BETTERGOV

Digital Social Work

Modernisation & Innovation in Adults and Children's Social Care

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Foreword

Peter Begley is a principal consultant at BetterGov specialising in finding ways to improve organisational performance, with a focus upon digital solutions. His early work in managing business risk through better IT was in the financial services sector, which included merchant banks, international insurance brokers and building societies that were changing into banks. He transferred across to the public sector in the early 90s to be the IT Director in Kent Social Services where he led the largest ever IT Group seen in this sector, with over 110 specialist IT staff. He left as part of local government re-organisation and since then has advised on a number of national programmes, led Director or Chief Executive level strategic reviews, worked on the first tranche of the government intervention projects to 'turn-around' zero-star councils and has developed robust working relationships with the IT industry in many settings, but particularly in social care.

This White Paper has been developed to raise awareness of the need for new and substantial strategic investment in digital solutions if greater levels of service modernisation and innovation is to be achieved. This already does take place locally within local authorities, but the pace and spread needs to be rapidly and systematically improved nationally to support, enable, or 'push' the sector more, as it tries to meet the current and future challenges it faces.

One of the recurring problems the sector faces is about knowing how much to invest in digital solutions for strategic and successful change, alongside identifying accurately what it currently spends to determine how it can achieve more value from this. Solving these problems is 'work-in-progress' at BetterGov, but meanwhile, this White Paper is being published to encourage debate and dialogue on these topics.

We have utilised a wide range of data sources to develop the cost models and assumptions in the report, which we recognise as being open to challenge, and imperfect, but we would like to encourage readers to get in touch to share their experiences, propose alternative ideas, refine our data-points and to enhance our collective knowledge base.

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Executive Summary

For modernisation and innovation to be successful, new investment is now required

Social Care is dependent upon a small number of case management system suppliers who provide specialist support to a specialist service, and the spend on these systems is low in contrast to NHS Electronic Patient Records and the overall national investment in GP Systems. For example, the Chancellor announced in his recent budget, a £2.1 billion investment fund for NHS IT alongside the recently announced Unified Tech Fund makes £680 million available to NHS organisations for digital investment. Prior to that the NHS Digital Exemplar programme provided £555 million and national GP funding was around £900m over three years[1].

There is no equivalent national funding for social care IT although it is clearly accepted as an operational necessity. It is widely acknowledged within the social care sector that not enough money is invested by Local Authorities [LAs] in social care IT, even though it is one of the highest risk and most costly services that councils provide. This paper makes the case that more should be invested to create a more digitally aware and capable service[2] and that greater investment would pay dividends.

For IT suppliers, keeping pace with changing service needs is becoming more challenging, and the need for a different and more specific approach to investment should now be given serious consideration by government agencies. This could be achieved through national pump prime funding along the lines that has been seen in the NHS. This report identifies new target levels of annual investment required, which is summarised in Table One and is a requirement of approximately £275m pa across both major service groups.

The existing software suppliers to local authority social care departments attract both criticism and praise in equal measure. Any analysis of them should consider the context they have had to work in with a sprawling, complex and demanding requirement at an arguably low price point. Between them, the suppliers have years of investment in their platforms and deep domain knowledge.

As is the case with the NHS strategy, funding the existing suppliers as 'trusted partners' through their local authority customers appears to be the most logical investment option, and the one most likely to deliver the quickest results. In parallel with this, funding increasing skills and capacity at the LA level would enable them to get more out of existing systems, especially if they can develop better relationships with their suppliers.

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1. Whilst this has had its imperfections, it can be seen to have worked reasonably well, ensuring that the small number of suppliers that serve the market have an improved funding stream for research, development and modernisation, which in turn serves their customer base better.

2. https://ipc.brookes.ac.uk/news/reviews-on-digital-technology-and-capabilities

Channelling such work through regional and national User Groups/Supplier Forums would build on existing commercial arrangements and would be a relatively low risk approach that could bring improvements and encourage innovation simultaneously.

This could be achieved through funding three distinct but linked aspects:

● A systems refresh and upgrade programme bringing all LAs to the same level of implementation of existing supplier functionality, perhaps utilising the CSC Partnership in Practice/ Innovation based approach whereby lead authorities act as mentors [or similar] to help bring partner councils up to speed.

● A series of reviews covering 'what does good look like' for the major service groups within Adults and Children's Social Care to help inform design improvements in partnership with IT suppliers and accelerate systems development road-maps.

● Developing these improvements through user-centred and standards-based design and development initiatives in partnership with IT suppliers.

Market size

The size of the core case management IT market in terms of the number of suppliers is similar to parallel markets in the NHS, for example in Mental Health and EPR's, and recent independent research indicates that for social care, the number of suppliers is about right given the current price of software that LAs can afford to pay for.

New suppliers (including large global IT players) have tried and failed to enter the social care IT market. This has been for a combination of reasons including lack of domain expertise, the considerable size, cost and complexity of the development, the need for the product to support local configurations, the low price point and diminished LA budgets. These have all inhibited success in a very competitive market.

It is considered that a supplier needs to achieve a reasonable market share to be commercially viable [typically seen to be around 10%], and would be incurring substantial development and sales and marketing costs until they did[3]. There are currently not the financial returns in this market to justify this, and it is difficult to foresee enough Councils coming out to tender to allow a new entrant to accumulate a decent user base in a reasonable time period.

Furthermore, new entrants would need to compete primarily in the short term on price, which could potentially harm the market by taking revenue streams away from the suppliers that the LAs currently depend on. Funnelling new investments to new entrants with potentially limited chances of lasting the course could do more harm than good.

3. BetterGov have more details on new market-entrant financial risk modelling if required

Investing for modernisation and innovation

The price, cost, and value of social care systems solutions has changed substantially over recent years with arguably, more, and higher quality functionality being developed and delivered. Software pricing has been reducing, although implementation costs have been increasing for LAs and continuous improvement programmes are being inhibited through lack of skilled and experienced resources within LAs.

Section Five describes in more detail an initial outline of the service improvement areas and an estimate of the costs for modernisation and support for innovation. This comes in at approximately £255m pa, allocated evenly across the IT supplier and LA domain.

Annexe Three gives an illustration of recent independent research on average internal and external costs for systems replacement programmes. These come in at around £2.37m per LA, which can be a mix of capital and revenue-based expenditure.

However, central and local government organisations do not appear to have a robust evidence base on how much social care departments are really spending on digital solutions, whether it is the right amount, or how much additional funding would be required to recover from any cumulative impact of recent under-investment

Measurable benefits of digital investments are also not widely understood, as anecdotal evidence suggests that there isn't a great deal of priority given to 'post-implementation reviews'.

Compounding a well-recognised shortfall in investment[4], there is a lack of national, regional or localised guidance or direction setting for strategic investments in social care IT. Annexe Four describes the challenges of managing digital programmes in more detail, as a contribution to the debate on how to redress this situation.

Exploring what might be the 'right' amount of investment required for good quality social care IT is illustrated in Table One. Firstly, by using international standards[5] as one suggested benchmark, which in the case of the public sector is seen to be around 2% of operational service revenue budgets. Secondly, by looking at average current costs for case management systems, which include portals and finance system solutions as a second benchmark.

