



techUK
FOR WHAT COMES NEXT

The techUK
Ten Point
Plan for
Healthtech

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Foreword

“During our response to this pandemic, we have had a weapon in our armoury that previous generations simply did not possess – the incredible emerging technologies that have spurred so much innovation in healthcare.”

**The Rt Hon Matt Hancock MP
Secretary of State for Health and Social Care¹**

There’s no denying that 2020 was a year of change. A year that we could not have gotten through without the efforts of key workers across the country, and, crucially, without our health service and the millions of administrative staff, nurses, doctors, care workers and many others that are working around the clock to keep us safe.

For techUK and its members, including the hundreds of companies of all sizes operating in the health care technology space, 2020 was also a year where we saw significant change in the health system’s approach to adopting technology and innovation.

To build on this momentum, our Health and Social Care team has drafted a list of 10 recommendations, informed by our regular engagement with our members, our Health and Social Care Council, our strategic partnership with NHS Digital, our work with NHSX, the Professional Record Standards Body (PRSB), Health Education England, the NHS Digital Academy, INTEROPen, the Shuri Network, and more, brought together in what we call the techUK Ten Point Plan for Healthtech.

This paper is not meant to be an exhaustive review of the health care technology landscape, but rather to provide a breakdown of what our members see as the biggest challenges in the space and a set of recommendations for how we can drive progress. In order to achieve our stated objectives, techUK welcomes further dialogue and collaboration with the service.

We would like to thank everyone who contributed to the process.



Recommendations

Our commitment:

techUK will work with members and stakeholders across the digital health and care ecosystem to support efforts to deliver on these recommendations. We are committed to playing our role in representing industry and helping to build a world-class digital health and care service that empowers patients, staff, and citizens, fostering true innovation.

1. Putting the power into the hands of the public

The health service should prioritise improving citizens' access to their own data, enabling them to make data-driven, informed decisions about their own care.

2. Developing world-class digital health and care standards

NHSX should continue to work with industry to ensure the Digital Technology Assessment Criteria (DTAC) is fit for purpose; raise awareness and support commissioners to understand and utilise the DTAC; work with third-party assessors to maintain a pipeline of innovation; and engage with the relevant stakeholders to realise a functional reimbursement model for citizen-facing digital health technology.

3. Communicating the value of digital

The NHS should leverage the channels that the public uses to access information about health and care to raise visibility of citizen-facing digital health technology. Stakeholders should consult on creating a mechanism that allows individuals to easily access information about the innovations available through the service within a specific locality, and commissioners to check what is being done across the country.

4. Applying an international, open standards first approach

techUK encourages NHS Digital and NHSX to take an international, open standards first approach as it develops national assets and infrastructure. Further education of NHS staff about what interoperability means in practice will help to reinforce the importance of this approach.

5. Centrally mandating, assessing and enforcing the use of interoperability standards

The Department of Health and Social Care should centrally mandate, assess and enforce the use of interoperability standards through NHSX and NHS Digital. Standards should be locally implemented and co-developed with both industry and the service itself. These should then be collated into a single, searchable interoperability standards registry. This standards registry should be transparent and accessible by end users so they understand what they should adhere to.

6. Supporting integration of social care through digital transformation

The Department of Health and Social Care, the Ministry for Housing, Communities and Local Government, NHSX, and local authorities should work with techUK and other industry associations to establish a commission to audit the structure and digital maturity of the social care landscape. This audit will help industry better support the digital transformation and integration of the health and care system. Having completed the audit, they should define a “target architecture” for care that will help to establish a roadmap for providers to identify what technology they need to implement.

7. Increasing digital maturity of staff

Stakeholders should leverage industry partnerships in the digital upskilling of staff, with a focus on continuing to improve boards' understanding and confidence of digital; designing clear career pathways for informatics staff; and developing a diverse and inclusive informatics workforce.

8. Providing targeted and dedicated investment for digital technology

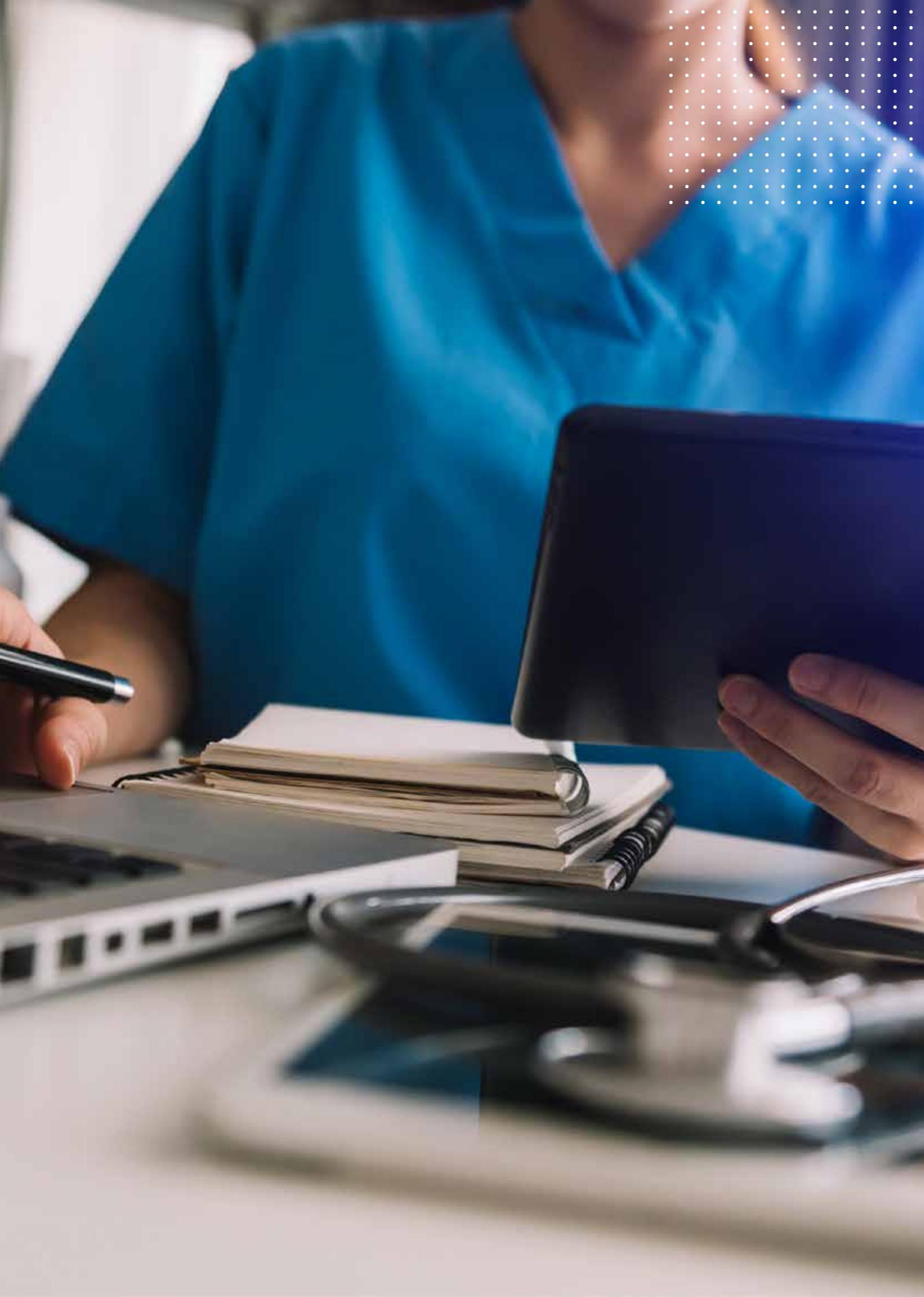
Following on from the findings of the recent Public Accounts Committee and National Audit Office reports, techUK believes that the vision for a digitally mature system should be delivered through targeted and dedicated investment in technology for health and social care. This funding should be ringfenced and delivered via multi-year budgets that will allow flexibility between Capital (CapEx) and Revenue (OpEx) where appropriate.

9. Enshrining the role of the Integrated Care System into law

In line with the Long Term Plan's recommendation to establish Integrated Care Systems (ICSs) nationally by April 2021, techUK calls on the Secretary of State for Health and Social Care to implement plans to establish the role of the ICS in law. This will help to simplify and codify the provider landscape, making it easier for suppliers to engage with the health and care system.

