Switching schools to Cloud MIS: What will really get things moving?
Vanessa Pittard

This paper examines local authority aspects of switching to Cloud management information systems (MIS). My last paper identified distinct and quantifiable benefits from Cloud MIS for multi-academy trusts (MATs,). Local authority (LA) contexts are different, however. Can these benefits and cost savings be translated to LA-maintained school contexts? And what steps are needed to lead and manage this change locally?

A shift of perspective

MATS and Cloud MIS

Last November I published a White Paper setting out the case for Multi Academy Trusts (MATs) to adopt Cloud MIS[1]. Harris Federation switched its MIS in 2016. As a result, the Trust achieved significant cost savings and considerable operational benefits.

The case study demonstrated the potential for MATs or local authorities (LAs) to save £650,000 per year for every 50 schools in their MIS operation. Harris achieved this level of savings per school through a combination of lower licence/implementation costs, simplification, savings on infrastructure and reduced maintenance and support costs.

Not only this, the switch was straightforward – a smooth process of data migration, particularly given the size of the Federation and complexity of previous systems.

Cloud systems are attractive to MATs as they offer more straightforward ways of amalgamating and analysing data at Trust level and offering 'any place, any device' access, to data, suiting ways of working across schools in Trusts. They also offer cost-effective scalability – something that's helpful to growing Trusts.

From MATs to LAs

Cloud systems reduce risks to schools in relation to disaster recovery (DR) and security and integrity of data – good reasons alone for any local organisation commissioning MIS services to look for alternatives to legacy systems.

MIS licence or implementation agreements for the large majority of schools are held by LAs or LA-owned bodies. There are some similarities between LAs and Trusts in the 'MIS relationship' with schools: LAs often hold single agreements on behalf of schools and can play a similar role in commissioning and managing related IT systems.

Despite these similarities, however, the typical LA-school relationship is more complex.

Decision-making can be more difficult: individual schools and Schools Forums will have their views and preferences. The LA and/or local traded service can play a leadership role, but is rarely in charge.

There is then the issue of whether to aggregate – adopting a unified system with the aim of achieving economies of scale, or providing choice for schools. Managing transition presents further complexities.

Call to Local Authorities

Based on the Harris Federation figures, I put forward a case that a 'typical' local authority with 100 schools using legacy MIS could generate savings of up to £1.3m annually for schools by switching to a Cloud system. LAs could also reduce MIS support costs, releasing valuable resource to the frontline where it's needed.

I wanted to test these figures and assumptions, so I asked local authorities to share data and evidence.

I've had good conversations with several LAs, but it was Newham's traded service organisation Newham Partnership Working (NPW) that came forward with detailed figures and insights, the analysis of which I've set out later.

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[1] https://www.vanessapittard.co.uk/single-post/2017/11/01/MIS-matters

Recap: Why Cloud MIS?

I put forward a compelling case for MATs to switch to Cloud MIS in my previous paper. For Harris Federation the switch was relatively straightforward and has paid off.

Asif Mangera, Head of Education ICT and Transformation at NPW in Newham, has been keen to point out to me that it's not about cost alone, nor Cloud as a starting point. I agree.

Asif's perspective, reflecting NPW's approach, is that systems should be selected on the balance of cost, quality and value (benefit to schools). For Harris, a Cloud MIS was the best answer to all three.

Quality depends much on the functionality and usability of software: there can be good and bad design in both on-premise and Cloud. Both memory/processor (re. legacy) and connectivity (re. Cloud) bottlenecks can affect user experience (the latter of course can be addressed through solutions such as Meraki or other approaches).

But the features of Cloud give it a genuine quality 'head start' over legacy systems.

Government Digital Service (GDS) perspective.

These features are behind 'Cloud First' policy[2]. The Government Digital Service (GDS) advocates Cloud solutions with two broad aims in mind: to reduce public sector costs (significantly); and to lessen risks resulting from the complexity inherent in legacy IT systems, notably reliability and security risks.

'Killer approach': what will really get things moving?