Given the current public sector financial circumstances, applying a more pragmatic 1.0% level of operational service revenue budgets as an investment target in digital solutions is proposed. This comes in at around a requirement of approximately £275m pa across both major service groups.

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4. Over the last decade councils have lost £15 billion of core government funding and additional cost pressures and income losses because of the pandemic leaves the sector with a funding gap of £7.4 billion. Unsurprisingly, this reduces the ability for councils to invest in technology and digital services sustainably, and makes it challenging to find evidence to make the business case for new projects if cost savings are seen as the primary target.

5. Please see: https://www.computereconomics.com/article.cfm?id=3026

As a further comparator, independent research into the last major national investment programmes for social care, covering the Integrated Children's System, the Putting People First Programme and implementation of the Care Act came up with a range of 1.25- 2.1% of revenue budgets as being the funding commitment for social care IT.

Table One **Illustrative Target Investment Model [pa]**[6]

Service area	2019-20 Out-turn [bn]	Investment level [m] @ 2%	Investment level [m] @ 1%	Overall Average Spend	Shortfall @1% [m]	New Investment required [m]	Average new investment per LA [m]
ASC	£17.9	£238	£119	£104	£15	£134	£0.89
CSC	£9.9	£198	£99	£57	£42	£141	£0.94
Total	**£27.8**	**£436**	**£218**	**£161**	**£57**	**£275**	**£1.83**

6. Clearly this target level will need further refinement to reflect different types of LAs and further research needs to be undertaken to develop a more accurate internal and external cost base, the revenue and capital aspects, etc but its primary purpose is to define an investment model to be utilised for further discussions with relevant key stakeholders.

Introduction

This research paper looks at the historical and recent NHS investment in the IT market for strategic systems solutions and what lessons can be learnt from this to modernise, improve or innovate in social care through an increased investment in digital solutions and expertise.

 In terms of what exists today with social care IT, there are millions of service users and families supported through case management systems, thousands of professional and administrative staff engaged in using them, and billions of pounds of financial transactions initiated and managed through them.

However, in most cases, these systems are not managed as a strategic asset by LAs and thus opportunities for enabling service improvement and innovation are being missed. In short, in most LAs there is an opportunity to extract more value from their IT assets if they had the investment, skilled resources and leadership.

The research paper published in October 2020[7] focussing on social care case management systems identified a series of strategic issues and posed questions on investment problems for local authorities that centred around the potentially limited sized market for core social care IT systems, and the cost of procuring and implementing them over contract and project life cycles. These findings have been utilised to initially 'set the scene' for this report.

This briefing paper, draws heavily on the NHS IT experiences as the nearest 'match' to social care case management systems for funding comparators, and the recent research into the next generation of children's social care digital solutions undertaken by DfE Discovery projects and similar NHS-X/LGA research into Adults' Social Care IT[8].

7. https://level-7-new.dev.krakatoa.eu-2.volcanic.cloud/blog/2021/02/digital-social-work-in-england
8. These research studies have yet to be published

Context

Social Care services have the unenviable claim of having at least four major stakeholder government departments[9] that can have substantial potential and actual influences on policy, strategic planning, setting business objectives, service delivery, funding and scrutiny.

The one common feature of these sometimes conflicting and differing styles of governmental direction-setting and oversight are the diverse community and public audiences that the operational services are to be delivered to, who are in essence, also another significant stakeholder.

Common expectations in these government agencies also include:

- That in this technological age, there ought to be a greater level of digital solutions to support citizen engagement in public services.
- A public sector workforce that is digitally enabled to plan and deliver these services.
- That the commercial technology providers that support public service, design and develop good quality system solutions at reasonable prices to achieve both aims.

However, in terms of social care, given the well-publicised perilous state of social care funding, an existing shortfall in skilled resources and the substantial increase in service demands, it is unclear as to how LA's are meant to achieve these things, what they might cost, and how they might be paid for.

This research paper has been developed to encourage debate and discussion on resolving these three expectations.

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9. Departments of Health and Social Care, Ministry of Justice, Department for Levelling Up, Housing & Communities and the Department of Education.

What we know already about social care IT

The October 2020 report mentioned earlier, and subsequent research[10] carried out this year by the LGA on behalf of NHS Digital/X and independent to this, the DfE, some common key areas were identified, for example:

- Social Care operational services, and particularly Children's services, are specialist services, needing specialist system solutions.
- That there is an absence of any national or regional guidance on digital strategies for social care and how to get the best out of information technology for both Adults and Children's Services.
- There is a lack of published or shared metrics around price, cost, and value of social care IT to support investment programmes in the future, and local business case development to support benefits realisation programmes more generally, should be more robust.
- Social Care IT was typically not seen as a strategic opportunity by service directors or LA senior managers to achieve business improvements or to 'push' service innovation.
- Investment in social care IT was falling short nationally and locally to achieve significant 'business transformation' when benchmarked with independent sources.
- There was a perception that the IT market in core social services systems was too small, in terms of number of suppliers thus limiting choice. However, research evidence clearly demonstrated that the size of the market was a response to software budget availability and is comparable with the NHS IT market in terms of number of suppliers, and also other similar line of business application markets in local government such as education management and revenues and benefits.
- These core systems were seen as too expensive by some LAs, but in reality, this was about affordability, not price or value.
- More value could be gained if LA resources were and focused on optimising existing systems and functionality and working with IT suppliers to design more 'user-centric' system solutions
- More system solutions around 'digital shared-care records', particularly between Children's Social Care, Education Management Services and partner agencies should be designed starting from 'what does good look like' principles, and involving current IT vendors, encouraged through central funding initiatives.
- This should take user-centred design as a key starting point, but led by social care senior management, supported by policy managers in respective agencies, in co-production with IT suppliers and with technical staff taking a secondary and enabling role, to avoid technology-led decisions and solutions dominating systems solutions.

10, The DfE and DoHSC research findings from these Discovery projects have yet to be published

Section Two
Comparing public sector IT Markets

It is generally accepted that public services cannot be run effectively without appropriate technology support. There is a clear and obvious dependency on the private [commercial] sector to deliver these systems solutions and the technology infrastructure to operate them,

Public sector organisations can mitigate against the risks of IT suppliers not delivering what's required in two ways, firstly by trying to performance manage existing suppliers, and secondly, by trying to provide an environment which encourages quality, price and performance competition within a community of suppliers, to properly support the sector and encourage innovation at both the technical and LA 'business' level.

However, experience shows that if the number of competing systems grows to a point where profitability margins for IT suppliers are reduced too far, the quality of service and products they provide is inevitably put at risk. More seriously for strategic systems such as case management in social care, these suppliers can (and sometimes do) exit the market leaving systems poorly supported in the short-term and options and choices for the LA customer base limited. The recent exit of Northgate from the social care market Is a case In point, as are the failed attempts to enter the market by suppliers such as Capita.

To explore this in more detail, this paper looks at the experience in public sector markets via three case studies, the details of which are shown in Annexe One-Three.

- The market for NHS EPR (Electronic Patient Records) systems, which once supported 26 suppliers. Government initiatives including the National Programme for IT and the recent Global Digital Exemplars programme have effectively reduced this to three active vendors.