10. Streamlining procurement of digital technology

As part of a comprehensive plan to reform procurement, the health and care sector should pivot towards outcomes as the primary success factor for digital transformation; signpost suppliers to existing frameworks; provide an accurate estimate for their total value; offer specialist training for procurement staff who are buying technology; and prioritise the streamlining of existing and future frameworks by committing to reducing their proliferation.



Chapter 1

Empowering the public

“We will empower citizens to participate in their health and care by ensuring there are digital tools and services available for them to access information and services directly. We will enable the health and care system to personalise people’s experience to meet their needs, improve health outcomes through timely interventions, and by enabling more effective interactions across care settings.”

NHSX Tech Plan - Vision²

Background

Over the past 72 years, the NHS has delivered massive achievements.³ Life expectancy has increased by 13 years⁴, despite slowing in the past decade. However, more than 20% of an individual's life is estimated to be spent in poor health⁵, and millions of people live with one or more long-term conditions.⁶

Coupled with the increasing pressures posed by an ageing population, the health and care system has been grappling with years of financial strain⁷ and staffing shortages.⁸ With COVID-19, these challenges are now becoming even more severe.

To future-proof the service in the run-up to its 80th birthday and beyond, as outlined in the NHS Long Term Plan, the need for transformation is clear. Citizens have to be given access to the data and tools needed to lead longer, healthier lives.

The Government recognises the role of digital technology in putting the power into the hands of its citizens. At techUK, we believe that only by doubling down on the digital agenda will we be able to build on the strengths of our NHS and become a world leader in health care technology, with a modern system and a truly empowered public.

Opportunity

“In the 2020s, people will not be passive recipients of care. They will be co-creators of their own health,” Advancing our health: Prevention in the 2020s⁹

According to the Institute for Health Metrics and Evaluation, over a third of all deaths in the UK can be attributed to behavioural risk factors.¹⁰ Figures from the Office for National Statistics (ONS) show that prevention makes up about 5% of all public funding on health¹¹, meaning over £100bn is spent treating disease and £8bn preventing it.¹² Meanwhile, long-term conditions are said to account for 70% of the health service's budget.¹³

The growing emergence of connected devices such as smart inhalers or wearable heart rate monitors opens up new possibilities for prevention, treatment and disease management. They can provide cost-effective methods to ease pressure on services, enabling the public to take control of their health and wellbeing and supporting the move from a reactive to a proactive system.

At the same time, an increasing number of apps are helping citizens connect with their clinicians, schedule appointments and monitor conditions by integrating with smart devices. Back in 2017, a report by research2guidance¹⁴ found that there were over 325,000 health apps available on app stores at the time.

In recent years, we have witnessed the growth of a new digital health subset called digital therapeutics (DTx), which use digital technology to provide therapies and prevent, manage or treat a condition.¹⁵ There is emerging evidence that the use of DTx is cost-effective in the real world, reducing primary care resources and spend whilst introducing well evidenced, clinically effective behavioural change at scale.

Case study: Creating capacity through 'telehealth in a box' during COVID-19

Docobo, British provider of digital health and telehealth solutions, has been working with healthcare organisations in Liverpool to deliver remote monitoring since 2017. Prior to the COVID-19 pandemic, around 1,800 citizens with chronic obstructive pulmonary disease (COPD), diabetes and other long-term conditions were cared for using their services.

As COVID-19 was declared a pandemic by the World Health Organisation, Liverpool Clinical Commissioning Group requested an expansion of the project to support its vulnerable population, which it needed to shield.

In six weeks, Docobo doubled user numbers to 4,000; and the number later rose to 5,000. They created 'telehealth in a box' to help citizens start using their services, and delivered vital equipment including blood pressure monitors and pulse oximeters working with British Gas volunteers. Latterly in the second wave, patients have been monitored via Covid Oximetry @ Home to prevent silent hypoxia and hospital patients discharged to be monitored at home in a COVID-19 Virtual Ward under the care of consultants.

With a nurse-to-patient ratio of over 1:400, Docobo is supporting Mersey Care to create capacity, helping to improve outcomes and reduce the workload of overburdened clinicians during the COVID-19 pandemic.

Case study: Bringing digital therapy to patients at scale

British company Big Health, provider of two solutions tackling insomnia and anxiety, is leading the way in the digital therapeutics space. The company's products are supported by 12 Randomised Controlled Trials and over 50 peer reviewed papers, real-world outcomes and independent health economics analyses.

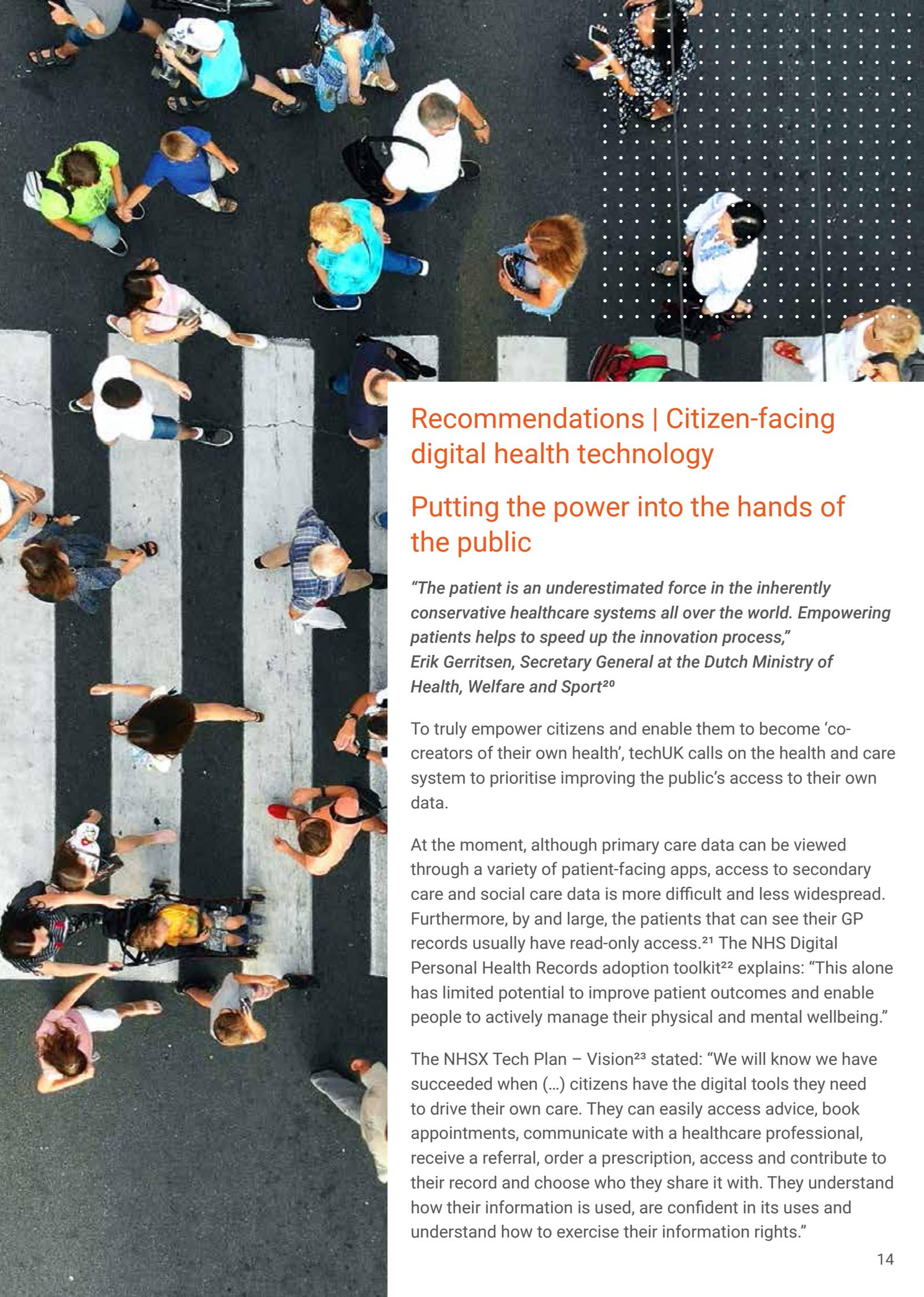
In October 2018, the company partnered with the Oxford Academic Health Science Network to provide digital Cognitive Behavioural Therapy (CBT) at scale in the Thames Valley region to patients living with insomnia, for which National Institute for Health and Care Excellence (NICE) recommends CBT as first-line treatment. In the past two years, 7,500 people accessed treatment through the company's Sleepio solution, showing a recovery rate of 58% and reporting improvements in their overall mental health and wellbeing.

