DIGITAL BOARDS

NHSProviders public digital NHS Health Education England NHSX

A new era of digital leadership

JULY 2020

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BOARDS

PROGRAMME OVERVIEW

About us

This guide has been prepared jointly by NHS Providers and Public Digital.

NHS Providers is the membership organisation for the NHS hospital, mental health, community and ambulance services that treat patients and service users in the NHS. We help those NHS trusts and foundation trusts to deliver high-quality, patient-focused care by enabling them to learn from each other, acting as their public voice and helping shape the system in which they operate. NHS Providers has all trusts in voluntary membership, collectively accounting for £84bn of annual expenditure and employing more than one million staff.

Public Digital is a digital transformation consultancy, set up by the co-founders of the UK government digital service. After leading the UK to first place in the UN's digital government rankings in 2016, they have advised the leaders of more than 30 governments, several global businesses, and multilateral organisations including the UN and World Bank on setting up digital teams.

About Digital Boards

This is the first guide in a series to be published as part of the Digital Boards programme.

Through good practice sharing and peer learning, the programme aims to build board understanding of the potential and implications of the digital agenda and increase the confidence and capability of boards to harness the opportunities it provides.

Alongside our guide series, a number of webinars and events are available to trust leaders, focusing on case studies of digital leadership in the NHS and other sectors and practical take homes for boards. The programme is also offering free board development sessions bespoked to reflect the development needs of your organisation. To find out more please contact us.

Digital Boards is being supported by Health Education England and NHSX as part of their Digital Readiness programme.

A NEW ERA OF DIGITAL LEADERSHIP

CONTENTS

EXECUTIVE SUMMARY

The NHS response to COVID-19 has accelerated digital transformation everywhere, underlining the importance of every trust having a strong understanding of the topic. This guide is designed to help boards build on this momentum. The five standalone chapters cover:

- The definition of digital
- Why digital transformation matters
- Pre-conditions for success
- Factors that help or hinder digital delivery
- Lessons from other sectors.

We have suggested a short list of questions that board members – both executives and non-executives – may find helpful as a check on progress. The answers should help prompt board-level discussions about areas for improvement or celebration:

- Does the trust have a shared understanding of what digital means that goes beyond IT?
- Can you explain which areas you chose not to focus on in your digital strategy, and how you made these decisions?
- Has the board experienced what users of the trust's digital services experience, rather than just read a description on paper?
- Does the trust's leadership take collective responsibility for the digital agenda, as it does for quality and finance?
- Is the board sufficiently technologically informed to hold digital leaders to account, especially on major contractual arrangements with suppliers?
- Does the board have the confidence and knowledge of digital working practices, processes and technologies to take a proportionate approach to digital risks and opportunities?
- Does the trust have a shared commitment and vision for digitally enabled health and care across its sustainability transformation partnership (STP) or integrated care system (ICS)? Is the trust clear on the system's investment priorities?
- Is the trust taking opportunities to copy and adapt learning and work from other trusts, the centre (NHS Digital/NHSX) and other industries? Is it sharing its work?
- Are teams in the trust empowered to experiment with new ways of working, and is the organisation well placed to scale up innovation when it succeeds?

1 INTRODUCTION

The NHS response to COVID-19 has accelerated digital transformation across health and care. From the increase in virtual outpatient appointments, to remote monitoring of ICU patients, trusts have delivered new services that would have normally taken months or even years.

Many NHS leaders have said "there is no going back". Trusts want to build on the progress they have made during the first phase of rapid digitisation and ensure digital remains central to the continued restoration and recovery of services. Harnessing the momentum of crisis response for long-term strategic progress will be the central challenge faced by every board over the next decade.

This guide has been written for board members of all types of NHS trust to support them in the new era of digital leadership required by the pandemic. It outlines how digital issues impact on strategic and operational concerns for executives and non-executives. It explains the issues and trade-offs that leaders should be considering, provides examples of good practice – from the NHS and beyond – of how other organisations have addressed them, and sets out some of the difficult questions that boards will need to address.