- The market for primary care systems, which once supported 11 or more systems. A ten-year government supported programme, GP Systems of Choice (GPSoC) reduced this to three.

- The local government market for social care systems, which at one point supported around eight – eleven suppliers, is now down to effectively four significant software companies.

The IT supplier perspective - feast and famine?

IT suppliers to UK Government organisations are key strategic partners in helping to provide public sector services, and yet they face a complex and unpredictable cycle of commercial challenges. Political timetables and budgetary constraints are among these, as are policy decisions and business strategy changes – which can emerge erratically and impact whole sectors of the market, with perhaps unintended consequences. For example, the 'new' approach to social care funding recently announced probably means substantial increases in the number of assessments that social workers have to undertake, and the linked and revised means-testing criteria will add financial complexity to resource accountabilities in the provider market, which is predominantly outside of LA control.

Suppliers will often talk about the NHS and Local Government market as being, 'feast and famine,' where trading conditions will regularly, and not always predictably, deliver both extremes. The cycle can be annual (contracts are awarded in the dying weeks of the financial year) and they can wax or wane according to an election timetable and outcome, the changing of a minister, the publication of a new national strategy, a spending freeze, or a change in the national conversation or media influences e.g. publicity around the trauma associated with serious safeguarding failures in children's lives.

IT suppliers must be able to ride these waves – to survive both feast and famine – if they are to be able to provide a consistent service to NHS and Local Government customers, while continuing to invest in their products in a very fast-moving technical landscape.

Perhaps there is room for a more closer working arrangement to be fostered, to achieve mutual objectives, for example,

- Should UK government agencies be sensitive to these challenges?
- Should there be strategies to nurture the ecosystem of suppliers who provide key systems to the public sector?
- Should public sector organisations look to consolidate strategic vendors into a small number of healthy suppliers?
- Or should the attitude be more Darwinian – hoping successful vendors will flourish while the weaker ones disappear?

The strategies software companies use to mitigate the challenges posed above might vary – but it is worth trying to understand them, and the potential impact each might have on the public sector organisations that depend on their solutions.

Diversification: A software house can look for other markets, either through development of new products, or through acquisition. A diverse portfolio can help to cushion the company through lean periods of public sector spending. One consequence of this, however, is that the supplier is likely to lose interest in their public sector solutions if these are seen as risky, and less worthy of investment. The vendor starts to lose focus and loses market expertise in the NHS or Local Government market. The application becomes just another line item in a catalogue of solutions.

Be American: Or have a complementary home market. Vendors that are not British and have a home market elsewhere, can be naturally cushioned against the peaks and troughs of UK market spending. The risk is that they design an internationally generic product – not usually a solution that fits or is ready for the UK public sector – and every hiccup in the UK market will reinforce this view. The greater risk is that they pack up and go home. In 2001-2010 the NHS Electronic Patient Record market in acute trusts included high profile deployments by companies that had their own home market outside the UK. All have now disinvested in the UK and most no longer compete for NHS contracts and in many cases their products are no longer supported.

Run a very lean operation: This is a commercial strategy that is attractive for many UK vendors. They keep resources low and minimise investment. The strategy helps them to weather the storms, but it short-changes the LAs with solutions that are under-supported, and in many ways are behind the curve in terms of innovation or 'pushing' service change through modern technologies. It reduces risk for the IT vendor, but increases risk for LAs, particularly if contract lengths increase or there are weak or non-existent performance management clauses in them.

Develop partnerships with public sector customers: Private sector organisations typically nurture and support their suppliers. They understand that it is not in their own interest for their strategic suppliers to go bust or to disinvest. They look for ways to build partnerships, to provide options for future business, to continue to pay for new developments, and to pay realistic prices for products and services.

This partnership approach can create long term stability, but in many cases, has not been the common approach of the UK public sector. It is worth exploring how Local Government could develop strategies to achieve greater levels of productive engagement with key IT suppliers in the social care IT sector, without compromising procurement protocols.

The Size of The Market, Options and Choices for IT Vendors and LAs

1. Central government investment in digital solutions in the NHS and market intervention has effectively helped to manage an unwieldy number of EPR solution suppliers in the acute hospital sector from 26 to three and in the GP sector from 11 to just four IT suppliers.

In contrast, the social care core IT market is around the same size, but receives minimal central government funding, and lacks central government intervention on investment; even though systems solutions are clearly less expensive relative to Electronic Patient Records, the nearest comparator to case management systems in social care.

IT vendors in the social care IT market arguably claim that the 'price-point' of their software solutions are too low, primarily due to lack of national investment combined with reduced LA funding availability. This in turn inhibits capacity for managing future significant changes in meeting business requirements, limits competition, reduces innovation, and raises inward investment risk .

Table Two **Comparative Costs Illustration**[11]

	Number of opportunities	Average cost per year	Total market cost per year	Government support per year	Peak number of active suppliers	Current number
NHS EPR	149	£1,400,000	£208,600,000	£185,000,000	26	3
GP SYSTEMS	7,500	£45,000	£337,500,000	337,500,000	11	4
SOCIAL CARE SYSTEMS	300	£189,000	£56,869,000	–	11	4

2. Unlike the NHS IT market for EPR and GP systems, which is now relatively fixed in terms of its supplier base, it is still possible that new entrants could enter the social care IT market with initially attractive price offers, but ultimately unsustainable product strategies, which inevitably would disrupt the operational services when LAs have to migrate away from failed products or suppliers[12].

11. These costs are different from the average costs used in estimating social care systems and derived from open-source data, including Bidstats.co.uk, Freedom of Information Requests, Contract Award Notices and independent research, e.g. on invoices paid by LAs to IT suppliers.
12. The 2020 report mentioned earlier into case management, covers examples of this in more detail.

From the comfortable distance of a different home market (like America or Europe) the UK public sector can look initially profitable. For example:

- There are probably always software products that look initially as if they ought to fit with social care business requirements with a modest degree of systems re-configuration or modification, although recent history actually shows otherwise in the case of Customer Relationship Management software [CRM][13].

- Local Government customers are mostly financially stable, with the likes of Northampton and Croydon hopefully being the exception to this, thus guaranteeing year-on-year revenue streams.

- Local Government customers are organisationally stable; but re-organisations do regularly take place, albeit slowly, e.g. Dorset, Northampton, Combined Authorities etc, potentially creating 'new' customers, and new revenue streams.

- There appears to be an appetite for new systems from new IT vendors in the market by LA's; recent market testing in Essex, Devon and Kensington & Chelsea, attracted a considerable response from nearly twenty interested IT vendors and/or partners to support and deliver a range of case management solutions.

- Change management in social care is a constant feature, particularly in Children's Services, presenting opportunities for new technology solutions to support business transformation and service innovation.

- Local Government's level of commercial awareness and negotiating skills are not generally high [there are exceptions] and contract performance management is not typically one of its traditional strong points, giving software vendors somewhat of an advantage when negotiating contracts.

3. The ability to produce good quality social care IT solutions has never been easy, or quick. It is a broad, complex and constantly evolving requirement, and social care systems are seen in the industry as specialist systems for specialist services, selling for relatively low cost, especially compared to markets such as health, but in the main, they are very modern, comprehensive, and flexible.