School Business Manager (SBM) role

I asked NPW what they thought would help deliver a move to Cloud MIS across maintained schools. An important enabler in their view is the backing and energy of School Business Managers (SBMs). But buy-in from SBMs is far from automatic.

In the context of squeezed budgets, SBMs are pivotal to the operation and sustainability and of schools. And there have been moves to raise their profile to recognise their role beyond budget management[3].

In NPW's view, SBMs need recognition and support for the role of 'strategic change initiators', enabling improved outcomes for stakeholders (parents, teaching staff, support staff and children) through long-term planning and change management. Framed in this way, IT systems look different.

At present, MIS responsibilities are diffuse and there are few incentives to drive change.

A new role and recognition for SBMs could change this - focused on outcomes through longer-term consideration of cost, quality & value.

SBMs don't need to be technical experts, but they should ask the right questions (take due diligence) and adopt a longer-term view. NPW encourages such a mindset and approach through its conversations with Headteachers and SBMs.

In practical terms, there is much that can be done locally and nationally, for example:

- Schools Forums looking at total IT costs and responsibilities towards achieving savings.
- Advice and training for SBMs to seize opportunities for better value, including tools to analyse costs over time.
- SBM roles as 'strategic change initiators' being reflected in Institute of School Business Leadership (ISBL) standards or fellowship criteria[4]
- Recognition for SBMs who achieve savings and add value through digital transformation – in performance rewards or wider schemes, possibly.

Finance systems

The introduction alongside Cloud MIS of new finance systems is a big change for SBMs used to Capita's Financial Management System (FMS). But there's no sense in on-premise systems if the MIS is in the Cloud.

Partner finance systems that operate seamlessly with the MIS need to be adopted. Reporting capabilities should be robust and easy to configure to lessen burdens on time-constrained SBMs, who can then focus less on detail and

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[2] See Annex – table of benefits.
[3] See for example: https://insights.thekeysupport.com/2014/11/28/how-do-you-define-the-role-of-a-school-business-manager/
[4] https://isbl.org.uk/www.isbl.org.uk/professionalstandards

accuracy and more on analysis, planning and management.

Cloud finance systems that are used *across* sectors can be flagged to SBMs as a benefit – a chance to gain transferable skills if they ever want to change sector.

Simple MIS switching

I highlighted fear of disruption in my previous paper on MATs and MIS[5]. All LAs and schools I spoke to cited this fear as a barrier to change.

Harris Federation's switch to Cloud MIS went smoothly despite the complexity of previous systems and the number of schools involved. Why was this?

The Federation's Cloud MIS supplier[6] offered a well-tested, comprehensive switching service with no disruption.

In the G-Cloud digital market place (see p.10), suppliers set out the scope and detail of their service, including each supplier's approach to 'Onboarding and offboarding' and 'Data importing and exporting'. It's easy to gauge how comprehensive these are and what's included.

Training is a crucial element. Well-timed and effective training and follow-up support from the supplier make a big difference.

Under the bonnet of costs and procurement

The analysis above highlights crucial 'on the ground' issues in achieving better value through digital transformation. But there are 'systemic' issues too.

Five-year thinking

The DfE strongly encourages schools to plan their budgets over a 3-5 period[7]. Schools and LAs sometimes fail to consider longer-term costs, putting too much weight in purchasing in the case of MIS on initial costs such as licencing, training and migration.

Interestingly, Capita's practice has been to not to charge upfront licence fees for SIMS to LAs with an existing licence – going back in some cases as far as the 1990s. This would place them at an advantage if whole-life costs aren't looked at fully.

Legacy MIS infrastructure and 'annual entitlement' costs are higher than those for Cloud, however. When costs are looked at over a 5-year period, Cloud MIS comes out cheaper.

Shifting costs elsewhere

Whereas LAs are not charged upfront licencing fees when re-procuring SIMS, Capita levies a fee of up to £10k on school conversion to academy status – in effect shifting MIS costs elsewhere. This accounts for a substantial proportion of the conversion grant for new academies, impacting on scope for other investment.

Other suppliers of course charge licensing fees for their MIS package, but none charges schools to *relicense* on conversion to an academy.

Clearly, MIS costs are not always what they seem; LAs need to consider costs 'in the round'.