Studying Sleepio's¹⁶ impact on costs in primary care across nine practices over 15 months, the Office of Health Economics estimated its use would result in cost savings of £4m in three years when deployed across the Buckinghamshire, Oxfordshire and Berkshire West Integrated Care System.¹⁷

Barriers

Although the digital health and care space is growing, our members have told us that a number of barriers continue to stymie widespread adoption and to slow the creation of a vibrant ecosystem of citizen-facing digital health and care innovation, including:

- > **Lack of access to full health and care records:** Despite progress in making it easier for citizens to view summary care records, accessing records from secondary care and social care, as well as integrating valuable data from connected devices, remains difficult.¹⁸
- > **Lack of clarity regarding the minimum evidence threshold that innovations need to meet:** From our engagement with members in this space, we hear that innovators are being asked to provide varying levels of evidence of effectiveness by buyers. It is not clear what is the minimum amount of evidence required to show that an innovation has high potential and therefore should be adopted within the system.
- > **No clear route to market or reimbursement pathway:** The fragmented approach to evaluation is reflected in a lack of clarity regarding routes to market. Even for innovators with strong evidence showing their digital technologies can improve health outcomes and deliver cost savings, it is not clear what is the definitive step towards getting reimbursed.
- > **Lack of awareness, training and professional development:** Members and stakeholders tell us that more needs to be done to ensure that citizens can and know how to access trusted information about the growing number of tools they can use to care for their health; and to provide education for clinicians, commissioners and policymakers about digital health and care technology and its different types and use cases, helping to enable better adoption. In the autumn of 2020, a survey carried out by Diabetes UK found that, according to 40% of the respondents, the greatest difference in improving access to diabetes technology would result from health professionals having the experience and confidence needed to support people with the condition to use it.¹⁹
- > **The issue of competition versus collaboration:** As emphasised in the techUK Manifesto for Matt from 2018, the digital health and care industry needs greater clarity with regards to what is planned to be built within the system and what the system believes the market should provide. Driving transparency, this would help to reduce duplication of effort and encourage the development of the UK's digital health and care industry.



Recommendations | Citizen-facing digital health technology

Putting the power into the hands of the public

“The patient is an underestimated force in the inherently conservative healthcare systems all over the world. Empowering patients helps to speed up the innovation process,”
Erik Gerritsen, Secretary General at the Dutch Ministry of Health, Welfare and Sport²⁰

To truly empower citizens and enable them to become ‘co-creators of their own health’, techUK calls on the health and care system to prioritise improving the public’s access to their own data.

At the moment, although primary care data can be viewed through a variety of patient-facing apps, access to secondary care and social care data is more difficult and less widespread. Furthermore, by and large, the patients that can see their GP records usually have read-only access.²¹ The NHS Digital Personal Health Records adoption toolkit²² explains: “This alone has limited potential to improve patient outcomes and enable people to actively manage their physical and mental wellbeing.”

The NHSX Tech Plan – Vision²³ stated: “We will know we have succeeded when (...) citizens have the digital tools they need to drive their own care. They can easily access advice, book appointments, communicate with a healthcare professional, receive a referral, order a prescription, access and contribute to their record and choose who they share it with. They understand how their information is used, are confident in its uses and understand how to exercise their information rights.”



A number of countries are further on this journey: for instance, the Netherlands' MedMij technical framework allows patients to collect, share and manage their health data in their own personal health environment.²⁴

At an event organised by techUK in December 2020, NHSX CEO Matthew Gould emphasised that “putting the patient at the centre of their own care” was seen as the “inexorable direction of travel”. We recognise that an increasing amount of work to make this a reality is already underway across the system, supported by the push to create shared care records in all health economies by September.²⁵

As we await the publication of the data strategy for health and social care from NHSX, we look forward to working with stakeholders across the board to ensure that citizens are equipped with the right tools and information to take control of their health and participate in their own care.

However, we must ensure that any efforts to drive patient engagement through the use of digital technology address the digital divide. Figures from the ONS²⁶ show that one in 10 UK adults did not use the internet in 2018, and 4.3 million people were estimated to not have any basic digital skills. Although that number has been declining over time, the Centre for Economics and Business Research estimates that nearly eight million people will still lack digital skills in four years' time.²⁷ It is therefore crucial that new services meet the needs of those that might be most excluded, who in fact might benefit the most from what digital has to offer.

Ensuring the Digital Technology Assessment Criteria is fit for purpose

The recent publication from NHSX of the Digital Technology Assessment Criteria (DTAC) shows a commitment to streamline the process that innovators have to undergo to validate the suitability of their technologies for NHS, social care and citizen use.

As we understand that the focus will initially be on citizen-facing digital health technology, we encourage NHSX to continue to work closely with industry to ensure the DTAC is fit for purpose, meaning it is proportionate and open to managing the iterative nature of digital health and care technology. Equally important is the DTAC being integrated and used by commissioners. We welcome the creation of a support platform for buyers, which would enable them to easily identify the technologies that are DTAC compliant.

Lastly, we believe further education and training of staff will be required to ensure that the DTAC is applied accordingly and that the introduction of the standards drives growth rather than stifling innovation.

Providing a local view of the tools available for use

The digital health and care market has previously been described as the 'wild west'²⁸, with the number of innovations being launched and lack of clear standards making it difficult for the public and health systems alike to easily distinguish between solutions that can deliver on their promises and those that do not.

As work is undertaken to clarify the end-to-end process for the assessment of citizen-facing digital health and care technology, we believe NHSX should work with local and regional stakeholders to consult on a system allowing citizens to access trusted information about the tools available within their locality, and commissioners to see what is being used across the country.

We believe such a mechanism would play an important role in helping to address some of the challenges that innovators face in scaling their solutions, and welcome further engagement with industry to facilitate an easily accessible view of proven and best-in-class products.



Chapter 2

Embedding standards and interoperability

“An efficient interoperability ecosystem provides an information infrastructure that uses technical standards, policies and protocols to enable seamless and secure capture, discovery, exchange and utilization of health information.”

Interoperability according to the Healthcare Information and Management Systems Society. (HIMSS)²⁹

Background

Identified in an internal survey from 2020 by members active in techUK's Health and Social Care programme as the most pressing concern, this challenging topic covers the broad themes of mandating and setting standards in order to facilitate the seamless flow of data across and between organisations. At techUK, we have already led industry-wide work in this area with our Interoperability Charter³⁰, which sets out a code of practice for health care IT companies in the UK. This charter advocates for industry and the NHS to work in tandem to co-define and implement interoperability standards, following a code of good practice. Together with organisations such as INTEROPen and the PRSB, we have been continuing our work in this area alongside the newly formed Standards and Interoperability team at NHSX. Their new Director, Irina Bolychevsky, has been handed a mandate to redefine their organisational strategy and lead this vast programme of work anew.

Five years on from the publication of the Charter, the challenge for the future is how to reconcile the current reality regarding siloed data and proprietary software with a health and social care system that is becoming more structurally, legally and financially integrated.

In terms of its ubiquity, it is the Sisyphean task of the health and care system and one of the primary questions is who is ultimately accountable for its delivery and implementation centrally and locally within the NHS in England. In truth, the answer is multifaceted, but as we at techUK have heard time and time again, it is more a cultural matter than a technical challenge.

Opportunity

In our Manifesto for Matt, we made a point of putting a price on the potential value of data held in the NHS.³¹ This data has the potential to transform the way that care is delivered through system level planning and population health management. In 2021, although progress on interoperability has not shifted significantly, the opportunity has stayed largely the same with the potential value of the data held in the NHS valued at some £9.6bn per annum in benefits (i.e., the NHS benefits worth £5bn per annum and the patient benefits worth £4.6bn per annum).³²

If, in the next four to five years, the health and social care system in the UK is able to achieve wholesale and wide-ranging integration of its systems, then the potential benefits to patient care, patient safety and the overall improved efficiency of the ecosystem are staggering. The response to COVID-19 has demonstrated the urgent need for data to be able to flow between systems freely and it is this patient centric use case that is perhaps the most compelling reason to now focus efforts on progress in this area.

As we move beyond the current crisis and with Integrated Care Systems (ICs) becoming a de facto reality as of April 2021³³, the need to ensure that data flows both outside of and inside an organisation has never been greater. Indeed, the opportunity to broaden the marketplace for suppliers, offering greater choice for providers and driving competition, now stands as the next horizon for the health and social care system.

