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Satswana Data Briefing

1   Purpose

The aim of this document is to provide a briefing for the lay individual that will explain the risks and restraints associated with managing information on a computer, especially with regards to the protection of personal information – a requirement of the Data Protection Act 2018. To start at the beginning, data is just a word meaning information – your name and address for instance – something about you that has to be stored and referenced. Once upon a time it would have been written down on a piece of paper, and there is no essential difference when you store that in a computer, except that it can be managed and manipulated by a software program to give you a range of answers. Do not, please, be bamboozled or put off by the language of computing because it has all been invented over the last 50 years or so and refers originally to something that the writer understood and sought to explain. For instance a "bug" – a word often used to describe a problem in computing – was originally a moth that became electrocuted in an early IBM machine, creating problems for both parties! What went wrong? "There was a bug in the computer"!

2   What you can do

We will go into some depth as to why, but straight away may we please say that every Trustee/Governor/Head/Leader in Education/IT expert – indeed senior elements of both Local Authorities and the Department of Education should be using this document to challenge every single contact they may have within the providers of software to the community and saying "you are not doing a good enough job, when are you going to give us the sort of support tools that we should expect in order to provide 'privacy by design and default' as demanded by the original GDPR?" That is Satswana's true purpose, to create sufficient understanding to mobilise a clamour for change which, in turn, will mean both designing in privacy, and then delivering it by default. That will be so much more secure and save staff endless time and anxiety. We also contend that it should be far cheaper to licence, run and manage, thus creating a return for your investment in Satswana.

3   What is currently so wrong?

Put simply you have far too many pieces of information being provided to you from different places, all of which need to be fed with the same detail, which do not talk to each other. You would not do this on a paper file, you would try and write everything you needed in one place, but early computers were designed to do just one task and "specialist applications" emerged – all requiring unique staff training, with their own cost. Thus you have a MIS system that requires another program to support SEN children, neither of which includes any sort of accounting, let along budgetary control and financial management, indeed the two programs you probably use for that will not manage the payroll – that again will be separate. Add to that communication programs like Parent Mail or Studybugs – talk to Governors and you need Governor Hub apparently. Hang on, we haven't managed school meals funds yet – and so the

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list goes on, piling on cost, inefficiency and (in security terms) adding risk every time the information is duplicated in a different place.

4   What is the solution?

We will explain the terms below, but for those who will only read two pages we have to cut to the chase. The answer is to demand for education what every large corporate takes for granted, and that is an information system that links every aspect together in one seamless deliverable. There are no "unknowns" about this, indeed many Governors and other external influences will use such systems every day. No legal firm (for instance) would operate without a practice management system with automated billing and integrated financial reporting. Such systems are designed around a relational database structure – we explain the jargon later – which are easy to write, maintain, and (crucially) change when required. Every one of your providers knows this, but to date it has been a soft, cosy and very profitable ride for them. Nobody has really complained so they have not invested in change. The paradox is that anybody who does a better job well will clean up, so why do they hold back? Even more paradoxical some newer MIS offerings are using a relational database, but then do not include accounts – why? Perhaps the recent purchaser of SIMS will provide the answer – certainly the proposed SIMS 8 (we understood) included integrated accounting instead of FMS. To return to the comfort zone of the lay reader we should stress that we are saying that the suppliers can do it, and know how to, it is just that whilst they got away without investing in a revised product, you ended up paying and working three times as hard as you needed to. In GDPR terms, it is also massively more risky.

5   Database structures

We are going to get more technical now, but hopefully in a manner that you will feel entirely comfortable to follow. "Database" is simply the term used by computer geeks for the information held by the machine, and it is manipulated by the program to give you what you then see on the screen. Historically this was designed to run as fast as possible, providing a motorway for rapid travel through the system – it was ideal for applications such as banking and was described as being "hierarchical" – a simple old fashioned English word that means it is organised according to its rank. Just like driving on a motorway it was (is!) fast, but you cannot get off once you start, and it is not a good idea to stop – thus it is inflexible if you want to do that.

By contrast a "relational data base" is like taking a country road in that you can get almost anywhere from anywhere else, stopping when you like, changing your mind and indeed asking directions. It is very much slower doing that of course, but we are still talking very high speeds in absolute terms, certainly fast enough for any educational requirement. "RDBMS" (if you want to sound very clever!) has another feature in that you can ask it questions that were never programmed into it in the first place as in "how many children had measles in year 6 in 2017". This is described as a structured query language and you may have come across its acronym "SQL".

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Thus what we should be asking the software supply industry to provide for the use of education is a program that can link everything we want to know together in one place, at one time, as we need it. Ideally that should be from one supplier, but it can also be from many, just so long as they talk seamlessly together. To say again there are no "unknowns" about this, indeed some readers may be familiar with the way Quickbooks integrates seamlessly with the Method CRM package, the Catholic Church responsible for schools in Western Australia have built an entire MIS system using just those tools. In the UK we need an exchange of information with both Local Authorities and the DfE for reporting purposes, so it is a harder task, but not insoluble.

6   Cloud systems

Moving logically forward it is likely that an integrated system would be hosted "in the Cloud" which means that you can get to it from anywhere, assuming you have a broadband connection. The real benefit here is that the cloud providers can normally provide a much higher quality level of network protection, with more skilled support staff than any school could ever afford. Having said that, as this is written, a former local authority provider has been "down" for almost a week and have not yet informed their client schools what the problem is. The lesson we fear is that it is not just the software providers who have failed to continuously update their product to the latest possible technology. It is a big challenge for the generally non-technical leadership of schools to demand optimum standards from both software providers and the related delivery infrastructure. Thus meaning that there is an open market opportunity for any organisation that can really deliver in a manner that everybody can be happy with.

7   Processors

Which brings us to the question of processors, those organisations who ask you to provide them with either your data, or access to it, in order to provide a third party service. Satswana has huge concerns over the currently casual manner in which processors are accepted. We note that one has been recommended by local authorities despite having a negative net worth of several million pounds. Can you really be confident that they are going to spend what it takes to keep your data safe? In analysing the Processor list we provide to clients we seek to consider the financial strength and the depth of the leadership as well as their compliance with an appropriate Privacy Policy. Ideally however a proper system would mean that most of these processors would not be required, creating much safer data – because clearly the more times it is stored in more places, the more the risk of an exploit must rise.

8   In summary

This paper has sought to explain in lay terms that change is required in both the quality of the software provided to education and in the manner of its delivery. The purpose of Satswana in doing so is to fulfil their mission to their customers of ensuring "privacy by design and default". We contend that the skills exist to make the

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change, but corporate inertia has become too comfortable with the status quo, and that therefore the leadership within education has to demand both change and significantly lower licensing costs – together with a reduction in the training time, experience and commitment that is also so costly. The result will be safer data, less stress, better value and greater efficiency. Not demanding such change cannot be considered an option.