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CASE STUDY

escoA growing desire to delve deeper into data for consumer insights have led to the creation of Lifestyles, a segmentation and modelling system based on customer shopping behaviour Noelle McElhatton reports



In the supermarket wars, the loyalty battle-ground is where the bullets fly thickest. And the grocer thought to have the most potent loyalty weapon is Tesco.

Yet one of the great mysteries of the data world is just how customer insights mined from Tesco Clubcard's data mountain help make it the UK's biggest (and most profitable) grocery chain.

In early 2001, six years after Clubcard's launch, Tesco bought a majority share in dunnhumby, its data analysis supplier. The word in data land was that something big was on the cards.

So it proved. Until 2001, Tesco and dunnhumby had typically restricted analysis samples of customers to around 10 per cent, in order to control the cost of data storage and transmission. The sea change came with lowering costs of technology, and Tesco's growing desire to delve deeper into the data for consumer insights. The chal-

lenge was to make sense of the 104 billion rows of data stored at any one time.

Tesco Lifestyles was the result – a segmentation and modelling system based on customer shopping behaviour. "Lifestyles is ultimately about trying to understand factors that drive

shopping behaviour, for example price, promotions or healthy eating, together with measurement of Tesco's share of a customer's wallet or purse," says dunnhumby chief executive Edwina Dunn. "We wanted to capture more spend from each customer, and nudge them into buying products from Tesco that they might buy elsewhere."

Six-year spree: Tesco's Clubcard has amassed 104 billion rows of data



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Edwina Dunn, chief executive,
Dunnhumby

What's in the basket?

Dunnhumby began by rooting through customers' shopping baskets, looking for products that are predictive of a need or a lifestyle – such as weight-watching goods. The data was then mined to identify other products that were highly correlated with these.

The analysis revealed 25 shopping dimensions, or typologies – such as how 'green' a product was, how family-oriented or calorie-conscious. "We were entering into areas where traditional statistics couldn't help, so we had to devise our own approaches for working with this data," says Dunn (see panel, page 34). Many of the 40,000 products stocked by Tesco were given a 'yes' or 'no' score across these dimensions. The segmentation was developed by studying customer shopping behaviour over time against the typologies.

The next trick was to apply the segmentation Cont'd on p34

Clever stuff





Lifestyles: allows mailings by EHSBrann to be targeted to consumer tastes

Dunnhumby developed what it calls a 'rolling ball' modelling approach to allow more and more products to be classified against each of the 25 Lifestyle dimensions. "We had to develop a new skill, which was to judge how long to let the ball run, picking up products along the way but stopping before it gathered products too far away from the dimension we were trying to build," says chief executive Edwina Dunn.

Affinity and beyond
For instance, people who buy green
products might only buy a certain kind
of shampoo that would not readily be
identified as green. "We were trying
to identify patterns within patterns,"
says Dunn. "We were inferring
product affinity beyond immediate
product affinity."

Dunn says it took two man-years of analytical effort to build a data set where all the products were scored across the dimensions. Eventually all 40,000 products stocked by Tesco were given a yes/no score across the dimensions. Customer baskets were studied over time against these criteria, identifying customers who had common scores across dimensions.

Dunnhumby could then build groupings of customers who had similar lifestyles, and thus the Tesco Lifestyles segmentation was born. Customers are reclassified at regular periods.

commercially. The most obvious by-products of Lifestyles are the more recent Clubcard statements and vouchers, whose content has been shaped by the various Lifestyles segments. More than eight million Tesco customers now carry a Lifestyles code, used to target mailings.

The challenge of these mailings, says Dunn, is to strike a balance between reinforcing shopping behaviour, by saying 'thanks very much', and encouraging changes in it. In July 350,000 young families received mailings geared to their tastes,

offering ideas on summer activities and discounts on related products.

The insight offered by Lifestyles is also having a more subtle influence on Tesco strategy. By modelling Lifestyles to geodemographic and Electoral Roll information, Tesco can predict the Lifestyle make-up of a store before it opens and allow local management to plan an appropriate range of products. A Tesco Metro in flat-land might, for instance, have a range to suit single-occupancy shoppers.

Sensitive indicator

How does Tesco Lifestyles differ from the classic lifestyle models such as ACORN and Mosaic? "Lifestyles builds on the ideas behind those classifications," says Dunn, who began her working life working on Census data in the 1980s. "The difference is that Lifestyles is a much more sensitive indicator: it changes as shoppers' behaviour changes. For instance, you can spot where an area is beginning to hurt through unemployment. When you have such a massive tracker of consumption, where you let people define their own behaviour, you can be sensitive to change."

Tesco's 2,000 or so suppliers also benefit. As an offshoot of the initiative, reports are available measuring how a particular brand stacks up against a category, what type of shoppers buys that brand, and so on. Procter & Gamble, Mars and Walkers are already using Tesco Lifestyles to assess what it implies for their customer strategy.

Direct mail is not Tesco's only route to Clubcard holders. More recently, customers have started receiving money-off coupons on their till receipts for products that match their Lifestyles profile. Tested in stores throughout Wales, the till coupon scheme has the advantage of being significantly cheaper than direct mail and may presage a cut-back in Tesco's mail useage.

Of course, the ultimate test of Lifestyles is what impact it has on the bottom line. To that end, Tesco says that a recent statement containing money-back reward vouchers and more than four million variations on coupons resulted in a sales uplift of over \$30 million. The sales effectiveness of new stores has increased by 50 per cent since adopting the Lifestyles approach.

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