Barriers

“With interoperability, in order for one party to be able to get benefit, another party has typically got to incur all the costs, has got to do all the clinical change and they themselves get no benefit whatsoever because it is the receiving organisation that gets all the benefit.” David Hancock, InterSystems³⁴

- > **Lack of prioritisation.** Interoperability is just one range of standards that suppliers are being asked to meet at any given time. Industry has a finite capacity and the lack of prioritisation makes it complicated to understand what is a “must” and what is a “nice to have”. Although this is often thought of as a concern that affects SMEs primarily, it is a cross-sector challenge for all businesses.
- > **Information governance.** Too often, legitimate concerns about information governance are used to stifle and delay progress on interoperability. NHS to NHS data sharing should not be an issue for information governance and fears over “big tech” handling sensitive information are blown out of proportion.
- > **“Not invented here” syndrome.** The NHS and social care sector tends to be reticent to adopt standards that have not been developed nationally or locally. This trends towards further fragmentation and variation, instead of adopting the internationally recognised version of any given standard. For example, the NHS in England has largely ignored the use of Integrating the Health Enterprise (IHE) despite its usefulness in helping to solve interoperability problems, whereas it has been more widely adopted in Wales.
- > **Systemic fragmentation.** Across the system, there are still vast oceans of data that exist in isolation. Poor levels of digital maturity and a reliance on analogue, i.e. paper, systems means that much is either not captured or lost.
- > **An alphabet soup of responsible Arm’s Length Bodies (ALBs).** Organisations such as NHS England and Improvement (NHSE/I), NHSX, NHS Digital and the Department for Health and Social Care (DHSC) and others make up an alphabet soup of responsible organisations, who, when combined with other stakeholders, muddy the waters of accountability for embedding interoperability. Most of these organisations have little to no “teeth” with which to enforce non-compliance with interoperability standards.

Case study: Share Care Record integration through interoperable solutions

Orion Health is a New Zealand based company that develops software to drive efficiency in healthcare and improve healthcare outcomes. Their technology is used to power some of the leading shared care records throughout the UK and Ireland, such as the Dorset Care Record (DCR).

The DCR has taken a phased approach to implementation, based on regular releases of additional data and functionality. The DCR is cloud-based, with hosting provided by Redcentric. Patient record matching is done through an interface between the Orion Health platform and NextGate's market-leading Enterprise Master Patient Index (EMPI). Demonstrating the DCR's commitment to interoperability, it uses SNOMED, Read, dm+d, HTML, ITK, HL7 and HL7 FHIR standards.

In April 2020, as part of Dorset's COVID-19 response, work to allow up to 150 clinicians and staff at neighbouring Yeovil District Hospital was fast-tracked, due to 30-40% of their emergency admissions coming from Dorset Clinical Commissioning Group (CCG) patients.

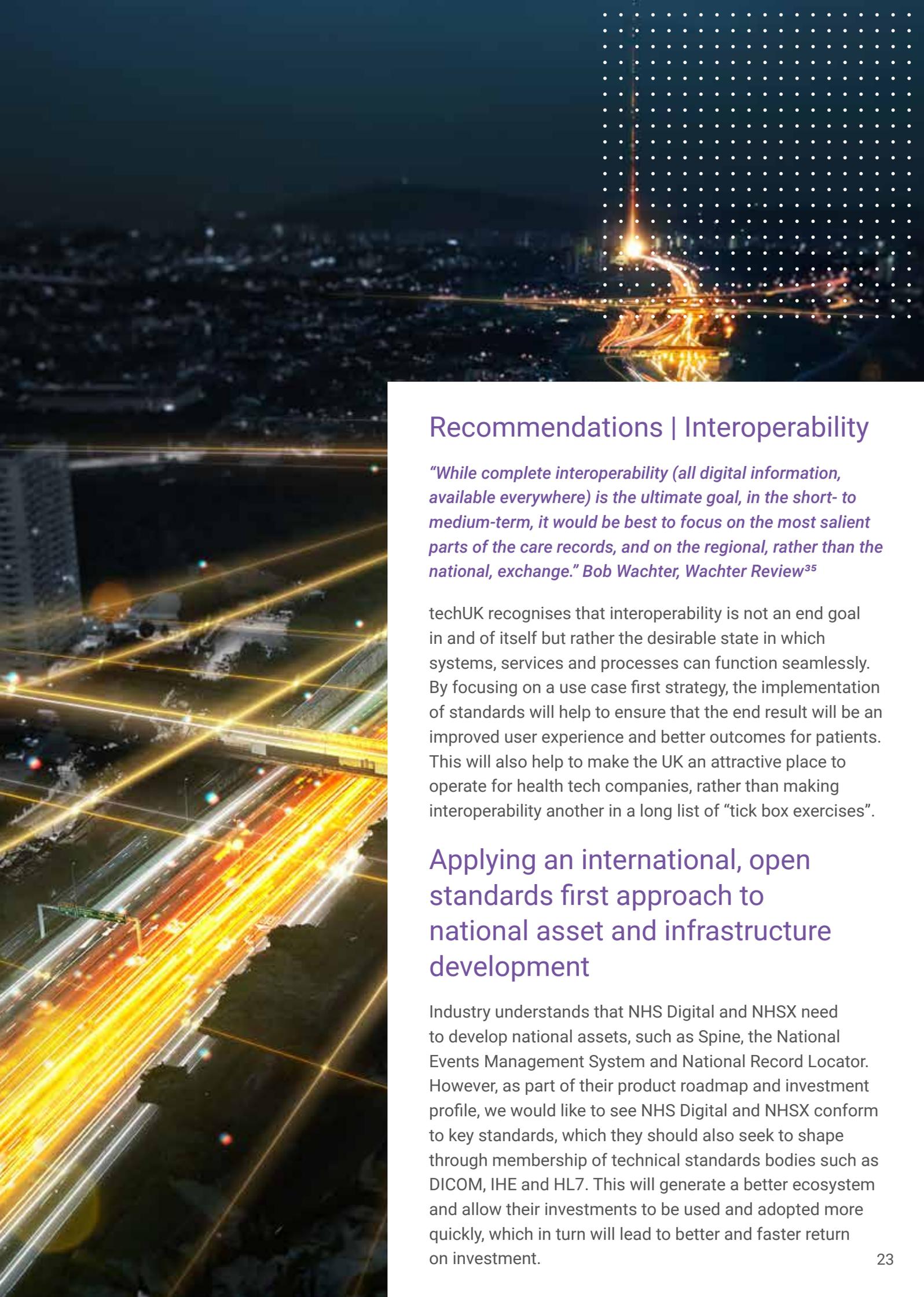
Case study: Supporting Nightingale Hospitals and the National Pathology Exchange

Lyniate partners with healthcare organisations around the globe to deliver cutting-edge solutions to address interoperability challenges. During 2020, they have partnered with CliniSys Group, who provides clinical laboratory management solutions used in 45% of the UK's NHS Trusts and laboratories.

This partnership has been involved in several COVID-19-related activities, including the establishment of Nightingale Hospitals and with the labs that use the National Pathology Exchange (NPEx) for COVID-19 testing and reporting.

In March 2020, the NHS began setting up seven temporary critical care facilities called Nightingale Hospitals. Several of the Nightingale Hospitals are using CliniSys to configure their laboratory information management systems (LIMS).

For instance, the Birmingham Nightingale uses the CliniSys ICE product for ordering tests and reporting results and the Bristol Nightingale uses the WinPath Enterprise LIMS product for managing its pathology service. CliniSys embeds the Rhapsody Integration Engine into its solutions to translate and transform clinical data.



Recommendations | Interoperability

“While complete interoperability (all digital information, available everywhere) is the ultimate goal, in the short- to medium-term, it would be best to focus on the most salient parts of the care records, and on the regional, rather than the national, exchange.” Bob Wachter, Wachter Review³⁵

techUK recognises that interoperability is not an end goal in and of itself but rather the desirable state in which systems, services and processes can function seamlessly. By focusing on a use case first strategy, the implementation of standards will help to ensure that the end result will be an improved user experience and better outcomes for patients. This will also help to make the UK an attractive place to operate for health tech companies, rather than making interoperability another in a long list of “tick box exercises”.