The future looks different

Towards a healthier market

Healthy competition is a good thing; it generally encourages keener pricing and higher-quality services. But such competition is a challenge when one supplier dominates.

In 2010, Becta[8] reported on school MIS and value for money, finding a "*worrying picture regarding the level of MIS procurement activity that the Market Study considers as potentially compliant with EU and UK procurement law*"[9].

In the intervening eight years, open procurements are still patchy – most LAs haven't procured competitively or used compliant frameworks to do so. But all this is about to change.

All change: Cloud SIMS

In April 2017 Capita announced its proposed move to Cloud, starting with the release of a ground-up redeveloped version of SIMS for primary in spring 2018. Capita will follow this with Cloud MIS for secondary and independent schools and a new finance solution.

It's a significant moment for MIS in schools: not 'another update' but a new SIMS software backbone. This change is commercially and legally significant. As a result, an MIS shake-up is coming.

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[5] https://www.vanessapittard.co.uk/single-post/2017/11/01/MIS-matters

[6] Bromcom Computers Plc

[7] https://www.gov.uk/guidance/schools-financial-efficiency-budgeting-with-a-3-to-5-year-plan

[8] Until 2011 Becta was the UK body for technology in schools, after which its functions were transferred to the DfE.

[9] Becta's MIS report can be found here:
http://dera.ioe.ac.uk/15716/1/school%20management%20information%20systems%20and%20value%20for%20money%202010.pdf

As Capita is launching a new software backbone, LAs can't just switch to the new system, as they have with previous updates; they're obliged to run a competitive process.

As background, Becta investigated commercial-legal issues relating to upgrades as part of its MIS market report. Becta found that an upgrade from a network-based to a Cloud-based product is:

"*a change which would not be permitted under the only-supplier exemption. This change is likely to be regarded by the courts as sufficient material to require the change to be competitively procured by the contracting authority.*"[10].

Indeed, regardless of the 'Cloud' aspects of the software, there's a risk that LAs may have already overstepped their obligations. Becta reported that exemptions do not include:

"*anything that could be acquired from other software vendors such as new software modules or additional functionality*" or "*incremental changes to a product which were shown over time to have resulted in the supplier developing new areas of functionality*"[11].

Other MIS suppliers have long been frustrated that "ever-greening" through incremental changes to SIMS has swept away a desire to change MIS, erecting "barriers to market" for other suppliers – a concept covered in the 2014 Office of Fair Trading (OFT) report on public sector ICT[12].

I'll avoid getting into too much legal complexity or debate. Suffice to say, Cloud versions of SIMS are different products; it means that LAs need to run compliant procurement competitions.

LAs – capacity and role

This presents potential issues. Many LAs, as a result of the squeeze on budgets and reduced services over several years, no longer have the teams they had to run technical procurements. Organising such a procurement from the 'ground up' is challenging and may even be impossible for a large number of LAs.

But this challenge can be addressed through the use of central procurement frameworks. Such frameworks are in place to reduce legwork and complexity, better enabling LAs to act as strategic partners to schools in broader digital transformation to deliver better value and outcomes.

More change: GDPR

Following publication of my last MIS White Paper, several people asked whether I thought that General Data Protection Regulations (GDPR, which replaces the Data

Protection Act in spring 2018) have a bearing on Cloud MIS.

They do, because (A) Cloud MIS switches "Data Processor"[13] responsibility from the school to MIS provider, and (B) requirements relating to data security are better met by Cloud systems[14]. Security is a key reason that GDS promotes Cloud First.

Schools of course need to consider where data is stored when purchasing services in the cloud – performing due-diligence to be satisfied that their data will be treated appropriately. The DfE provides advice on this[15].

But it comes down to more than how 'well-locked away' the data is. This is essential of course, but data security has crucial behavioural aspects.

A school server using a modern software platform can lock away data securely, but data is unlikely to be accessible to those who need it without risk – for example, that individuals store data on their own device, write it down, or compromise passwords due to the number of apps and therefore logins required.