A successful supplier needs to achieve a reasonable market share to be commercially viable – typically seen as to being around 10% over five years[14]. It would be incurring substantial development and sales and marketing costs until they did.

They will also need to meet the ever-changing business demands of their customers at the same time as winning new ones.

For new entrants to prosper the price point those authorities are currently able to pay would have to be significantly higher, and this is unlikely in the current climate. To put this into context, it is possible that a new entrant would need to spend on initial

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13. Lagan, Siebel, Microsoft, SAP all failed in the market, and relatively quickly, with customised CRM solutions; IBM initially thought that their social welfare system [Curam] could meet requirements with small adjustments.

14. The current turnover rate is around eight – ten; historically it has been around 12-14 out of a total size of around 304 'sales opportunities'.

development around £5-6m for an integrated CSC system solution and around £8m for an ASC/Finance system solution.

It would also need to provide sector-leading customer service support [help-desk, technical implementation etc] to differentiate itself at the outset, and acquire already scarce product sales and marketing expertise resources. Altogether a difficult business start-up and continuity challenge, especially if the forecast market turn-over is slowing down and the competition remains strong.

Changing suppliers is a complex decision for LA's, and they need to undertake this with care given the limited choices they face and the frequency that this occurs. Typical 'costs of change' could be around £1m for a project implementation team over an 18-month period for an average size LA.

Fifty-three [35%] of Local Authorities have changed supplier in the last five years across both major service groups, these predominantly being NPS/OLM sites moving to Liquidlogic or Servelec. In the previous five years, sixty-four [43%] LA's also changed supplier. Liquidlogic and Servelec sites rarely change suppliers.

Three main IT software suppliers provide 90% of case management systems solutions in England (Liquidlogic, Servelec and OLM). The business of social care is critically dependent on these suppliers to function well, and they can make an important contribution to the ongoing 'success' of social care. However, they are usually not treated as an essential partner, which is both surprising and a missed opportunity to do more, and better, with their products.

All IT suppliers need to be able to demonstrate how they are utilising the very best of modern technologies to design, develop and deliver good quality solutions. Two of the key indicators in this are the extent to which they have corporate financial strength and technical depth, for example, the extent to which they inwardly invest in R&D investment[15].

There is now a much clearer distinction between the needs for Children's and Adults social care solutions. In Adults Social Care, for example, there has been an emphasis on self-service and on linking with health, whereas in Children's Services, a major shift has been towards the demand for integrated solutions that support social care, education management (including admissions), SEN and early years. There is thus a clear rationale for consolidating education management systems onto the same IT platform as social care in children's services.

15. The market leader in social care IT invests around £3m pa in R&D

Investing in digital solutions to support modernisation and innovation in social care

1. The case studies shown at Annexe One and Two describe the level of investment and its consequences for major NHS IT programmes, for example, in Electronic Patient Records and GP systems, and it's clear that this scale has had a positive impact upon the IT supplier market, and more importantly their customers, and sets an example of what should have been replicated in social care.

2. The recent new announcements on investment in NHS digital solutions of around £680m[16] was accompanied by a series of proposals to address the challenge of the seven 'big-issue' areas identified as barriers to success:

- Identify their gaps and prioritise areas for investment and improvement

- Focus on upskilling NHS organisations that weren't performing as well digitally

- Identify the barriers to investment in digital and technology and proposals to start to fix them in 2021 to 2022 and beyond

- Organisations do not know how much they are spending on digital solutions

- Or how much additional funding would be required to recover from the cumulative impact of recent under-investment

- Measurable benefits of digital investments are not widely understood

- Some worthwhile investments have no direct measurable feedback, but create cumulative 'gain' in terms of repositioning the organisation for strategic change and managing future risk.

3. These aspects also apply equally to new investments in social care IT. Solving these issues for social care is going to be challenging and given the diverse nature of oversight and policy direction setting across the four major central government departments that can affect social care, coordination on resolving them will require a great deal of cross-departmental cooperation, encouragement, and social care leadership.

4. There have been a number of national funding initiatives in the past from the NHS for social care primarily for 'pump-priming' initiatives through for example, the Social Care Digital Innovation Programme, although scalability was not supported and these were at a relatively small scale.

Two other significant programmes have also occurred, one to improve hospital discharge, the other to support Child Protection Information Sharing [CP-IS] were also undertaken. The former has been partially successful in that the proof of concept funding delivered good results, but it was left to LAs to fund its subsequent

16. https://www.digitalhealth.net/2021/08/exclusive-nhsx-what-good-looks-like-guidance/

roll-out , which has been disappointing, and not all social care IT suppliers took part in the programme. CP-IS has been more successful, and has been a good example of IT supplier, NHS-D and LA cooperation. It would appear that a Phase Two is now under consideration.

5. Currently, the NHS is also exploring investment in the social care provider-side to improve its digital readiness and capabilities although this does not appear to include any of the major IT case management supplier implications.

6. There are also a range of other nationally funded pilot programmes underway in Children's Services, exploring digital improvements. One directly managed by DfE Digital and social care policy staff, with funding around £2.4m, with LA bids currently being considered. Another Trailblazer initiative is underway to support Contextual Safeguarding managed through the MHCLG, along with a £7m Digital Accelerator initiative from the Supporting Families Team.

7. Annexe Three describes the existing levels of investment in digital solutions but it needs to be increased and consequently, the impact on social care services would be significant. Meeting digital challenges is going to need commitment and leadership, Annexe Four gives some insight in how to create a framework for action based on the Audit Commissions recent work in this area.

8. Suggested areas for investment are described in Table Three, and it is suggested that discussions around how to expand the details of each of these to create a modernisation and innovation agenda could form the basis of a new approach to investment planning that key stakeholders [Service Directors, Departmental Service Policy Leads, IT Suppliers, Service Managers, Lead Practitioners etc] could be encouraged to participate in, and BetterGov would be willing to consider coordinating this.

Table Three **New Investment areas for consideration**[17]

Service Area Improvement	IT Vendor Costs [£m]	LA costs [£m]	Overall [£m]
Hospital Discharge and GP systems integration	£12.8	£13.3	£26.1
Strategic Commissioning and Early Intervention	£30	£31.2	£61.2
Integrated Digital Care Records	£15	£15.6	£30.6
Optimising and refresh systems functionality	£37.5	£39	£76.5
Product roadmap acceleration. [User-centred design and 'what does good look like' development]	£30	£31.2	£61.2
Overall	£125.3	£130.3	£255.6

17. Derived from recent BetterGov open-source research data and discussions with IT suppliers. Costs have been allocated on a 49:51 vendor/LA ratio. LA costs could probably be reduced significantly for certain aspects of this if collaboration between regional and specialist user groups could be utilised, rather than individual council implementations.