Every trust is at a different stage of its digital journey. Every board in the country will already have some experience of introducing new digital solutions, working online or integrating legacy systems. This guide is written for organisations that have begun their transition to working in the internet-era, but who still have a substantial legacy to manage – in terms of technology, processes, working practices and capability. It is also written for those seeking to make the most of the unique circumstances that trusts face in responding to the pandemic.

As part of the *Digital Readiness Programme*, Health Education England has compiled eight elements of good digital leadership:

- The board understands the changes being brought about by the use of data, information, knowledge and technology in health and care. The board understands the opportunities and risks of these changes and the changing expectations of staff, stakeholders, patients, service users and the public.
- The board and wider organisation has a culture of open discussion, experimentation and sharing, led by visible leaders.
- Everyone within the organisation understands users' needs, as well as organisational performance, and are empowered to act to improve them.
- The organisation has a suitably skilled and empowered workforce.
- The organisation is supportive of cross-functional, non-hierarchical structures as well as traditional hierarchies. Trust leaders consider where power to affect change should be, inside and outside of the organisation.
- The processes that the organisation uses to underpin its functions are fast, integrated, light and meet patient, service user and staff needs.
- The risks associated with use or adoption of digital are understood, weighted appropriately against benefits and appropriate assurance is available.
- The organisation is supported by technology that is scalable, interoperable, flexible, fixable, resilient and fit-for-purpose and the board understands how to assure itself of this.

Digital does not exist in a vacuum. Nor is it a panacea. Good digital leadership is not significantly different from good leadership. But certain capabilities are becoming increasingly important if boards are to maximise the benefits and minimise the risks associated with the new digital world. These should be on the mind of any leader looking to make their trust fit for an uncertain future.

2 WHAT IS DIGITAL?

- **Digital is not just about technology, it is about applying the culture, processes, operating models and technologies of the internet-era to respond to people's raised expectations.**
- **Digital is not a case of entirely replacing one way of working with another, it provides new approaches to addressing problems old and new.**
- **Digital disruption does not represent an existential threat to the NHS as it does for many parts of the private sector, but failing to meet people's ever-increasing expectations of service quality will have very negative consequences.**

Digital is easy to dismiss as a vague and unhelpful buzzword. Coming to an agreed definition that the whole board and wider organisation understands is a basic but essential first step.

The mistake for all organisations to avoid is equating *digital* with *technology*. Wikipedia's own definition of digital transformation at the time of writing is "the use of new, fast and frequently changing digital technology to solve problems." This can lead to an organisational response (often supported by technology suppliers) where digital is solely the responsibility of the IT department.

The consequences of taking a technology-centred approach to the uncertain and uncontrollable environment of digital public services can be ruinous. The UK's first e-Borders scheme, started in 2003 to collect and analyse data on everyone travelling to and from the UK, was cancelled after 11 years and a £830 million investment, leaving behind "highly manual and inefficient" systems. The healthcare.gov website, front-door to the Obama administration's flagship domestic policy, crashed on launch, costing $2.1bn and forcing a rose garden apology from the president.

A technology-centred definition of digital is not wrong, but it is incomplete. Digital transformation is not all about technology, it is about changing the way an organisation works in response to the changing environment around it. Tom Loosemore, co-founder of the UK's Government Digital Service, summarises it as: "Applying the culture, processes, operating models and technologies of the internet-era to respond to people's raised expectations."

Undertaking a digital transformation of a trust means revisiting the operating model of the organisation – what is it there to deliver, who is going to deliver it, and how will its form fit that function – in light of how the world has changed since that operating model was first put in place. It then considers how technology and the use of data can underpin that new operating model.