Applying an international, open standards first approach to national asset and infrastructure development

Industry understands that NHS Digital and NHSX need to develop national assets, such as Spine, the National Events Management System and National Record Locator. However, as part of their product roadmap and investment profile, we would like to see NHS Digital and NHSX conform to key standards, which they should also seek to shape through membership of technical standards bodies such as DICOM, IHE and HL7. This will generate a better ecosystem and allow their investments to be used and adopted more quickly, which in turn will lead to better and faster return on investment.

For example, the National Record Locator is a halfway house that has some utility for sharing documents. However, as a piece of infrastructure, it should support key standards such as IHE Cross-Document Sharing (XDSb.) and Cross Community Access (XCA). Many vendors already support these standards, but without being able to interact using them, they have to build bespoke integration. This makes adoption much harder. Furthermore, these standards have already solved these integration problems before the sharing of information, and suppliers do not want to re-invent the wheel and solve them in a different way.

Moreover, it is only through the education of NHS staff, not only on the technical nuances of interoperability, but on its overall utility, that we will meaningfully move the dial on how it is viewed, used and ultimately valued.

We encourage both NHS Digital and NHSX to take an international, open standards first approach as they develop and commission more infrastructure, as they have done with FHIR UK Core, which has been developed specifically to improve the way FHIR R4 is used in the UK. Requiring industry to comply with NHS-specific standards will only erect barriers to adoption and discourage industry-NHS collaboration. An example of which would be the use of the NHS Interoperability Toolkit (ITK) which was based on HL7 v.3, when few suppliers supported its use.

Centrally mandating, assessing and enforcing the use of interoperability standards

All standards are equal, some are more equal than others, George Orwell (probably)

In order to achieve ubiquitous interoperability, there must be a way in which standards are managed and understood across the ecosystem. Over time, standards tend to deprecate and get replaced with newer versions, although this is not always reflected in the tenders that are published or the standards that are referenced (i.e. SCCI 0129 and DCB 0129³⁶).

With a graded and curated list of standards, how they pertain to different clinical and operational settings, including how they will be valued from a procurement perspective, industry and the health and social care system will practically understand what these mean and how to assess which to focus on.

Whilst there is an Application Programming Interface (API) Catalogue³⁷, this is, for the most part, a list with a brief description of what the APIs do. Currently, it is insufficient to both publicise and help all system providers adopt these standards. Additionally, there are other sites, such as a page on the use of Fast Healthcare Interoperability Resources (FHIR) - Based APIs, where you can find another list of standards³⁸, which makes a single source of truth hard to define.

Therefore, techUK is advocating for a single place to find all APIs, with a comprehensive searchable registry of standards. This should contain the information needed to help industry understand what stage the API is at e.g. current, being developed etc.. so companies know if they need to plan to support this in their product roadmaps. This means there needs to be more meta data about each standard, which again should be searchable. Currently, suppliers are able to use NHS Digital's interactive product backlog to suggest, comment and upvote features on their backlog .

Meta data that should be held in the registry for each standard could include, for example:

Figure 1: Table to show an example registry of meta data held on interoperability standards

Meta Data Item	Description	Meta Data Item	Description
Standard Name	Name by which everyone will refer to it by	Standard Description	More detailed description, what it is used for, in what circumstance
Standard Specification	Link to the actual standard	Date of Next Review	
Active/Deprecated	Is this standard active or has it been superseded or withdrawn	Type of Standard	HL7 v3, FHIR STU3, FHIR R4
Type of Interoperability	Message, Document, REST API	Status	NHS Digital status (Exploratory, Alpha, Beta, Release Candidate, Released)
Under Further Development Y/N	Standards must evolve, therefore industry need to know whether they are under further development so that they can see if they need to plan for it in their roadmaps	Related PRSB clinical specification	Link to the clinical modelling completed by PRSB
Logical Model	Link to latest Logical Models	FHIR Profiles	Links to FHIR Models and Profile definitions (typically on Simplifier)
Implementation Guide	Link to Implementation Guide	Data Last Updated	
Legal use			

We would like to commend the other work which is being done by the PRSB on a registry of standards, and we believe that industry, PRSB, NHS Digital, and NHSX should work together to define this. There is plenty of work that has been done in the UK using ISO/IEC 11179 meta data registry, so we should build on that together to solve this problem. The registry itself should then be in a single location linked off an NHS Digital (or NHSX) home page, which would make it far easier to find.

Operating at the ICS level and as part of their digital transformation plans, NHSX should work with industry, trusts, Primary Care Networks (PCNs), Local Authorities, and others to publish “cook books” to help with the implementation of standards and knowledge sharing across organisations. Graham King, Product Manager for DesAcc, has prepared an example “cook book” which illustrates the sort of implementation guide that industry would like to see developed. Areas of prioritisation for future standards NHS Digital and NHSX could include Medications (and Allergies) including Dose Syntax, Social Determinants of Health data, and Care Plans.

Ultimately, these standards will increase the ability of providers to choose the most suitable supplier on the grounds of efficacy and product capability. Similarly, it will open up new opportunities for businesses to operate in an increasing number of geographies, whilst guaranteeing that they are on a level playing field.





Chapter 3

Digitising social care

“Digital will underpin transformation of the health and social care system as we know it. Now is the time to level up social care and deliver on the promise for citizens, carers and the social care workforce.”

**Chris Gibbons, Technology Consulting Senior Manager, Health and Public Service, Accenture;
Chair, techUK Social Care Working Group**

Background

Unduly seen as the poor relation of the NHS, in recent years, social care has been in something of a policy no man's land, where attempts to find a political solution to the issues around a sustainable funding model are typically portrayed as unfeasible or undesirable by the party in opposition at the time.³⁹ For the purposes of this paper, which will focus on adult social care, the care sector is defined as encompassing residential, domiciliary and community care. It employs around 1.5 million⁴⁰ people formally and, against the backdrop of sustained pressure, expenditure has increased to £22.2bn⁴¹ by 2018/2019. The connection between increased funding and technology may seem obvious, but as local authorities struggle to meet the growing demand for provision of care, their ability to invest strategically tends to take second place to a need to meet the immediate demands of the population.

Indeed, the Government's Green Paper on Social Care, which was due to establish a long term plan, has been delayed repeatedly and is now not expected until sometime in 2021.⁴² This is a once in a lifetime opportunity to get it right for social care, and we are in a unique position to build on the good work from a local and national level, which has for the last few months been responding to the pandemic and delivering meaningful change. The vision behind a reform of social care is to create a connected health and care community that is cohesive and enables standards to allow everyone across the social care ecosystem to deliver on.

A comprehensive financial settlement is not the only issue that the sector has to manage, as the governance around what the digital policy is and who manages it is fragmented in a different way to the NHS. This creates a large number of challenges in terms of the commissioning of technology, as the beneficiaries of investment are more often than not the ones actually paying for it. Moreover, although many NHS services are able to be integrated into social care, the local infrastructure of community volunteering should not be forgotten. The goodwill of people and volunteers of the last few months is key for the future of social care. A lot of care support was enabled during COVID-19 due to capacity and people power. Furthermore, digital maturity in social care has lagged behind the health service for some time, but, despite this, it is in social care where we have perhaps seen the greatest digital transformation during COVID-19 and where, paradoxically, there have been the most sustainable opportunities for technology to transform the quality of care delivered.

Opportunity

Although there are broader systemic challenges to the delivering of care in the UK, through the successful deployment of technology, using solutions such as remote monitoring, Technology Enabled Care Services (TECS) and increasing the base level of connectivity across the social care estate could go a long way to helping to improve outcomes for citizens and aid in balancing the books at the same time.

ICs will play an increasingly important role from a social care perspective as it becomes ever more integrated with the NHS and overtime builds up more of a holistic view of managing cohorts of citizens. Across care homes and domiciliary care, there are vast pools of rich data that are currently untapped and unutilised, which, if shareable and accessible, could provide insight to help improve services.



Barriers

- > **System fragmentation and a lack of accountability.** The question of “who ultimately makes the decisions on policy?” often leads to a vacuum of decision making. To deliver on the vision for integrated health and care there needs to be clarity at a national level on who is delivering on social care alongside localities, as the current confusion in signposting care prevents this.
- > **Low levels of familiarity with digital.** Technology itself isn’t always the barrier and challenges around digital inclusion and digital skills. e.g. domiciliary care workers with tablets, are currently limiting the potential of digital transformation to change how care is delivered.
- > **Health first, social care second strategic thinking.** Planning and funding is typically developed with the NHS in mind and then worked backwards to fit the care sector. This leads to policy being developed and funding allocated in sub-optimal ways.
- > **Poor digital maturity and levels of connectivity.** Although now developing, the overall connectivity across the social care estate is a significant limiting factor, with many care homes still entirely paper based and perhaps without Wi-Fi. Without improving this layer of digital infrastructure, the digital transformation of social care will be held back by frustrating gaps in coverage.

