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DATA RULES. OK?

"Research evidence is the answer to sloppy thinking." Thus David Willetts, celebrated in the UK Conservative Party as Mr Two Brains.

When even the politicians back evidence-based reforms, you know that the day of data has finally arrived.

Now, commentators everywhere are singing the praises of Big Data, reports suggest significant productivity and profit gains versus competitors[1], and marketers are hurrying to put information to work.

Given the hoopla, you'd be forgiven for thinking that this is something quite new. But data analysis has a long history. In the 1980s, companies like American Express were using the Champion and Challenger model for direct mail, to identify the creative and content that would maximise response. Expanding the approach, Sir Keith Mills, founder of the Air Miles programme launched in 1988, was a pioneer in making the ability to collect data on customer behaviour an essential element of the coalition programme's value to its partners.

By 1994, Tesco was sufficiently convinced that it launched the stand-alone Clubcard specifically to gain information on what customers bought. Presenting early results to the board, analytics firm Dunnhumby's story prompted then Chairman Lord MacLaurin to comment "What scares me about this is that you know more about my customers after three months than I know after 30 years."[2] Taking the concept to an industrial scale, in the 1990s Wal-Mart was believed to operate the largest data warehouse in the world, then holding some 180 terabytes of data.[3]

And the technology developed right alongside: back in the mid 90s, Air Miles Netherlands was mailing custom-built voucher offers to collectors, the selection based specifically on previous purchase patterns.

So crucial has data become that companies are re-defining themselves around it. Josh Silverman, President of U.S. Consumer Services for American Express, puts it this way: "We think of ourselves as more a data company that happens to be in financial services."[4] In China, Alibaba dominates internet retailing, where it handles more merchandise volume than eBay and Amazon combined. One of its strategies will be to use the data it gets from e-commerce to expand into new areas. "We

[1] "Making advanced analytics work for you," *Harvard Business Review*, October 2012
[2] *The Independent,* 10 March 2003
[3] *Wall Street Journal*, 8 March 2013
[4] *Payments Source,* 11 February 2013

have the best data mindset in the world," they boast. Zeng Ming, the company's chief strategy officer, points to finance as a way its data can give the company an edge in new markets[5].

Observers note that companies are becoming more adept at combining data from different sources to generate new strategies: a group of LSE students found that discounts offered on Tesco car insurance varied from 1% when quoting an unused Clubcard to as much as 18% for one that was frequently used.[6]

Thankfully, perhaps, the days of decision-making by hunch, or HIPPO[7], or what the Chairman's wife thought, are behind us.

So it's all plain sailing now? Well, no.

Painful experience is showing that traps lie in wait for the excited marketer: the difficulties can be grouped under five main headings.

- What data to collect
- How to collect it
- How to manage it
- How to use it
- When to use it

What data to collect

Rule 1: Beware of noise

It ought to be obvious, but for a business to identify that the majority of its customers have surnames beginning with R isn't terribly helpful.

An exaggeration perhaps, but the principle remains: only collect data that are actionable. It's fair to say that what's actionable may not always be obvious – that links can be made between two otherwise apparently independent variables. The example famously quoted is the US supermarket chain's finding that disposable nappies were bought at the same time as packs of beer. Splendid, if true, and clearly actionable - but it turns out to be a myth.[8] Of course, there is always the possibility of finding previously unsuspected patterns, but commonsense suggests not confusing correlation with causality: at the very least, a third and more important characteristic may be driving both behaviours.

For a fascinating – and slightly frightening – study of the challenges in analysing medical statistics, see an excellent article in the London Review of Books for 11 April 2013: http://www.lrb.co.uk/v35/n07/paul-taylor/rigging-the-death-rate

In practice, at this stage, it's probably best to stick to transactional data: building in unstructured material – social media traffic, for example – offers both value and challenges, and should be left till the mainstream activity has proved itself.

How to collect it

Rule 2: Choose your moment

There is a temptation, too rarely resisted by online marketers, to try to collect information from a customer as soon as he clicks in.