WEST SUFFOLK NHS FOUNDATION TRUST

Defining digital beyond IT projects

"The board needs to be clear that it's not about IT, nor replacing your PAS. It's about transforming the quality of your services and engaging your staff in that journey, recognising that it can be a bumpy road."

DR STEVE DUNN CBE, CHIEF EXECUTIVE OFFICER

The context

West Suffolk NHS Foundation Trust provides a range of acute, specialist and community services across the east of England.

The trust is the smallest global digital exemplar site in the country. One central ambition is to deliver a single health record that covers its whole health and care system. The trust is already linked up across Cambridge and is now joining up with system partners in Suffolk and north east Essex.

The challenge

West Suffolk's digital journey reached a critical point when it was suddenly confronted with a patient administration system (PAS) that urgently needed replacing. The board understood from the outset that this was not simply an IT project and that it had to deliver wider service benefits. Alongside the new PAS system, a new digital strategy would be crucial in terms of improving the quality of services. Such a strategy would stand or fall on the effectiveness of engagement with staff and patients.

As a result, the trust has focused on considering the potential of digital to every aspect of its wider strategy, but in a way that puts people first, and the technology second.

In implementing new digital technologies, the trust always seeks to engage the 'key influencers' within individual services. Delivery is focused on improving staff and patient experience. Sometimes this involves getting the best out of what already exists so that it works better for users. This can mean time is spent sorting out low level gripes, for example by introducing voice recognition for clinical note taking. At board level, the medical director and nursing director have an important role in ensuring clinicians lead digital transformation within the trust.

Going forward the trust will continue to balance the risks and rewards that come with an increasingly ambitious digital strategy. For the board this means discussions remain strategic rather than technological. For non-executives with digital backgrounds, this might mean resisting the urge to become too close to the details.

The impact

The board's confidence has grown as it has learned more about what is possible. In many cases it did not fully foresee some of the benefits of the digital tools it was implementing.

It has focused on improving the enabling environment within the trust to help staff exploit the opportunities digital provides. This means more ideas are being shared, risks are being discussed more openly and clinicians are speaking up earlier.

The biggest challenge now is to think 'system-wide' about digital programmes. The board understands that the real benefits of digital transformation lie beyond the organisation. The focus is on spreading this learning within their integrated care system.

Like many businesses, universities and government departments, NHS organisations were set up in an era before the internet and computers. NHS processes, organisational structures and ways of working were designed for an analogue world. Much as trying to work in a new way without using modern tools will cause problems, overlaying new technology on old processes results in a mismatch.

A charge often laid at the door of digital – and many other forms of 'change programme' – is overzealousness, a tendency to dismiss old ways entirely and throw the baby out with the bathwater. The point of digital transformation is not to replace one orthodoxy with another. Many processes, cultures, models and technologies used by trusts for decades remain the best tools for a particular task.

Successful digital transformation should not swing the pendulum from one extreme to another, it provides leaders and their teams with another set of tools that are better suited to tackling certain kinds of challenges. These challenges tend to involve meeting new needs, how to deal with the increased service expectations of patients, for example, or how to capture and use huge volumes of data. Addressing these challenges may require new technology, tightly coupled with new practitioner skills (those who deliver in code, design and research), project management techniques, forms of financial appraisal, and approaches to governance. As these are capabilities that span the full range of a trust's activities, accountability for their successful implementation therefore has to be the collective responsibility of the whole board, rather than one isolated silo.

It can be helpful to think of digital transformation in terms of addressing three questions, where the answers are often in tension with one another:

- If you started with the cultures, processes, business models and technologies today, what would the operating model of this organisation look like?
- How do we pivot an organisation with cultures, processes, business models and technologies that may be three or four decades old towards this, without over-burdening leaders and teams tasked with keeping the healthcare service running day to day, and without jeopardising patient safety?
- How do we retain our organisational flexibility to change, and avoid getting stuck into a new status quo?