Case study: The benefits of managed TEC services

Tunstall, a British company active in the social care market, operates in 15 countries around the world and supports more than five million end users through their technology and service offerings. Tunstall has been working with Nottinghamshire County Council (NCC) as a technology partner for its telecare service since 2006. Following a successful tender submission, in October 2018, Tunstall was also appointed to deliver a managed telecare service on behalf of the council.

Monitored connections have risen from 1,010 in December 2018 to 1,375 in March 2020. In addition, as of April 2020, there are 1,531 people using stand-alone equipment (not monitored by Tunstall Response) to support them at home as part of the service.

The Telecare Service continues to maintain as close to normal service levels as possible during the COVID-19 emergency. While engineers will not enter homes with symptomatic residents, all other working practices have been adapted to ensure service continuity and the safety of service users and engineers.

Case study: Devolving digitisation in Greater Manchester

On 1 April 2016, Greater Manchester took charge of the six billion pounds spent on health and social care in their 10 boroughs, following the devolution deal with the government. They were also given extra £450m to help transform services.

This is overseen by the Greater Manchester Health and Social Care Partnership, which is made up of the city region's NHS organisations and councils, plus representatives from primary care, NHS England, the Voluntary, Community and Social Enterprise (VCSE) sector, Healthwatch, Greater Manchester Police, and the Greater Manchester Fire and Rescue Service.

Tameside is leading the way in the Greater Manchester region in using digital technology in health and social care. Staff in care homes now use Skype to get in touch with dedicated nurses at the local hospital when patients within the homes become unwell. The hospital nurses are able to provide expert advice and guidance through a video conversation over Skype.

This support means that patients who would normally have been directed to A&E can remain comfortable in their own bed while staff receive advice on the right course of treatment or action to take.



Recommendations | Social care

“Spending more time with the people they support and less time doing paperwork – a welcome benefit of technology.”

Kate Terroni, Chief Inspector of Adult Social Care, Care Quality Commission

Carrying out an audit of the structure and digital maturity of the social care landscape; defining the ‘target architecture’ for care

An audit of the social care system, including a review of the levers available to policy makers, will help to make clear who is responsible for the digital transformation of the social care system, and critically, what the various options are to achieve this. With clear leadership on social care established, policy makers can work to define a “target architecture” that will help to scale solutions and provide guidance to the providers of care on what is possible, how they can achieve it and where it has been previously done.



Chapter 4

Supporting the health and social care workforce

“The future of the NHS and social care depends on getting technology right. The only way the NHS can stay true to its founding principles in a world of rising demand, rising costs and expectations is to use digital technology to transform itself. If we can get this right, there is huge potential to improve outcomes, the experience of patients, people in care, and staff, and productivity. The opportunities to improve health and care are almost endless.”

NHSX Tech Plan - Vision⁴³

Background

At no time in history has the impact and value of health and care workers been more evident than throughout the COVID-19 crisis. However, as demand for services continues to grow, the 1.3 million staff in NHS and NHS-commissioned services, along with millions in public health services, the voluntary sector and social care, as shown in the previous chapter, find themselves working in a collection of organisations stuck behind the digital transformation we have seen in other sectors.

As of February 2020, a quarter of providers had no Electronic Patient Record, while a third of social care organisations still ran on paper.⁴⁴ In some places, staff have to log into as many as 15 different computer systems to care for one patient. They do not have access to the data needed to do so, with hundreds of systems still unable to talk to each other.

While digital technology will not be the cure-all for the slew of challenges facing the health and care system, to deliver on the Government's ambition to improve outcomes, reduce burden on the workforce and build back better, it is clear that funding for digital transformation and upskilling will need to be prioritised. At techUK, we believe that only by doing so will the UK be able to ensure that the service is prepared to cope with the demands of the future.

Opportunity

“We’re in a situation where the health service can’t afford to continue to keep putting in more money to provide services in the traditional way that it has, there aren’t enough people that are trained to provide the services that are required. Something has to change. And the thing that can enable that change is digital.”
Non-executive director, NHS trust

Supported by advancements in science and technology, we know that health and care will undergo a significant transformation in the coming decade. Digital technology will play an integral role in helping the NHS meet the ambitions set out in the Long Term Plan, creating a service model fit for the 21st century.

Back in 2019, the Topol Review cautioned that nine in 10 jobs in the NHS would require “some element of digital skills” within the next 20 years.⁴⁵ Every NHS member of staff will become a digital member of staff, and digital technology a core and not peripheral part of the service.

This provides health and care with an opportunity to leverage the use of digital technology accordingly, providing the workforce with the modern tools needed to do their jobs, helping to improve job satisfaction and retention.

Barriers

“What you need to do is recognise that there has to be investment which doesn’t necessarily pay dividends in itself but provides a toolset for transformation,” non-executive director, NHS trust

To truly empower the health and care workforce using the power of digital technology, members and stakeholders have told us that a number of challenges will need to be addressed, including:

- > **Lack of funding for digital technology:** Years of underinvestment in getting the right infrastructure in place, coupled with the fast rate of technological change, have resulted in a large number of NHS and social care organisations being left with outdated systems that do not cater to the needs of today’s workforce or the workforce of the future.
- > **Lack of understanding of digital at senior leadership level:** Without having representatives at board level that understand the role of digital technology in creating a sustainable health and care system, organisations will continue to remain stuck in the past and play catch-up with other sectors.
- > **Support for the digital workforce:** Health Education England estimates that there are around 45,000 staff working in digital roles across the system. For these professionals, we heard that career pathways can lack clarity or appear disjointed. The NHS Digital Academy has made great strides towards developing the next generation of digital leaders. For the rest of the health and care workforce, however, we understand that digital upskilling initiatives can appear disparate, with no single resource for support.
- > **Mismatch in industry, system understanding:** As opposed to other industries, digital health and care innovators are seen as suppliers and not partners to the NHS. There is a mismatch between their expectations and a lack of understanding, transparency and, most importantly, trust between industry and the system.

Case study: Use of Microsoft Teams across the NHS during COVID-19

Microsoft Teams has been used across the NHS since March 2020 to collaborate and share information securely, reducing face-to-face contact and maintaining social distancing. The solution has played a key role in ensuring the NHS can still care for its patients accordingly, with over 65 million messages exchanged on the platform by staff by October. More recently, just in the first two weeks of January, staff hosted over 2.5 million meetings, with over 217,000 daily users.

“The use of remote messaging and meeting technology like MS Teams has proven to be essential for NHS organisations during the pandemic,” [according to Chris Parsons](#), who leads the NHSmail work at NHS Digital.⁴⁶

“Many doctors and nurses have had to work remotely to provide effective care, especially to those patients who have been self-isolating, and technology like this can help make it possible.

“There has been a seismic shift in how organisations work over the last few months, and these figures show that the appetite for digital collaboration has increased exponentially over that time, becoming part of the fabric of working life on the front lines.”

Case study: Putting digital health into the hands of staff

With thousands of health apps and no digital formulary for NHS professionals, throughout COVID-19, health and care organisations partnered with ORCHA (Organisation for the Review of Health and Care Apps) to put safe and effective digital health into the hands of frontline staff so that they could recommend the best solutions to patients.

Within 21 days of lockdown, NHS organisations in 50% of regions had access to their own ORCHA libraries filled with apps covering a wide range of conditions, including COPD and mental health. Staff had access to online, CPD-accredited training and were given tools to email or text app recommendations directly to patients.

Health and Social Care Northern Ireland included its app library as part of its national COVID-19 response, the Chartered Society of Physiotherapy rolled its library out to all members, and Public Health teams such as at Staffordshire Council actively embedded the practice of recommending health apps into their public health service offer.



Recommendations | Empowering the workforce

Leveraging industry resources to support the upskilling of staff

“The levels of digital literacy, the workforce’s awareness of the required capability, access to training and support, and skills to enable patients and citizens to improve health and wellbeing through technology will all need to be improved, as a fundamental shift in the balance of skills in the workforce takes place over the next two decades,” [The Topol Review \(2019\), Preparing the healthcare workforce to deliver the digital future](#)⁴⁷

The challenge that public sector stakeholders have in front of them to deliver large-scale transformation across the disparate workforce of the health and care system is no small feat.