GDPR places a requirement on accountable organisations to demonstrate not only that they comply, but how[16]. It's no wonder therefore that schools are considering the value of Cloud in light of GDPR.

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[10] Becta MIS report p.20
[11] Becta MIS report p.20
[12] http://webarchive.nationalarchives.gov.uk/20140402182449/http://oft.gov.uk/shared_oft/market-studies/OFT1533.pdf
[13] See ICO definitions: https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/key-definitions/
[14] See: http://www.naht.org.uk/welcome/advice/advice-home/governance-and-infrastructure-advice/data-and-its-use-in-schools/
[15] https://www.gov.uk/government/publications/cloud-software-services-and-the-data-protection-act
[16] https://ico.org.uk/for-organisations/guide-to-the-general-data-protection-regulation-gdpr/principles/

Case Study

NPW in Newham: aiming for 'outcomes first' ICT

A context like many others

Like many LA areas, the large majority of Newham's schools use SIMS. And, like many local traded services organisations, NPW offers technical and support services for SIMs as an accredited support provider.

NPW provides a range of technical services to local schools, procuring and managing ICT systems and services on behalf of many schools locally. NPW is owned by local schools, but schools can nonetheless opt out of NPW's services. So the organisation can find itself competing with commercial suppliers for ICT contracts.

NPW, like many organisations of its kind, continues and thrives through its reputation for integrity and value: it is trusted by schools.

MAT conversion - a driver for change

Arguably, NPW's context is different to some, however. First, it is owned by and is therefore is directly accountable to schools rather than the LA.

Second, it has taken on a strategic role working responsively alongside Newham LA to support schools through academy conversion, helping to ensure that IT infrastructure and systems are fit for the future.

Schools in Newham are converting to academy status at a relatively high rate,

> ## Newham Partnership Working - NPW
> NPW is a not for profit and mutual organisation, owned by schools themselves rather than the LA. It delivers support services for schools in Newham and provides a 'one stop-shop', offering packages and solutions in the areas of HR, ICT, governor support, school support and the commissioning of education services to support school improvement. This includes technical services, IT procurement support and strategic IT consultancy.

forming MATs with the support of the LA, whose aim is to ensure that the resulting partnerships and arrangements produce the best outcomes for Newham's schools and children.

The process casts a spotlight on the infrastructure and systems required by schools both on conversion and Trust expansion. And this in turn has led NPW to develop its proposition and overall approach to ICT services.

'What do you want to achieve?'

NPW's approach follows a simple principle – start with what schools or MATs want to achieve. NPW's role is to help translate this vision into an accompanying digital strategy. This entails thinking about the longer term – both in terms of the aims and plans of the school or MAT and technology change.

It's not about choosing tools; it's about the strategy. The tools come after. Business processes and systems should be designed or determined 'for the end-game'.

Value proposition

NPW's discussions with schools about systems and implementation consider the

balance between cost, quality and value, as together these determine outcomes.

As the next section demonstrates, NPW takes a rigorous approach to examining costs, adopting Total Cost of Ownership (TCO) methods[17] to reveal the true and longer-term costs associated with systems.

> ### LEADING LEARNING TRUST (LLT)
> NPW was asked to quote for a server refresh due to LLT's ageing infrastructure. A server-based MIS wasn't ideal in light of potential MAT growth and lack of tools for Trust-level working and reporting. NPW proposed a scalable and accessible technology stack using the capabilities of cloud computing, to deliver outcomes rather than the endless cycle of server refresh with limited gain.
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> NPW identified cost savings of around £80k over 5 years for two existing schools and the change paved the way for the Trust to grow its infrastructure in a sustainable and cost-effective way. The strategy of integrating ICT in light of current requirements and future aspirations was central to achieving a sustainable model capable of delivering all round value.

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[17] See: https://www.gartner.com/it-glossary/total-cost-of-ownership-tco

Total costs for on-premise versus Cloud solutions
Back to where I began

I started this paper citing my call to LAs for data and evidence, to assess the likelihood of the cost savings from Harris Federation's switch to Cloud MIS being generalised to an LA context.