While it may be tempting for leaders to look at the successful examples of Amazon and Netflix for lessons, it is essential to consider those organisations in the appropriate context. Trusts were not born on the internet, like Google and Ocado. Like almost any organisation set up before 1997, trusts are now 'on the web, but not of the web'. Successful digital transformation for any organisation that pre-dates the internet-era involves riding two horses at once; building something new while maintaining the old, and carefully managing the risks in transitioning from one to the other. When that leap is made too quickly, or in one fell swoop rather than a series of incremental steps, things often fall between cracks.

As an industry, healthcare has not ignored the implications of digital change. Unlike some sectors, it actually faces a much lower risk of falling prey to the existential disruption some organisations have already experienced. Writing of media companies terrified by the insight that broadband might end up killing traditional TV, a former BBC executive compared them to being pursued by a giant snail. It's not a fast mover, yet they cannot get away "The snail! The snail!", they cry. "How can we possibly escape?". As he points out, "the problem being that the snail's been moving closer for the last twenty years one way or another and they just weren't paying attention." Many large organisations have watched the internet approach their sector and refused to adapt their operational model in order to survive. Kodak, Blockbuster and Toys 'R Us, among others, learned the hard way.

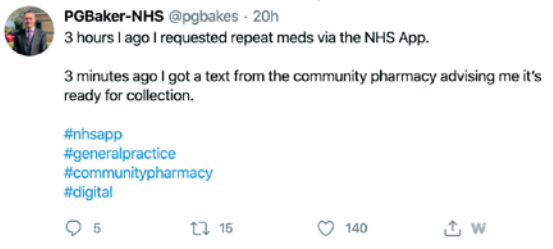
This won't happen to the NHS. Digital's disruptive pressure on public services is different. Rather than go out of business, governments and public bodies bear the cost in different ways. One is failing to make the best use of finite resources, but the most profound is loss of trust. A clear and obvious trend in public attitudes throughout the internet-era is the growing expectation we all have of our 'service experience'. We have all got used to the ease and convenience of well-designed online banking, or shopping on Amazon. People do not expect their experience of public services to be any less effective at meeting their needs. For some public sector organisations, failure to live up to their expectations damages institutional trust and credibility. In the NHS, there is a risk that failing to harness the opportunities of digital will hold back improvements in patient care and experience, and worse, lead to missed chances for saving lives.

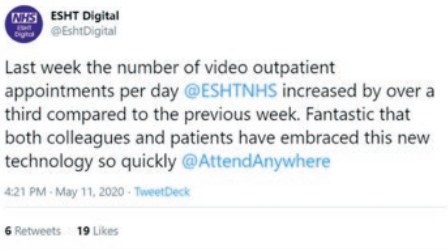
In a world shaped by the coronavirus response, the pace at which expectations increase is likely to accelerate.

According to Ipsos-Mori data from April 2020, just six weeks after lockdown was announced:

- almost three in five people report having used streaming and video services more than they did a month ago
- over half indicate they have used social media more than they did a month ago
- around one in six used video to communicate with family and friends for the first time
- one in seven used video to communicate with work colleagues for the first time
- around one in four downloaded fitness apps, almost one in ten for the first time
- one in ten searched online for what is open/closed near me for the first time
- 6% of people used a banking/mobile app for the first time
- 7% were participating in community and religious activities by video for the first time.

In the weeks immediately following the pandemic, the crisis response proved that NHS organisations were capable of delivery that would have been considered impossible in normal times.





Yet with the spotlight on frontline healthcare more than ever, trusts will bear much of the burden of these new expectations. They will also encounter greater scrutiny of comparison between countries and between trusts. That scrutiny, fair or otherwise, is unlikely to account for nuances of context if an organisation's digital response is perceived to be poor. While the immediacy and focus of this crisis will diminish, the heightened service expectations that patients, service users and staff have of the system will not. Meeting the needs of all these different stakeholders – in a sustainable way – is a challenge only a successful digital transformation can address.