Case Study 1: NHS EPR Systems

Table Four The fortunes of 26 NHS EPR System Vendors in England

#	Vendor	EPR sites at peak (Approx)	EPR sites now
1	SYSTEM C	29	29
2	HBOC/MCKESSON	6	0
3	TDS/ALLSCRIPS	5	5
4	MCDONNELL DOUGLAS/NORTHGATE	9	0
5	GERBER ALLEY	1	0
6	MEDITECH	6	5
7	GTE	1	0
8	ISTEL	22	1
9	BMDS [SMS/iSOFT etc]	40	0
10	CERNER	26	24
11	SEMA/ATOS	3	1
12	iSOFT/CSC/DXC/DEDALUS	40	37
13	IBA	2	0
14	IDX/GE	2	0
15	MICROSOFT	0	0
16	IMS	3	1
17	ALERT	1	0
18	NOEMA LIFE	0	0
19	CHIPSOFT	0	0
20	TRAK/INTERSYSTEMS	4	1
21	PER SE	1	0
22	EPIC	7	7
23	EMIS/ASCRIBE	11	9
24	TPP	1	1
25	SIEMENS	0	0
26	CAMBIO	2	0

KEY
EPR SITES NOW
LAST COMPETITIVE WIN
EPR SITES AT PEAK (Approx)
INACTIVE VENDOR — 1 — 1
ACTIVE VENDOR — 1 — 1

Timeline: 1980s | 1990s | 2000s | 2010s | 2020s →

Dates are approximate

The market for NHS EPR (acute) systems in England is effectively 149 sales opportunities, which is similar to the 152 Councils with social services responsibility. This number has fallen with Trust mergers from around 172 in 2012. As a rough guide, if a Trust re-procures a system every 10 years, you could therefore expect the market to create around 15 EPR contract opportunities a year. In practice it is less than half this. Research indicates around 64 open competitive procurements since 2011 – around 6 contract awards a year (see Figure 2).

The chart above illustrates the fortunes of 26 vendors of NHS EPR systems. The dates are approximate, and the numbers are based upon open-source research but even allowing for some inaccuracies the conclusions are stark.

Of the 26, only eight are active vendors today and there are really only 3 serious players. Vendors eager to get a foothold in the UK EPR market would frequently bid a low price to win business and although initially looking like a successful outcome for the Trusts too, it rarely worked out that way.

Dozens of trusts risked being left high and dry with software that simply wasn't selling and which fell behind in functionality and technology. The chart is an object lesson in risk avoidance in this market.

The difficulty, commercially, was that for much of the period illustrated, no one vendor stood out. This created challenges. It meant that no supplier took a significant market share and this created a fragile market.

A typical American software house with a user-base back home of, say, two hundred hospitals, and with an eye on the NHS market, would need to set up an office in the UK, would employ a chief executive, and a sales director, and half a dozen salesmen, and product specialists, and support staff, and would need to divert the efforts of a significant chunk of their development team to adapting their software to meet UK business requirements.

An EPR vendor of this scale needs, reasonably, three or four major contracts a year to justify these levels of investment. What's more they need these contracts to be awarded at a sensible market price. Yet, as indicated, since 2001 the market has delivered just over six contracts a year, and these have been distributed among 12 vendors.

Whittling the market from twenty suppliers down to three

Looking at this from the perspective of 2021, however, the landscape has changed markedly. The market has effectively been reduced from 26 suppliers down to three. This, at last looks like delivering a period of stability to the EPR market. The three solutions left standing in 2021 are:

- Millennium from the Kansas based Cerner corporation.
- EPIC EMR from the Wisconsin based Epic corporation
- CareFlow from Warwickshire based System C company.

Table Five Sixty four open Procurements for Acute EPR in England since 2011 showing the winning vendor

This tracks EPR purchases in England since 2011. Excludes contract renewals and National Programme/LSP deals.

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* Based upon the open procurements the author knows about. **Mid Staffs a win but since merged with UHNM. *** Cancelled by procurement body (Liverpool after award, Stockport before award).

In the last five years Epic has won five NHS sites, Cerner has won five NHS sites, System C has won seven NHS sites. In addition Chicago based Allscripts has won one site. There appears to be no other significant EPR contracts from other suppliers in the last five years.

Rationalising the EPR market to three credible and proven suppliers makes a lot of sense. But the road the NHS took to get to this point has been an extraordinary one. Two programmes have been key. These were the discredited now notorious, National Programme for IT (NPfIT) (2003-2012), and, more recently the Global Digital Exemplar Programme (GDE).

The Global Digital Exemplar Programme (GDE) (2017-)

This new government initiative was launched with the aim of tackling the problem of the proliferation of EPR solutions. This was the 'Centres of Global Digital Excellence' (CoGDE) programme – more often called, 'the Digital Exemplars Programme' or 'GDE'. Exemplar sites were intended to be the most digitised NHS trusts.

The strategy was for these trusts to receive substantial national investment and support to accelerate their development of IT, so they could eventually become future reference sites for the digitisation of NHS services. At launch they were described by Jeremy Hunt as the 'premier' or 'ivy league' of NHS trusts. Twelve acute GDEs were announced in late 2016 with a further four subsequently announced in early 2017 taking the total to 16 acute GDEs. In March a seventeenth Trust, Chelsea and Westminster, was added. Known as "digital exemplars", these seventeen trusts would each receive up to £10 million from NHS England in a bid to inspire a digital revolution across the health service.

As well as the GDEs there was also a programme of Fast Followers, which were trusts matched to the GDEs, able to follow in their footsteps. £385m was allocated to support 56 Trusts under this programme.

Central Government funding for consolidation initiatives under the GDE programme came to around £555 million over 3 years, and no new highly innovative software solutions or new vendors emerged from the programme. It looks likely that the NHS EPR market will settle into a three way split with Cerner, Epic and System C as the three surviving software companies, with Allscripts as a possible fourth. Of the three, only Cerner was a beneficiary of NPfIT. Cerner received the largest share GDE, and System C and Epic were fringe beneficiaries.

It is likely that exclusion from GDE for some IT vendors was the final straw who may have withdrawn anyway from the market, but for whom GDE accelerated their decision. In this respect it can be seen as successful in streamlining a very crowded landscape to a healthier and more manageable three (or possible four) systems.

Costs of Hospital EPR

It is difficult to assess the costs to the NHS of hospital EPR systems due to their large component software configurations. There is a huge variation in reported costs, some of this related to the size of the Trust, some to the scope of the EPR, and some to the timing of the contract (contracts have been growing in price).

One way to look at the cost to the NHS of Acute EPR is to look at the total spending. The table below shows the spending over 28 months from April 2018 to July 2020 on all significant vendors. The total sum spent over 28 months was £486 million, which suggests an average annual spend of £208 million.

This is equivalent to £208 million across 149 Trusts = £1.4 million per Trust per year.