In 2019, the Topol Review put emphasis on the importance of working closely with academia and industry to help plug the existing skills gap: “Creating a culture of innovation and learning will be critical, by cultivating a reputation for training and support, proactive learning activities, opportunities to learn and reflect away from the workplace, dissemination of lessons from early adoption and sharing examples of best-practice evidence-based initiatives.”

In the Autumn of 2020, techUK organised a roundtable discussion with representatives from the health and care system and industry to identify how we can support the delivery of this ambition. We welcome the work that NHSX and Health Education England have undertaken through the Digital Readiness programme. Going forward, our recommendation is that stakeholders continue to leverage industry partnerships in the digital upskilling of staff, learning from the best of the technology sector. We believe the focus should be on continuing to improve boards' understanding and confidence of digital, as done, for instance, through the work with NHS Providers; designing clear career pathways for informatics staff; and developing a diverse and inclusive informatics workforce.

Over the past two years, techUK has been closely working with the NHS Digital Academy to establish a programme of work through which digital leaders from across the health and care system have been able to tap into industry resources to further their professional development, with the mentoring relationships developed independent of the mentor and mentee's respective organisations. We look forward to continuing this work as the future vision for the Academy takes shape.

Moving the dial on Equality, Diversity and Inclusion

“It’s important to focus on diversity; not as an afterthought, but because doing so will generate crucial research questions and lead to the widest and most innovative range of future technologies which will serve the needs of the people,” UK AI Council Roadmap⁴⁸

The Shuri Network⁴⁹, the first network of BAME women in digital health and care, was set up in 2019 to celebrate diversity in the sector and challenge the NHS and social care system - and those with decision-making power - to push for progress in addressing the inequalities BAME women may face. In 2019, their research showed that there were less than 10 BAME women in CIO, CCIO or equivalent roles across the health service, despite over 75% of the workforce being female and around 20% BAME.

In the tech sector, the lack of diversity, especially at leadership level, is widely documented. In November 2019, Inclusive Boards⁵⁰ found that only 8.5% of senior leaders in the industry were BAME, while 75% of boards had no ethnic minority representation at all.

Through our Health and Social Care Council, techUK started working with the Shuri Network in the summer of 2020 to help connect the tech and healthtech industry with members of the Network. At techUK, diversity and inclusion are a core part of everything we do. We commend the work of the Shuri Network and support their efforts to champion the voices of underrepresented groups and create new avenues for development in digital health and care.

It is worth noting that often the reality of the wider digital health and care sector's diversity problem is masked because people characterised as BAME are grouped together. techUK understands this is not a real representation of the different experiences that exist in the industry and BAME may not be totally representative. However, it is useful in ensuring that we leverage meaningful data rather than lose the needs of minority groups whose issues have the potential to get lost in data aggregation. We will work to incorporate wider appropriate language that recognises the complexity of these issues as data becomes more granular.



Chapter 5

Reforming business environment and procurement

“The old argument about whether it’s right to prioritise modern technology in the NHS and our care sector is over. The pandemic has proven beyond doubt that better tech is vital for the future success of our health and care service.”⁵¹

**The Rt Hon Matt Hancock MP
Secretary of State for Health and Social Care**

Background

The interrelated topics of NHS procurement and the general business environment in which innovators operate are not subjects that get the blood going. They especially tend not to see much in the way of significant change within a short space of time. Unusually, in what had otherwise been a national *annus horribilis*, 2020 and COVID-19 began the process of changing the culture around procurement for what seemed to be the better. A need to adapt at pace, scale solutions within weeks and make contracting decisions overnight has led to the kind of cultural change that might take years of gentle carrot and stick. The question now is: how long will this change last?

techUK has for some time championed and petitioned for NHSE/I and the DHSC to simplify the procurement landscape by reducing the overall number of frameworks, thereby reducing the burden on suppliers. It also asked that they support the Health System Support Framework (HSSF) to become something of a “G-Cloud for Health”.

Opportunity

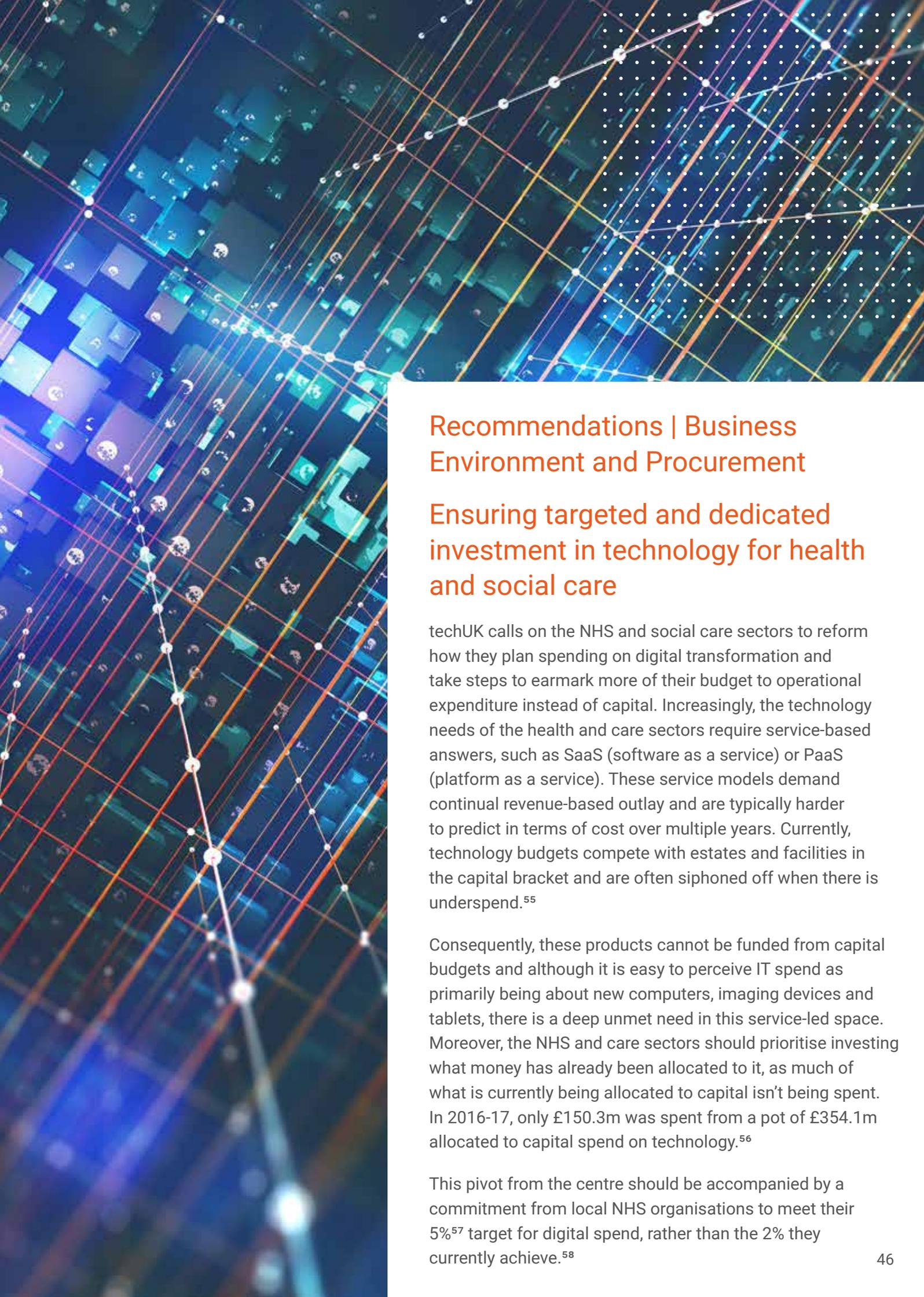
Fixing the procurement landscape and making the UK an easier place to do business has long been the goal of Government, dating back to their desire to reframe NHS procurement in the Future Operating Model (FOM)⁵² following recommendations in the Carter review. With a concerted move to ICSs, improved clarity on financial responsibility from NHSE/I and a will to rectify a fragmented system, the time for change is now.

