

# Doing our history homework

**Laura Dawson** says we must learn the IT lessons from the past as we seek to exploit the potential of big data.

THIS MAY SEEM odd, but I am going to start with a reflection on another big information initiative from 20 years ago – electronic document and records management systems (EDRMS).

Call me old-fashioned, but I hanker after the days when things were filed. When I started working in government IT in the mid-1980s, we had a group of people who worked in ‘the registry’.

That was where information about what had happened – by whom, to whom, and what led to it – was stored in cardboard files, with different colours denoting varying levels of sensitivity.

## Explosion of information

In the 90s though, the registry was decommissioned and, at the same time, there was an explosion of information. Now, many people could generate their own data and reports, and did so with gusto.

They didn’t just file finished reports: half-written reports, excerpts without context, and lonely photographs were all abandoned in the wastelands of many server hard drives – usually filed under ‘Norman’s folder’.

The registries had gone and we all did our own filing. Well, in reality, no we didn’t because we didn’t know how to.

So began the need for – and hunt for – EDRMS, and the subsequent implementation projects that all-too-often failed. The cost of those systems must have run to many millions of pounds. What is harder to quantify is what, if any, benefit they brought, and what were the reasons for their failure?

Eventually technology came up with an easy answer: the search engine. At last, we no longer had to feel guilty about using our network servers as virtual lofts or garages. We knew we could get the data back somehow. EDRMS were effectively forgotten, but their underlying problems are still with us today.

“ We wasted millions on EDRMS – our problems then remain highly pertinent ”

It is worth pausing to remember why EDRMS were so problematic, because the issues we had back then remain highly pertinent now, as we try to understand and make the best use of ‘big data’ (see figure 1).

You will have read many definitions of big data, but rather than looking for another definition I would prefer to think about what big data can do for us – why do we want it? What is the outcome we are looking for?

I don’t mean a long specification of requirements but rather a short,

easily understood ‘elevator pitch’ on why a not-for-profit should invest in big data.

## Dipping our toes in the water

When a charity considers investment opportunities there are two key questions it needs to answer:

- How can we raise funds more efficiently, and at greater scale; and
- How do we know we are meeting our charitable objectives as effectively as possible?

The first question is, for our sector, the equivalent of ‘sales’ and the second question is the equivalent of our return on investment – sometimes referred to as impact or reach.

In the past we collected our data on a transactions basis, and if we wanted to know more we commissioned market surveys and audits.

Figure 2 gives a flavour of how we used to gather intelligence, and how we do it now. The table is only illustrative, but it does give a sense that data can now be available to us more immediately than merely at the end of a month or a quarter.

With the right skills and tools, we can now bring outcome information to managers and decision-makers in almost real time and – if done well – with greater confidence than ever before.

### figure 1: Lessons to learn from failed EDRMS projects

- We believed that technology alone would solve the problem;
- We let the project be run and ‘owned’ solely by the technologists, with inadequate business involvement;
- We didn’t optimise processes or look at how people would use the information;
- We didn’t make policy decisions about how information should be tagged and stored;
- We were not sure what we wanted; or what the problem really was – we only knew we had a problem;
- We spent years specifying the system to the ‘nth degree’;
- We were ‘oversold’ on the technology, and
- Our benefits were all about headcount reduction, but they were never going to be realised because staff were not doing what we thought they were doing.

figure 2: Ways of gathering business intelligence – then and now

	Fundraising	Impact or reach
Then	<ul style="list-style-type: none"> <li>• Market research</li> <li>• Internal calculations</li> </ul>	<ul style="list-style-type: none"> <li>• Internal data</li> <li>• Customer satisfaction</li> <li>• Academic studies</li> </ul>
Now	<ul style="list-style-type: none"> <li>• Social-media activity data</li> <li>• Market research</li> <li>• Third-party data</li> <li>• Internal transactions</li> </ul>	<ul style="list-style-type: none"> <li>• Social-media activity, including direct feedback from customers/beneficiaries;</li> <li>• Open-government data;</li> <li>• Internal data; customer satisfaction; academic studies</li> </ul>
Improvements in data analysis	<ul style="list-style-type: none"> <li>• Greater detail on propensity to give;</li> <li>• Greater understanding of donor motivation (what works and what doesn't);</li> <li>• Moving away from 'spray and pray' so marketing can be more efficient.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction of 'leading' indicators rather than 'lagging';</li> <li>• Improved evidence of impact to support policymaking and influence (eg influencing others to act);</li> <li>• Broader appeal and reach in respect of non-financial supporters;</li> <li>• Reducing time taken to gather feedback.</li> </ul>

### Three big points about big data

#### • Big data is not a 'thing'

We hear the term 'big data' all the time; executives go to dinners with their peers and hear promises of high returns and miracle innovations as a result of their 'big data solutions'.

I would suggest there is no such thing as a 'technology solution' for big data, but rather a suite of behaviours, governance, technology, skills and asset management techniques that many in the finance world will understand far better than those in the technology world. This is crucial because of my next point.

#### • Data is the third asset class

As such it needs the same approach as the other two major asset classes in an organisation: finance and people. Organisations have a CFO and an HR director; why do we never see a 'CDO' or a director of data?

Quite often data is the responsibility of the technologists. My concern is that, for the work charities are doing, the approach and cultural norms of technologists may not be right.

It is perhaps an unfair stereotype, but people in technology tend to be somewhat binary in their approach, or black and white. The problem is

that data, and the exploitation of it, is not. Which brings me to my third key message.

#### • Don't confuse accuracy with utility

Now, at this point, a lot of IT and finance people may well be howling.

“ Making best use of big data shouldn't just be left to the technologists ”

Yes, it is true some systems need to have accurate data – finance systems for example – but others, particularly when looking at insight and business intelligence, need only be indicative.

There are diminishing returns regarding data quality when you are dealing with the volumes that big data can generate. Clearly, you need to remove significant data-quality problems (eg those generated by systematic failure) but worrying about data quality in other cases – like dealing with given name versus the name on a birth certificate – starts to become costly and pointless.

The important thing here is to be clear what the purpose of the data will be. If you are doing your year-end accounts, then the level of accuracy



needs to be high; things must balance. However, if you are looking for trends, then the accuracy can be lower.

The basic principle is that you must understand the difference between transactional or operational data (day-to-day transactions) and strategic data. When you chase the accuracy of data, the resources you need increase exponentially – the Pareto principle applies.

#### Specialist skills are needed

The skills needed to deliver insight and business intelligence are more akin to statisticians and strategists than technology specialists. They are specialist skills, and we may not have them in our charities already.

Don't get me wrong, both technology and insight are needed. But considering where to position the responsibility for data and what skills this requires may indicate that the miners of big data need to sit closer to the front end of your work. And, crucially, they need to be excited by data and what it can do to support your charitable operations. ■



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