Table Six **Spend by EPR Vendor**

VENDOR	APR 18 – MAR 19	APR 19 – MAR 20	APR 20 – JUL 20	TOTALS
CAMBIO	£229,773	£144,052	£22,500	£396,325
NERVECENTER	£331,931	£142,384		£474,315
SERVELEC	£1,671,191	2,515,068	£700,387	£4,886,646
SILVERLINK	£1,640,554	£2,812,756	£591,553	£5,044,862
QUADRAMED	£2,225,543	£1,957,889	£1,082,606	£5,266,037
IMS	£1,680,893	£2,607,001	£1,011,818	£5,299,713
MEDITECH	£385,440	£4,819,055	£492,260	£5,696,756
GE	£2,407,830	£2,201,058	£2,276,417	£6,885,306
INTERSYSTEMS	£4,687,200	£4,730,736	£1,128,281	£10,546,217
ALLSCRIPTS	£14,785,601	£16,121,443	£6,870,314	£37,777,357
EPIC	£13,000,030	£22,141,533	£4,826,552	£39,968,115
SYSTEM C	£45,223,211	£38,422,277	£11,413,200	£95,058,688
DXC	£42,807,978	£40,697,229	£18,634,528	£102,139,735
Cerner	£81,676,041	£64,476,350	£20,485,514	£166,637,905
	£212,753,215	**£203,788,831**	**£69,535,931**	**£486,077,978**

The table below shows eight recent EPR contract awards where the average contract value per annum is £6.12 million. The average value of the 3 EPIC contracts is £12.15 million a year, and the average for the other 5 contracts is £2.5 million a year.

Table Seven **Recent EPR Contract Awards**

Supplier	Trust	Contract Duration (Years)	Contract Value (000s)	Contract Value pa
EPIC	Frimley Health NHS Foundation Trust	11	£108,000	£9,818,182
EPIC	Guy & St Thomas	12	£175,000	£14,583,333
EPIC	Manchester University NHS Foundation Trust	15	£181,000	£12,066,667
Cerner	Sandwell & W. Birmingham (NB No PAS)	10	£19,000	£1,900,000
Cerner	West Hertfordshire	10	£30,000	£3,000,000
Allscripts	Bolton NHS Foundation Trust (NB No PAS)	10	£30,000	£3,000,000
System C	Walsall Healthcare NHS Trust	10	£22,300	£2,230,000
System C	Shrewsbury and Telford	10	£24,000	£2,400,000
				£48,998,182

Case Study 2: GP IT Market Frameworks Strategy

In early 2000, GP systems were a very mixed landscape of systems, essentially more like a 'cottage-industry' than the strong commercial software companies that we know today, and similar in shape and structure to what hospital Electronic Patient Records [EPRs] had become.

At least 10 different systems were installed in various practices across England, and a lot of new suppliers were trying to enter the market. In 2004, the Department of Health ran an effective exercise to reduce the number of suppliers down to a market of just four, which was seen as a reasonable number to resolve a wide range of issues . This was known as GPSoC.

Suppliers also agreed to price their licence and support fees nationally as part of the framework standard conditions. GPs would be able to choose to stay with their own system or move to another system on the ladder and were assured that their recurrent maintenance and support fees would be supported. Each supplier was expected to rationalise its software products and move its customers onto a modern comprehensive strategic solution.

In August 2007 GP leaders published their shortlist of eight. They were:

- CSC Computer Sciences Ltd
- Egton Medical Information Systems Ltd (EMIS)
- Healthy Software Ltd
- In Practice Systems Ltd
- iSOFT plc
- Microtest Ltd
- Seetec Business Technology Centre Ltd
- Waveform Solutions Ltd

To this list was later added, TPP (The Phoenix Partnership)

Framework contracts were awarded in 2007, and within ten years four IT suppliers emerged as market leaders and no other vendor on the framework had any significant presence.

When GPSoC expired in 2017, it looked as if the market might re-set. A new scheme – the 'GP IT Futures Framework' was introduced, and in October 2019 it was announced that new software companies to the NHS primary care market could be awarded contracts under the GP IT Futures Framework, pending the completion of an assurance process.

A total of 73 suppliers submitted tender applications for the new £484 million general practice IT framework. It represents the first time the NHS has opened up the market to a new software player in over 12 years. It is, however, looking more of a theoretical exercise than a practical one. Consolidation among the four GPSoC vendors is virtually complete, and it is hard to see many GP practices changing IT supplier or breaking away in favour of a wholly new system in the short term.

As a large number of IT vendors emerged when GPSoC ended, this might be seen as evidence that the original programme had stifled innovation and had prevented new solutions emerging. Alternatively, the framework could be seen as preventing a free-for-all with seventy odd systems competing for over 7,000 customer opportunities! Ultimately the beneficiary of this is the NHS, taxpayers, and patients. Competition is still open amongst the four leading vendors, and the majority of GPs could be seen as satisfied with the system they use.

Table Eight **IT Suppliers of GP Systems**

% Market Share	EMIS	InPS	ISoft	TPP	Other
2006	57	22	14	0	6
2019	54	12	0	30	4
2019 Customer base	4108	981	0	2289	n/k

A key test of the newer framework strategy might turn out to be COVID. As part of the vaccination programme, NHS England commissioned a National Immunisation Management System (NIMS) – a system seen as being central to the success of the vaccine rollout. NIMS relies upon data feeds from every GP system in the country. It also depends on the ability to feed back information to GPs on citizens who have been vaccinated.

With just four GP systems to deal with, this system could be developed and tested in record time. Had there been twenty, forty, or 73 competing systems, it seems unlikely this could have been achieved in the way it was.

Pricing estimates for GP Systems

A typical GP practice system in 2006 before GPSoC would cost between £50,000 – £100,000 and annual running costs were around £10,000 – £20,000. An estimate of costs in 2020 could be around double this figure.

At this level of cost, if an average system is replaced every 10 years, then the cost of a system to a GP practice would be around £45,050 a year. The cost for 7,500 GP practices could therefore be reasonably estimated at around £340 million a year. Investment funding for this is currently via Clinical Commissioning Groups and capital funds allocated to CCGs were reported as £900 million in 2016 for three years, which tends to underpin this assumption.

Case Study 3: Social Care Case Management Solutions[18]

The landscape of Social Care Solutions within English local authorities in the early 2000's looked very much like the landscape of NHS IT systems, with eleven active suppliers.

There are 152 local authorities that are responsible for social care services in England. All have systems for adult social care and for children's social care. The market might therefore be seen as 304 opportunities, although many councils typically operate the same system across adults and children. Tables Nine and Ten below illustrate how the market breaks down historically between core case management system providers over time to get to effectively four key suppliers in the current market, and the distribution across the major service departments.

There have been a couple of key changes that created disruption and shaped the current market size, including:

● The demise of in-house systems capability, due to departments losing local teams and budgets to Corporate IT and subsequent cost saving programmes

● Mergers between suppliers, for example, Northgate acquired Anite, which had acquired Sheridan, which had acquired ICL

● Market failure for major IT companies in this sector, the latest being where OLM acquired the Northgate customer base in 2017 and Capita withdrew twice, latterly in 2019 after two attempts to create system solutions from existing Education Services products.

● The separation of Children's Services from Adults Services, which gave them an opportunity to independently choose their own supplier, which created mixed supplier sites, which now accounts for nearly 20% of the market.

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18. This typically includes portals, core CMS, finance and additional modules e.g. mobile and systems integration options.