Potentially, the health and social care sector could adopt a system where a handful of wide-reaching procurement frameworks cover much of the potential technology landscape. This would reduce the burden on business to accede to multiple, small and limited-in-scope frameworks. It would also make it easier for buyers (NHS and social care providers) to view and understand their options from across the market, thereby making them better informed purchasers who will be empowered to make data-driven decisions on behalf of their organisations. By slimming down the overlapping and overhead on the increasing number of frameworks, there is an opportunity to make the healthtech market a truly attractive one to enter.

From the 1 January 2021, the United Kingdom has become an independent trading nation with the ability to diverge from, or conform with, international standards, and it is therefore imperative that the Government strikes the right tone on the regulatory environment within which digital health innovators will operate. techUK is engaging with the Medicines and Healthcare products Regulatory Agency (MHRA) on upcoming changes to UK Medical Device Regulation (MDR) and the future of the United Kingdom Conformity Assessment (UKCA). Patient safety and public health is a national priority, which should align with a desire to make the UK an attractive host country for SMEs and multi-nationals alike.

Barriers

- > **Proliferation of procurement frameworks.** The recent NHSX launched Clinical Communications Procurement Framework⁵³ and Spark Dynamic Purchasing System (DPS)⁵⁴ for remote monitoring make what is already a complex landscape more byzantine in nature. Although the flexibility of the DPS is a least bad option, the sheer increasing number of frameworks is simply overwhelming for many innovators.
- > **Federated structures of accountability and governance.** The relationship between local contracting authorities and the centre is highly federated. The role of the Crown Commercial Service, Local Authorities, NHS Digital, NHSX, NHSE/I vis a vis Clinical Commissioning Groups (CCGs), NHS trusts and social care providers creates additional complexity. The centre doesn't have the power to mandate the use of specific frameworks, which makes enforcing standards around interoperability, for instance, challenging. An exception to this is the GP IT Futures framework for which NHS Digital is responsible.
- > **Onerous barriers to entry.** Although the time and resources spent bidding for frameworks is an especially high barrier to entry for small organisations, this is also true for even the larger companies, who even with fully resourced bid management teams struggle to manage this burden effectively.
- > **Misaligned funding models.** Current funding models for digital transformation are not aligned to future need. Most allocated budgets for technology comes from the capital expenditure budget rather than revenue expenditure budget. As priorities shift towards digital services rather than just hardware, the way money is allocated needs to shift too.
- > **Asymmetric information between end users and buyers.** Procurement teams don't necessarily have the technical expertise to assess bids from healthtech companies. They are typically trained as generalists and so the evaluation criteria may not be suitable for highly technical procurements, where it is essential to know "what good looks like". Additionally, the disconnect between the incentives for the user (clinicians/ operational IT) and the buyer (procurement) lead to a mismatch of priorities. The current criteria weighs price too high and outcomes too low. This leads to organisations buying things they don't necessarily want or which are not fit for purpose.



Recommendations | Business Environment and Procurement

Ensuring targeted and dedicated investment in technology for health and social care

techUK calls on the NHS and social care sectors to reform how they plan spending on digital transformation and take steps to earmark more of their budget to operational expenditure instead of capital. Increasingly, the technology needs of the health and care sectors require service-based answers, such as SaaS (software as a service) or PaaS (platform as a service). These service models demand continual revenue-based outlay and are typically harder to predict in terms of cost over multiple years. Currently, technology budgets compete with estates and facilities in the capital bracket and are often siphoned off when there is underspend.⁵⁵

Consequently, these products cannot be funded from capital budgets and although it is easy to perceive IT spend as primarily being about new computers, imaging devices and tablets, there is a deep unmet need in this service-led space. Moreover, the NHS and care sectors should prioritise investing what money has already been allocated to it, as much of what is currently being allocated to capital isn't being spent. In 2016-17, only £150.3m was spent from a pot of £354.1m allocated to capital spend on technology.⁵⁶

This pivot from the centre should be accompanied by a commitment from local NHS organisations to meet their 5%⁵⁷ target for digital spend, rather than the 2% they currently achieve.⁵⁸

Establishing the role of the ICS in law

In line with the Long Term Plan's recommendation to establish ICSs nationally by April 2021, techUK calls on the Secretary of State for Health and Social Care to implement plans to establish the role of the ICS in law. This will help to simplify and codify the provider landscape, making it easier for suppliers to engage with the health and care system. Whilst we recognise that the immediate change in their legal status won't solve the inherent cultural challenges that stymie collaborative working between organisations and across health and care, it will signal that the Government is serious about integration, providing a roadmap to shared care records as the norm.

Simplifying the landscape by providing the right tools to drive digital transformation

Reforming the way that technology is procured in the NHS and care sector is possibly the centre's greatest overall challenge, although we now believe that the pieces are in place to implement a package of reforms that will improve patient outcomes, make England a more attractive environment for businesses and deliver value for money for the British taxpayer. To achieve a health and care system that is citizen-centric, clinically-led and outcomes-driven, the NHS must evolve the way it weighs the relative benefits of what products and services it buys. In order to achieve this, we ask for the methodology used in procurement decisions to weigh measures of outcome more highly.

As part of our Strategic Partnership, techUK has recently been working with NHS Digital to promote the publication of their procurement pipeline⁵⁹, which provides suppliers with an opportunity to review and prepare for upcoming tenders. This is something that we would welcome from NHSX and NHSE/I in order to provide a broad overview of commercial activity in the coming six-twelve months. Estimations of value and the signposting demonstrated in the NHS Digital pipeline is a best practice example of transparency that helps to build confidence in the system.

For the Health Systems Support Framework (HSSF), in the two years since it was launched, we believe it has at points fallen short of living up to the expectations of becoming the primary procurement vehicle of choice and as recently demonstrated in a high value, high profile off-framework purchase,⁶⁰ is sometimes bypassed altogether. Although there is never a guarantee of business for any company that joins a framework, the continued disappointment has led many innovators to become disillusioned with it as a viable choice, yet feel compelled to apply whenever refreshed for fear of missing out.

Where HSSF has not yet met expectations, we would caution against a raft of replacements taking its place, but rather encourage DHSC and NHSE/I to create a simpler landscape that is easier, cheaper and more intuitive to navigate. If a new framework is required, it should come attached to dedicated funding that rewards the NHS and supplier that has been through the application process. In order to help achieve this, techUK recommends a mechanism to "jumpstart" companies to pass through framework application processes beyond their first.

"In the year we managed our application to HSSF, it was the largest application we made globally that year" former Big Four employee

Assessing and establishing system wide digital maturity

Measuring digital maturity in healthcare is a challenging but necessary task that aims to demonstrate the real-world impact of information systems that enable process transformations and to identify gaps and investment priorities. Digital maturity comprises multiple dimensions, incorporating infrastructure, application capabilities, workforce capabilities and patient/service user outcomes.

techUK has formed a joint working group with BCS Health & Care and SOCITM to explore the development of a digital maturity toolkit that supports this multi-dimensional scope. Both of the independent professional bodies have existing assets that could be utilised in the toolkit and BCS is proposing to develop simplified versions of academic methods used to evaluate aspects such as clinician and patient satisfaction, usability and interoperability. We are starting the discovery phase and commencing wide stakeholder engagement in Q1 2021.



Afterword

This paper outlines a number of concrete recommendations that have the potential to improve health and care outcomes by empowering citizens; embedding system level interoperability; and by creating a health and care ecosystem that works to ensure the UK is a long-term home for innovators.

Throughout this process, we have been guided and supported via our networks, stakeholders and colleagues. Our Ten Point Plan for Healthtech summarises the output of the health and social care programme for the past year. It has been informed first and foremost by the techUK membership, who have been a source of great insight and knowledge throughout. Additionally, this paper has been appraised by our strategic partners NHS Digital; a number of teams across NHSX and NHS England/Improvement, the Professional Record Standards Body, INTEROPen, Health Education England, the NHS Digital Academy, the Shuri Network; and the techUK Health and Social Care Council among many others.

Throughout the past year, the role of digital health to improve lives, alleviate suffering and transform the way that care is delivered has been manifest for all to see. Looking ahead to the future, it is clear that the pace of change is unlikely to decrease as the role of technology becomes more central to the NHS and social care sectors ability to react, plan and prepare for public health crises.

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About techUK

techUK is a membership organisation that brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. We collaborate across business, Government and stakeholders to fulfil the potential of technology to deliver a stronger society and more sustainable future. By providing expertise and insight, we support our members, partners and stakeholders as they prepare the UK for what comes next in a constantly changing world.



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