Harris Federation considered total MIS costs over five years. MIS licencing was just part of the picture; the analysis included cost of infrastructure, applications (apps), SMS fees, maintenance and migration. Annual savings from the Cloud MIS operation compared to the legacy client server solution were equivalent to saving £650,000 per year for a group of 50 schools.

NPW's TCO model and server-less schools

Part of NPW's role with converter academies and Trusts has been to work with them to determine the best approach and systems to use centrally. Conversion to academy status confers new responsibilities for financial management and reporting, entailing a related review of systems. It also offers a chance to examine MIS requirements in light of joining a Trust.

It is in this context that NPW undertook a Total Cost of Ownership (TCO) analysis for several converter academies, looking at the cost of three finance and MIS scenarios:

- Traditional on-premise (SIMS and FMS, server-based)
- Mixed on-premise and Cloud (SIMS and PS Financials)
- Off-premise Cloud (PS Financials and Cloud MIS – Bromcom)

The backdrop to this analysis is the shift by many schools towards modern, scalable IT infrastructure making use of Cloud services[18], such as Google Domain, which offers free cloud storage for schools.

This consideration was central to NPW's analysis – where schools were planning this shift, it might not make sense to continue with server-based finance and MIS systems.

NPW made comparisons between on-premise and server-less approaches, costing the running of curriculum and admin servers. Savings from moving just one server to the Cloud were marginal – if, say, an admin server was retained to run the MIS and finance systems. The real savings came from being server-less[19].

In fact, NPW's analysis demonstrated that significant savings would be achieved through a reduced need for maintenance and technical support. Schools could of course choose to retain/pay for technicians if they wished and use them differently – supporting users, for example, and therefore adding value.

NPW encourages schools to look in the round at:

- Cost (TCO)
- Quality (Usability, Functionality)
- Value (Benefit to schools, Risk reduction).

With this in mind, Newham's converting schools, with NPW's support, are starting to 'think server-less'.

What about maintained schools?
Translating costs

NPW worked with me to examine how their model might translate to an LA-maintained school scenario. I wanted to model a fairly 'typical' scenario of this kind. I'm aware that there is no such thing, but I anticipate that the scenario set out below is reasonably recognisable in many settings.

Assumptions and adjustments

We made an assumption in the TCO analysis that maintained schools would use a Cloud finance system. For this scenario, costs for the finance system were modelled on those of a commonly-used Cloud finance package[20].

Initial training for this package was modelled at 50% of typical costs, however, on the basis that the training demand is lower, as maintained schools do not need to meet external accounting standards.

Costs relating to academy conversion in NPW's academy model were taken out, and size of school was adjusted to reflect a typical Primary in England (400 pupils). Many local ICT service providers

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[18] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/644845/Cloud-services-software-31.pdf
[19] Defined as de-commissioning high powered servers, replaced with a low powered infrastructure server for local services such as printing and logon.
[20] PS Financials

supply secondary schools and non-maintained schools, but we decided to keep it simple.

The model indicates *minimum* savings that can be achieved in a 'mixed economy' of schools that would more often than not include Secondaries.

Initially, we modelled 12 schools. I then took those figures and scaled them to reflect the average in unitary and county authorities (100 and 340 schools respectively).

Overall savings

This conservative TCO analysis puts the annual savings from Cloud MIS and finance systems, as part of a broader move to Cloud, at around £12,000 per school per year. While the methodology is slightly different from the Harris model, the savings

identified for maintained schools are of a similar order.

Scaled up, savings at the local level would be substantial, equating to over £5.9m over 5-years for a 100-school authority and £20m for 340 schools.

Beyond the crucial benefit of risk reduction, there are strong reasons to switch.

More to be saved: discounts and other costs

A 12 school MAT can expect discounts on software licences, support and training. A 20% discount might be typical for a MAT of this size. One Cloud MIS supplier I spoke to was clear that discounts would apply in the case of LA arrangements. The supplier treats this on a case-by case

basis, but for a group of 100 schools, the licence discount could be 50%, for example.

It's unlikely that this order of discount is possible for legacy systems, suggesting far more than £12k per school could be saved.

Neither does the model factor in client devices and Windows licences. The cost of these can reduce significantly with the use of Cloud.

