'Understand your data; know your customer better'. Data is being fired at retailers from all directions, but survival relies on using it effectively, not only to improve the efficiency of operations, but to offer shoppers the experience they demand – regardless of the channel.

Our research shows consistency between channels remains an issue. It also shows that retailers should not underestimate the need to get the basics right. Shoppers value easy-to-use websites. They like extensive ranges, but at the same time want to find what they are looking for.

Easily accessing that data is one of the biggest challenges for retailers, so having it all in one system can be extremely beneficial. "An integrated system can support growth, as it scales along with it," says Rowett.

Big data can make a big difference, through personalisation of the online experience, with relevant products, promotions and pricing. But not just online. Retailers can't afford to lose customers as they enter the store, so they need to leverage the data as they've surfed, tweeted and reviewed, and apply it in store.

Achieve that and shoppers will keep coming back – and a loyal customer will bring more data and that will bring even deeper understanding.

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ABOUT COLUMBUS RETAIL

There are many compelling upsides to deploying a comprehensive end-to-end Supply Chain Solution or ERP system. Columbus has performed a great number of successful software projects for B2B and B2C retailers, so we know how to make technology perform to deliver the customer experience and competitive advantage you want to achieve.

We take advantage of one of the most flexible and powerful ERP systems available, Microsoft Dynamics AX, and integrate it with our multichannel retail solution, ColumbusMCR, and our eCommerce platform, ColumbusWebstore.

Our retail solution delivers the complete shopping experience including point of sales, direct commerce, customer care, supply chain and business planning, finance, warehouse and transportation, marketplace integration and eCommerce.

A Columbus Retail Solution helps you improve your:

- Customer experience
- Supply chain and multichannel collaboration
- Visibility of big data
- Financial management
- Price and promotion strategy

This enables retailers to gain insight, operate with agility, exceed customer expectations, and build enduring loyalty.

To speak to someone to see how Columbus can help you please contact our Retail Practice Sales Director, Martin Burden on 07974 454 005 or via email on mbur@columbusglobal.com

FROM BIG DATA TO SMART DATA