Spreadsheets Future Proofed

Bill Cawley – June 2020

It is perhaps unnecessary to point out that there are problems with spreadsheets – others have done so better than I can – for instance here or **here.**

But if spreadsheets are so dangerous, why do businesses continue to place so much reliance on them?

The obvious answer is that they have no alternative. All the fancy applications that gather up business data from different sources and show snappy graphs of the number of people who buy ice creams on sunny days are no substitute for a spreadsheet that allows the operational teams to construct their own models.

But it's more than that. The one skill that can be assumed in any analyst is an ability to use a spreadsheet. In this group of people, it's even more important than their ability to use PowerPoint or Word. But all the fancy applications need to be learnt.

Which is why, if spreadsheets are really so dangerous, the solution is not to try to replace spreadsheets with other applications, but rather to make spreadsheets safe. The only way that this can be done is to extract the data from the spreadsheet, so that it can exist independently from the spreadsheet, and to introduce true auditability into the data.

This logic is so obvious that it's very surprising that nobody (not even Microsoft!) has managed to think of a way of achieving this. Yet the problem virtually defines the solution

First, it is clear that the 'database' behind a spreadsheet cannot be a relational database, unless it is a single-table, people in the Business Intelligence Team simply do not have the skills to create and maintain relational databases.

Second, it is evident that individual items of data need to be tagged with meta-data – the source of that item of data. In accountancy terms this can be called an 'audit', but I would prefer to resort to antique-dealing terms and refer to 'provenance'. Provenance, it seems to me, is exactly what we want when we refer to any fact rather than simply a number. Numbers are a subset of facts in general.

Third, we need to ask how people 'read' a spreadsheet. If I point to any particular item in a table, how do you know what that value means? The logic is also inescapable – we understand the value in terms of its 'context'. By 'context' in this instance, I mean the row and column headings in the sheet as well as any values in the headings which narrow down the options.

I'll leave these thoughts here. We at Azquo have long believed that we have the answer to all these problems. It will be the dawn of a new age for spreadsheets which can be used without exposing the organization to risks, to opaque numbers, and to painstakingly slow production of the numbers.

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0203 524 5203

info@azquo.com