And 'app' licences weren't included in the analysis. It is difficult in a non-MAT context to model these, as they differ from school to school. But 25-30% of the savings achieved by Harris came from reduced app licence fees because the new MIS included many of these functions. This offers potential for further savings still.

Total cost of ownership comparison of Cloud versus on-premise software solutions: maintained Primaries scenario						
	On-premise, server-based			Cloud-based		
	12 schools	100 schools	340 schools	12 schools	100 schools	340 schools
Annual expenditure						
MIS & finance software licences & hosting	£0	£0	£0	£85,200	£710,600	£2,416,040
Software support	£54,000	£450,000	£1,530,000	£59,400	£495,000	£1,683,00
Software training	£30,000	£250,000	£850,000	£24,000	£200,000	£680,000
Per-pupil entitlement charges	£21,600	£178,000	£605,200	£0	£0	£0
Backup costs	£24,000	£200,000	£680,000	£0	£0	£0
3rd party infrastructure support (admin/curric/network)	£72,000	£600,000	£2,040,000	£14,400	£120,000	£408,000
Technician costs	£240,000	£2,000,000	£6,800,000	£120,000	£1,000,000	£3,400,000
Electricity charges	£7,200	£60,000	£204,000	£2,100	£17,500	£59,500
Long-term expenditure						
Server refresh (5 yr) admin & curric, licences & commissioning	£240,000	£2,000,000	£6,800,000	£54,000	£450,000	£1,530,000
Wifi (Meraki)	£204,000	£1,700,000	£5,780,000	£204,000	£1,700,000	£5,780,000
Migration costs						
Onboarding, including training, data migration, one-off hosting.	£0	£0	£0	£96,464	£803,867	£2,733,148
Cloud migration: inc domain creation, Impero licence, configuration	£0	£0	£0	£98,400	£820,000	£2,788,000
Total annual cost	£537,600	£4,480,000	£15,232,000	£395,673	£3,297,273	£11,210,730
Five-year costs	£2,688,000	£22,400,000	£76,160,000	£1,978,364	£16,486,367	£56,053,648
Five-year saving	N/A			£709,636	£5,913,633	£20,106,352

Managing change
Cost modelling is only the start, but it's essential

The TCO model developed with NPW's support demonstrates the value of taking a systematic look at total costs over a five year rather than a one-year period.

The analysis demonstrates that maintained schools can reduce costs by switching to Cloud MIS in the context of other functions moving to the Cloud. Indeed, the full savings from Cloud domains are only really delivered when the MIS and finance system become Cloud-based too.

This TCO analysis tells us that 'it'll be well worth doing it for the budget'. It also offers insight into the changes required to realise savings: for example, training and redefined technical support.

Realising benefits still requires good planning and change management, however.

Local expertise and leadership

I've said already that Harris Federation found the switch to Cloud MIS relatively easy given the complexity of previous systems and number of schools involved. Change was managed through the relationship between a responsive and proactive MIS supplier under the leadership of an excellent and expert IT team at Harris.

Newham schools, similarly, have the benefit of NPW's expertise and leadership. NPW is strategic and solution-focused. This perspective extends from solving technical and analytical challenges to organisational, local and commercial ones. Its staff have expertise of running change projects in the private sector, where arguably IT transformation is more often focused on gaining better value at the same time as reducing cost. This perspective is invaluable, but it can be scarce in LA support contexts.

> "Schools need professional support with long term vision and strategies to help deliver alternate, sustainable models that generally produce better outcomes for children, staff and parents."
>
> Asif Mangera, Head of Education ICT and

Strategic local partnerships

NPW works closely with Newham LA in a way that enables NPW's work to reflect the needs of local schools more strategically.

Crucially, NPW defines its role not as merely a service provider, but also a strategic partner to schools in digital transformation. The role is relatively new, but it's essential in the context of technology developments that offer the potential to gain far greater value from technology investment.

Relationship with commercial partners

As I highlighted earlier, historically NPW has been an accredited SIMS support provider. Recently NPW also has become accredited for supporting Bromcom Cloud MIS. As NPW came to recognise that there may be value in some schools switching to Cloud MIS and finance systems, it began talking to Cloud MIS suppliers about ways forward.