Table Nine Historical structure of the core social care IT market

Supplier	2000	2005	2010	2014	2020
ICL	16	0	0	0	0
Northgate	52	52	34	11	0
OLM	28	46	41	27	9
In-House	53	22	5	3	1
Servelec	0	13	20	32	39
Careworks	0	7	8	5	3
Civica	1	8	6	3	1
Mixed	0	1	26	40	28
LiquidLogic	0	0	11	30	67
SAP	0	0	1	0	0
Azeus	0	0	0	0	2
Siebel	0	1	0	0	0
TOTAL	**150**	**150**	**152**	**151**	**150**

Notes: Liquid Logic has the majority of 'mixed sites'. The number of LAs excludes Bournemouth, Poole and Christchurch as they have two different suppliers for historical reasons in each of ASC and CSC.

Table Ten Distribution of IT Suppliers across major service areas [2020]

Supplier	ASC	CSC	Total
LiquidLogic	70	87	157
Servelec	46	47	93
Azeus	3	2	5
OLM	16	8	24
Careworks	7	4	11
Civica	3	1	4
TPP	3	0	3
In-House	2	1	3
TOTAL	**150**	**150**	**300**

Estimating the costs of social care systems:

It is well recognised that it's quite difficult to get accurate metrics from LAs on the internal costs for acquiring case management systems, and the typical internal support costs associated with them. For some LAs, affordability is a major issue and funding the revenue implications of new capital investment programmes, e.g. changing software supplier, can be very problematic. Overall this creates a climate that inhibits business driven transformational programmes and developing digital support for service innovation.

However, estimating social care IT costs from the IT supplier and LA perspective can be achieved in a number of ways, and examples are shown below, which can be utilised for investment planning and developing business cases for change.

[i] Using average prices of case management systems and implementation costs where LAs change IT suppliers:

Initial purchase costs are shown below and there are two models being employed here:

Firstly, initial upfront one-off Perpetual Licence costs of base case management and finance systems accompanied by a number of optional extras items which include items like interfaces, specific modules, Portals and Interoperability layers.

Our broad estimates of the average software licence acquisition costs (being mindful that there are often large local variances on requirements and consequently what is purchased) are around £250k for the base Social Care and Finance System and then up to a further £200k for the various optional extras amounting to a total one off cost of circa £550k for software licences.

A Software as a Service (SAAS) style offering is increasingly being proposed over and above these licence costs- our observations are that most LA's can't run this service as efficiently or as cheaply as the software providers. These costs vary depending on size, economies of scale are also evident; we have noted costs as little as £50k per annum for small authorities but as competitive as £70k to £90k per annum for huge County Councils.

Secondly, activity based costs per user, normally accompanied by minimum volumes; this model is often employed together with a Software as a Service (SAAS) style offering.

Depending on user numbers and products on offer the costs we have seen range from £11 per user per month to £21 per user per month.

It should be noted that depending on the provider, the cost may not vary too much if just one or two (ASC and CSC) departments make use of either model as it's often very cost effective to purchase the system for both Adults and Children's. However, unlike the other main IT suppliers, LiquidLogic, has a separate database solution for Adults and Children's services and can be purchased as such. Around 80% of LA's have the same supplier for both service departments in England.

Implementation

The social care system providers tend to charge a base implementation cost which varies considerably depending on local requirements, on average we feel it's normally in the region of £200k per department, unlike initial purchase costs

our observations are that very little by way of economies of scale is achieved from a saving perspective by implementing both ASC and CSC together here with the exception of the migration implementation costs. Due to competition between providers we have noticed the offering from all providers is usually a 'bare minimum' to remain competitive

The internal cost of transition is considerably more and ranges from £800k to £1.4m per directorate.

Overall, the average costs of change could be in the order of around £2.37m per LA.

Assuming around ten LAs change supplier each year, this brings in around £11.7m income pa in total for the social care IT supplier market and LA costs of around £12m to cover implementation support.

[ii] The average internal social care IT costs

Team size is estimated at around seven staff, and for most LAs, this could attract an annualised cost of around £550k pa. We have noted that the teams are considerably larger where a SAAS style offering is not used, so much so that there has been a significant shift to SAAS style models.

Technical infrastructure is estimated at £120k pa for either hosting or on-premise charges at £180k.

Annual software maintenance could be in the order of £110k.

Additional supplier modules and associated maintenance charges could be in the order of £160k pa.

Additional support services from IT suppliers would also be commissioned, at around an average value of £40k per annum.

On this basis the overall per annum average for each LA would be around £550k for internal costs, and £430k for the IT supplier sector, including a cloud/hosted solution.

[iii] Using these average-cost baseline assumptions:

For 140 LAs, IT supplier income would be around £60.2m pa; ongoing internal LA costs for supporting their social care IT would be in the order of £77.0m pa

By combining 140 LA costs with ten LA IT supplier changes, the overall market value comes in around £71.9m pa for IT suppliers. LA costs comes in at around £89m pa.

[iv] An alternative approach would be to utilise actual data from invoices paid by LAs to software suppliers, to gain an alternative view of the market value and LA supplier costs:

The table below looks at the invoices paid to the three largest suppliers of Social Care systems over the 28 months from April 2018 to Aug 2020. During this period councils paid over £56 million pa on average to the three largest vendors, for services covering software and associated services.

Table Eleven Invoiced Costs of Supplier Systems & Services

VENDOR	2018 – 2019	2019 – 2020	2020 – 2021 Part year	28 Months Total	Average £ per year
LiquidLogic	£18,841,313	£21,948,819	£17,301,655	£58,091,787	£24,896,480
Servelec	£15,696,347	£19,476,355	£14,689,748	£49,862,450	£21,369,621
OLM	£9,231,386	£8,842,608	£6,667,435	£24,741,429	£10,603,469
				£132,695,666	£56,869,570

Notes: Servelec also have income from sales of their Youth Justice and Education Systems sector.

The Challenges in Implementing Digital Change[19]

Our way of life is now increasingly digital, and technology is almost always a feature of business change programmes in the public sector, particularly with the need to modernise and innovate in social care to help manage increased demand and scarce resources. Current and future public services ought to have digital change as a major component in service innovation not least because the public increasingly expects the government to make effective use of technology, so public bodies have little choice but to plan and deliver high-quality digital services.

Digital business change programmes face intrinsic business challenges as well as technical challenges. And the range of problems includes shifting business requirements; over-optimism; inconsistent supplier performance; and lack of capability at the senior and operational level. Only a small proportion of senior social care service directors have first-hand experience of digital business change and as a result many lack sufficient understanding of the business, technical and delivery risks for which they are responsible. This means that many of the problems probably stem from the inability of senior decision-makers to engage effectively with the difficult decisions required to implement technology-enabled business change.

But, local government is not a 'green field' site and added complexity arises from the need to transform or change existing digital and operational services. The difficulties lie in understanding and determining how to make changes to these, and their associated systems and technology environment, and what it means to build new systems to integrate or replace what already exists.

This type of change requires a level of analysis before making decisions, that does not fit comfortably into public sector standard mechanisms for approval, procurement, funding and assurance. Developing an Agile approach to this increases the ability to 'get it right, do it right' although Agile project delivery can lead to poor outcomes if local government applies it inappropriately. Outline guidance on this is shown below.