[5] *The Economist*, 23 March 2013
[6] *The Economist*, 5 November 2011
[7] Highest paid person's opinion…..
[8] http://www.dba-oracle.com/oracle_tips_beer_diapers_data_warehouse.htm

Far too many websites require potential customers to "create a profile" before they will provide even basic price and product information. Certainly, an insurer will need some detail to assess risk: but should a prospect really have to provide her date of birth, marital status and occupation to get a quote for pet insurance? This ham-fisted, and all too transparent collection under another guise of information required for marketing is a guaranteed turn-off. The more affluent, desirable, and usually time-poor, customers will see through it straight away, with predictably dire effects on click-through rates and repeat visits.

On the other hand, once a customer has provided the detail, it's reasonable to encourage him to update it when necessary.

How to manage it

Rule 3: Only connect…

For the marketer, the essential requirement is that information be easily available. Leaving aside the technical details about the hard and software needed to deliver this, there is an even more fundamental question. Who owns the data?

Coalition rewards programme managers are painfully aware of how many hours are spent with their partners deciding just who has access to what customer information, how it can be used and when.

And they're not alone: banks also have a problem with ownership. The origin here is the product silos that still bedevil any programme that needs to cross internal boundaries. Issuing doesn't speak to Acquiring, Retail Banking doesn't speak to Insurance, Savings Products don't speak to Lending Products…and the upshot is that each of them will likely have built its own database to meet its own needs.

Even within the same organisation, parts of the business can have quite different answers to what seems to be the same question. Asked to quantify a key business measure, two units of the same financial services client recently gave widely varying answers. The reason? They saw the question in different contexts.

Almost certainly, the first step in any Big Data initiative will be to bring together the different sources of information within the institution. Experience suggests that this won't be quick, easy or cheap. Regrettably, it won't always be widely welcomed, either.

How to use it

Rule 4: Budget time, budget money, keep it simple

Reports suggest that, at this time, Facebook holds 100 petabytes of data, and generates every day 500 terabytes of data.[9] Just to put that in perspective, one petabyte is the equivalent of 20 million four drawer filing cabinets full of text.

Of course, that's at the very extreme end of data storage. But it's likely that an institution of any size will hold a great deal of data. Managing it and getting useful information out of it requires specialist tools (Bayesian multivariate analysis, anyone?) and expert people to use them. And that expertise is expensive. Accordingly, following in Dunnhumby's footsteps, a growing number of businesses specialise in the arcane arts of data management, interrogation and statistical analysis. The alternative is to hold vast amounts of information sitting in a data warehouse, gathering metaphorical dust. And Yes, it does happen.

Either way, whether data analysis is managed in-house, or outsourced, it makes sense to keep the first projects simple: this will build confidence among corporate customers and kibitzers alike.

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[9] *Wall Street Journal* 8 March 2013

When to use it

Rule 5: Care required

Being able to do something doesn't mean you should do it.

As an example, too many price comparison sites, excellent in other ways, ignore this simple rule: a visit to them is likely to unleash a positive blizzard of follow up emails, banner pop-ups, "targeted ads" and the like – all probably permitted under the Ts and Cs, but all too likely to provoke a negative reaction among site users.

Given the growing concerns about privacy, it's not much of a stretch to imagine a future regulator requiring companies collecting data for marketing purposes to provide the equivalent of a "Key Facts" statement setting out the implications of a positive sign-in. As we've seen before in marketing, undiscriminating use of a powerful communications tool can lead to heavy restrictions on it.

Just a thought, but it would be interesting to test the effect of postponing the marketing questions until after a customer agrees to authorise their use. That at least would be more honest, and may well reduce abandon rates.

At the risk of over-simplifying, the choice is between being Tesco or Morrison's: between expensively collecting and using customer information, or deciding to plough the money into price cuts. Data allows even the biggest corporation to know nearly as much about me as the corner shop: it's a huge opportunity. But it has to be handled responsibly and carefully: properly managed, it can greatly strengthen customer relationships.

Good thing? Bad thing?
"…as if waited upon by a single salesman with an unfailing memory and uncanny intuition about their preferences." The Economist, 23 March 2013

Badly handled, it can destroy them.