This discussion has been helpful. There has been 'solution thinking' about finance systems for maintained schools, for example, exploring third-party Cloud finance solutions as suitable options. Similarly, there has been discussion about technical roles, including accredited support roles.

While formal procurement and commissioning is the main show, this discussion – to understand and the technical and other changes needed – has been essential in establishing how NPW's services should develop to meet the needs of schools.

The people dimension: 'What's in it for me?'

Digital transformation by its very definition has an impact on people – users, function managers, technicians, support staff and trainers among them.

NPW recognises the fears that can arise from change of this kind – particularly fears that 'our service may no longer exist'. In relation to the potentially thorny issue of legacy services, change presents opportunities for renewed support and training functions to develop which offer a strong service wrapper for schools.

Similarly, as indicated earlier, school business managers (SBMs) and office staff in schools may have concerns about switching from a well-known system to something unfamiliar. NPW's response is

to work through the 'what's in it for me' (them), which includes an extended and a more generalisable skillset in the use of management information systems and recognition when financial benefits are met.

From understanding change to 'How To' deliver

NPW is thinking both practically and strategically about change in the context of the opportunities presented by modern Cloud IT systems and infrastructure.

They won't be alone in the LA-schools landscape. Like other organisations, they're at the start of a journey. But they're going to take it. For MIS, they're working out how to do that with everyone on board.

But not all LA-level services and organisations are in the same position. Schools and LAs are hard-pressed. Leadership teams are time-poor. I spoke to several LAs who hadn't thought about alternatives to legacy on-premise MIS operations or the inexorable shift to the Cloud and what it entails for services and local schools. Where LAs were starting to think about this, many were concerned that a switch would be difficult to achieve.

But legacy systems won't stand up forever, nor should anyone expect them to. Existing agreements will expire and change is inevitable.

But if LAs want to deliver the savings and benefits achieved by Harris Federation from its

migration to a Cloud MIS, they do this in a complex operational and stakeholder environment. Which is why they say they would welcome advice and help.

As I've mentioned already, support for procurement exists in the form of the government's G-Cloud framework[21] (see the next page), which identifies suppliers meeting appropriate standards[22] and takes organisations through a compliant process[23].

Beyond this support, there's a good case for further practical advice to be made available to LA teams to help them plan and manage the introduction of Cloud MIS on behalf of schools, ideally learning from the experience of successful 'pathfinders'.

Over the next few years, MIS services will need to be newly commissioned. It's a fantastic opportunity to transform the digital landscape in schools to deliver far better value: an opportunity that shouldn't be wasted.

Conclusions

I look back to 2010 when Becta's report on MIS in schools was published. Cloud infrastructure and solutions were at an early stage. Today they're becoming a norm.

As a consequence of Capita's plans for a Cloud version of SIMS, local authorities and LA-owned organisations are about to find themselves at the heart of an MIS shake-up.

The new MIS procurements will offer a unique opportunity for schools and LAs to take a systematic look at costs over time and consider how local services can be remodelled to save money and add value.

My messages to LA teams are:
- Look at total cost of the MIS over five years.
- Understand these in the context of other systems, considering the benefits of all-round digital transformation.
- Reduce the resource pressures of procurement by using an established framework – G-Cloud – to run the process.
- Work with Headteachers to focus responsibilities and establish incentives for achieving savings and benefits, for example through a more strategic SBM role.
- Above all, don't go for an expedient 'fix'. In the words of Jimmy James and the Vagabonds, 'Now is the Time to Get Things Right'.

I want the competitive process to kick in properly. If it happens, costs will reduce and MIS services improve even further. Savings and benefits for schools in the longer term will be substantial.

Acknowledgements

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[21] Lot 2: Cloud Software

[22] NIST Cloud software standards: https://csrc.nist.gov/publications/detail/sp/800-145/final

[23] https://www.gov.uk/guidance/g-cloud-buyers-guide

DIGITAL TRANSFORMATION IN SCHOOLS

Introducing a Cloud-based MIS is a 'switch', which, reflecting this language of consumer choice, can be achieved nowadays far more straightforwardly than many people think.