However, currently many managers in the public sector see new digital ways of working and the management of data and technology as separate from their core business and reflect this in the distinction between capital and resource spend. The comparative ease of getting capital funding to invest in new digital assets, as opposed to revenue funding, which is needed to maintain those assets or consume services and is under more pressure.

This can lead to departments delivering digital services without the ongoing funding to maintain them, and critically, to establish 'continuous improvement programmers'.

19. This Annexe is an abridged version of the Audit Commission report on Managing Digital Change for central government, and is gratefully acknowledged; it resonates so well with the issues facing social care that it was thought well worth adapting to give it here e social care context.

Digital investment requires a continuity in resource budget investment in business capability, and this need will increase as the pace of 'digitisation' moves toward.

One good example of thinking differently is in LAs increasing its commitment to 'cloud-first' digital solutions. The cloud uses the internet to access systems and data stored outside an organisation's own premises, using software and technology 'as a service'. Where cloud pricing models replace capital expenditure, they increase it with revenue based operational costs as use of cloud services is in effect 'renting' the infrastructure of the cloud provider. This requires a different approach to financial management across departments.

The public sector also needs to increasingly see technology as part of a service that involves people, processes and systems. Often there is an unmeasured 'people cost' to not modernising operational services. In the legacy landscape, large numbers of administrative staff need to knit together data and find workaround solutions to compensate for the inadequacies of these older, but perhaps dependable systems and put off developing strategic business cases, replacing outdated technology. Digital programmes do not always save costs or have cashable benefits, especially in the short term. It can be hard to make the economic case for investment in legacy IT.

Ways forward for social care

- LAs should create imaginative and innovative training programmes to better equip and train all decision-makers with responsibility for digital transformation programmes. This should include education on legacy systems, the importance of data, the risks of 'build before buy' and of opting for unproven technology.

- Social Care Directors should work more closely with LA Finance Directors to review existing business case funding and approval processes for digital programmes, primarily to:

    - remove the incentives to state with full confidence those things which are still unknown;

    - ensure that uncertainties associated with assumptions are made clear;

    - when these uncertainties will be better understood;

    - understand what the final product should look like, and the path to get there;

    - be clear on what risks represent 'unknown unknowns';

    - and ensure professional independent technical assurance mechanisms are in place, to support those responsible for approving programmes.

● Find ways to disseminate and apply lessons learned from the successes and failures of strategic system replacement programmes from the past within social care and seek to understand why digital strategies have made poor progress, including developing a wider understanding of the 'business' of software and digital providers and:

> ● find ways to develop mutual objectives could be gained from closer collaboration with existing IT providers, within their competitive environment.

> ● carry out proper evaluation and assurance in the early stages of a digital programme to understand its complexity and scope, assess how realistic the chance of success is and reflect this in the programme approach;

> ● strengthen the 'intelligent client' function for digital change including identifying and developing key requirements, led by a 'user-centric' design approach before tenders and bid processes commence and take the lead on supplier engagement; in parallel with this, ensure senior digital, data and technology colleagues have wider influence on all change programmes with digital components, by providing strategic direction and oversight at key decision points in the process;

> ● maximise the chances of effective digital delivery by ensuring that business leaders have sufficient skills, commitment and time to engage in all aspects of governance and decision-making;

> ● produce departmental strategies and plans for how to manage the IT estate so that maintenance, support and decommissioning are systematically addressed and the required funding is ringfenced;

> ● ensure that 'Agile' principles and approaches are appropriately applied within the context of significant business programme change, for example by developing interim and target operating models, and having appropriate business and technical architecture in place, in advance, rather than in parallel with significant systems change.

Things to try and get right at the outset:

Understanding aims, ambition and risk

Avoid unrealistic ambition with unknown levels of risk.

Ensure the business problem is fully understood before implementing a solution.

Plan realistic timescales for delivery, which are appropriate to the scope and risk of the programme.

Engaging commercial partners

Spend enough time and money exploring requirements with commercial patterns at an early stage.

Adopt a more flexible contracting process that recognises scope and requirements may change.

Work towards a partnership model based on collaboration with commercial partners.

Approch to legacy systems and data

Plan better for replacing legacy systems and ensure these plans are appropriately funded.

Recognise the move to the cloud will not solve all the challenges of legacy.

Address data issues in a planned and incremental way, to reduce the need for costly manual exercises.

Using the right mix of capability

Be clear about what skills government wants to develop and retain, and what skills are more efficient to contract out.

Better align political announcements, policy design and programme teams' ability to deliver through closer working between policy, operational and technical colleagues.

Choice of delivery method

Recognise that agile methods are not appropriate to all programme teams.

When using agile methods ensure strong governance, effective coordination of activities and robust progress reporting are in place.

Effective funding mechanisms

Ensure that requirements for both capital and resource funding are understood and can be provided for.

See technology as a part of a service that involves people, processes and systems in order to better consider the economic case for investment.

Agile project delivery

Agile can lead to poor outcomes if local government applies it inappropriately

Agile is not a single prescribed methodology. Its origins are as a simple set of principles that value flexibility over rigidity when developing software.

However, agile is not 'better' – it is better adapted to some problems, but not so well adapted to others. We have seen situations which give cause for concern about its application to large-scale change and transformation programmes, or those involving complex legacy environments.

Concerns are set out below against the topics in the National Audit Office's framework for the analysis of change and transformation.

Vision and strategy

● Organisations may be in danger of applying techniques for simple software development inappropriately to large-scale change & transformation programmes. Documentation may be sketchy or superficial and not evidence the fundamentals to a necessary level of depth.

● In the absence of clear governance and assurance processes, it is hard to get a clear view of how and what real progress is being made for the money spent, or to assess the likelihood of successful delivery. Recording methods may be inadequate to compensate for the lack of more formal documentation.

● For more complex business change enabled by technology, essential early activity (such as business problem identification, full discovery rather than just user journey, feasibility, options analysis, business architecture, planning, costing and so on) is at risk of either not being done up-front, or being done inadequately to a shallow and superficial level.

Governance, business model and architecture

● The flexibility inherent in an agile approach is easily abused and is not an excuse for failing to undertake the necessary thinking through of what the transformed organisation will look like. The initial foundations may not be sound.

● Senior leaders may mistakenly believe that agile means such thinking can be lightweight at the start and/or deferred to a future stage.

● Designing and developing technology solutions ahead of key business decisions may lead to nugatory or costly re-work resulting in solutions costing more, taking longer and creating a sub-optimal outcome based on an incomplete architecture and design, leading to integration issues.

Change management

● Reporting arrangements may be merely conveying project activity (such as completed sprints and epics) and not true progress on the full scope of the project.

● Organisations may confuse 'test and learn' with after-the-event rationalisation of slippages and re-work.

People, process, technology and data

● Large-scale business change requires much up-front thinking (target operating model, architecture, and so on) and careful consideration of how the legacy systems and environment will integrate into any new change.

● Such thinking needs to include clear plans for how data will be integrated, especially fixed elements such as the data model and data architecture, as well as data cleansing and migration.

● There is a risk that data needs are not considered sufficiently early, and where existing data sources are used, whether the current data remain fit for purpose.

● There is a risk of lack of identification of critical dependencies in complex programmes and projects that require integration with other systems, especially legacy systems.