Digital transformation on the other hand is a journey – towards what a school, partnership or LA needs and wants to achieve from the switch and from other technology change.

When reviewing Cloud MIS implementation locally, it's helpful to consider the place that schools, partnerships, and MATs are on this journey. We might extrapolate that there are stages of maturity in the capacity to implement change that genuinely exploits the potential of the Cloud – potential both for savings and for new ways of working that add educational value.

As an example, if prior to introducing a Cloud MIS, partnerships of schools have already worked collaboratively on school improvement over a single network using Cloud software, accepting this way of working, they're more likely to recognise the potential of using a Cloud MIS when working with partners and stakeholders. Sharing high quality and insightful analysis in near real time can be transformational for Trusts and schools, particularly for individuals with responsibility for school improvement.

Where software suppliers and ICT services recognise and understand where schools, LA's and MATs are on their digital transformation journey, this is better still – it paves the way for support for transition beyond the essentials of training and support for new systems.

USING G-CLOUD FOR CLOUD MIS PROCUREMENT

The government's (Crown Commercial Services) G-Cloud Framework facilitates the purchase of up-to-date, commoditised cloud-based solutions and supports 'Cloud First Policy', offering a way to access and use cloud based services when they are needed.

There is no need for an OJEU, Invitation to Tender (ITT), Request for price (RFP), request for quote (RFQ), request for information (RFI) or negotiation, leading to a time and cost-effective buying process. The framework is compliant, regulated and refreshed regularly, offering access to an up-to-date list of innovative suppliers.

Customers follow a six-step buying process to carry out long-list and short-list searches. G-Cloud provides all the steps needed to eventually place a call-off contract and complete a benefits form.

The online catalogue ensures that all service information is available up front to enable buyers to evaluate services based upon best fit and/or price. This functionality facilitates a direct award following the prescribed buying process.

Full details of the Cloud 9 Framework can be found here:

https://ccs-agreements.cabinetoffice.gov.uk/contracts/rm1557ix

School Cloud MIS supplier lists can be accessed via the Digital Market Place, here under 'Cloud Software':

https://www.digitalmarketplace.service.gov.uk/g-cloud

ANNEX: GDS 'Cloud First' benefits

What the Government Digital Service says about the risks and benefits of legacy systems versus Cloud-based (GDS 2016)[24]	
Latest technology	On-premises commercial or self-developed IT solutions require budget, effort and planning for upgrades. **It is very hard for any organisation to keep up with the constant demand for upgrades and security patches**.
Easier to support and use	Non-cloud solutions often depend on client software installed on the user's computer. This **client software has to be installed and managed along with all other applications installed locally**. To stay in business the service owners need only to stay up to date with the browser, operating system and device choices of customers.
Reduced complexity	Customisation is limited in cloud software systems, and the service provider manages any that is needed, **reducing complexity that makes support difficult and upgrades complex and risky**.
Elasticity	**Even on-premises IT solutions with great scalability designed in have limits, and those limits are often within reach.** For Cloud, there are no delays associated with waiting for servers or other capacity when scaling up. **There is no long-term investment and no cost caused by unused capacity.**
Upfront investment	Cloud Software as a Service (SaaS) is typically pay as you go. There's **no upfront investment**.
Pricing	On-premises solutions require a business plan that looks at today's pricing, and some years of maintenance and support in the future. It is very **hard to work out the real cost of an on-premises solution**. **Cloud services keep getting cheaper**. Pricing is usually very simple and transparent, and there are no hidden costs to worry about.
Security	Using a browser to consume data means there is less information stored on devices. Upgrades and security patches are constantly applied. The **size and expertise in security teams of cloud providers makes for high levels of assurance of data security**.

About the author:

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[24] Summary of:
https://governmenttechnology.blog.gov.uk/2016/07/22/why-we-use-the-cloud-supporting-services/
https://governmenttechnology.blog.gov.uk/2016/08/02/why-we-use-the-cloud-security-and-efficiency/