3 WHY DIGITAL TRANSFORMATION MATTERS

- **Successful digital transformation delivers multiple benefits, from improved clinical outcomes and patient/service user experience, through to financial savings.**
- **The benefits of digital can be realised at an individual trust and whole system level.**
- **Substantial medium to long-term benefits can only be achieved and sustained with organisational change that goes beyond quick fixes and technology upgrades.**

In the immediate response to COVID-19, few trust boards had time to consider the reasons for prioritising new ways of working or digital tools. They just got on with it. As the immediate crisis settles, leaders will need to step back and consider where digital transformation sits in their list of priorities in light of what has changed.

If delivered successfully, digital transformation can lead to a range of benefits.

Clinical outcomes and patient safety

The ways in which digital can improve clinical outcomes and patient safety are well documented. Like all other industries, there are trends in healthcare technologies and a constant flow of new opportunities on the horizon. Almost all seek to improve clinical outcomes, patient safety and the quality of care.

New digital ways of working can build consistency across services. Most importantly, this leads to a reduction in clinical variation and fewer clinical errors. It can improve communication and documentation within an organisation and across a system. In the NHS, perhaps the most obvious example is the Scan4Safety campaign, which encourages trusts to use barcode scanning and radio frequency identification software to identify the most appropriate use of equipment, medicines and resources. Trusts are using other decision support tools to improve clinical consistency, such as electronic prescribing. Artificial intelligence will increasingly have a role to play too, as highlighted by the trusts using AI to help improve detection of acute kidney injury.

Digital underpins better and faster coordination of care, which means patients and service users receive the most appropriate care in the most appropriate settings. Perhaps the most obvious example here is telehealth, which allows clinical care to be delivered remotely when appropriate. Beyond telehealth, eObservations and virtual multidisciplinary teams are also giving patients and service users access to the most specialist and interdisciplinary expertise. Meanwhile in the ambulance sector, new triaging software is improving response times and ensuring patients are seen in the most appropriate care setting.

Perhaps the most significant digital transformation for the long term relates to prevention. Digital can play a big role in keeping more people healthier for longer. At the simplest level, this could mean giving patients and service users more control over their own healthcare, such as through remote monitoring and wearable devices. More sophisticated use of data will enable earlier interventions and upstream prevention of avoidable illness. This has already started with the development of predictive analytics and risk stratification, but the continued expansion of the local health care records exemplars (LHCRE) is enabling system partners to focus on population level health outcomes as never before.

User experience

There have been lengthy debates about the appropriate term to attach to experience when discussing digital. Whether it is user, citizen, patient, customer or stakeholder, the essential point is that successful digital transformation can dramatically improve everyone's experience of healthcare.

'User' is a helpful shorthand, because it captures the full range of actors for whom digital should enhance the experience – patients, service users, clinicians, visitors, support staff, managers, and so on – and the fact that the same individual can be a different type of user on the same afternoon. The word experience itself also has a different quality in healthcare to what you might see in other industries. Simplicity and efficiency are all valued just as much, but so are kindness, empathy and compassion.

Good digital services, underpinned by reliable data, can support a healthcare system that is more proactive and of higher quality, but just starting with the basics can make a huge difference to user experience and adoption. 47% of users will give up on a website if it takes more than three seconds to load. In 2018, Google tracked over 900,000 landing pages on mobile websites in an effort to understand their overall mobile performance and found that 70% of web pages needed significant improvements to enhance usability. 'Light' pages, clear language and mobile responsiveness are all relatively straightforward to deliver.

In healthcare this will often mean direct patient involvement in the development of new digital services. This is particularly relevant when designing services to enable patients and service users to actively monitor and manage their long-term conditions. Patient engagement in service design is also essential given the continued challenge of digital exclusion.

The central importance of user experience cannot be underestimated. The UK government digital service's (GDS) mantra was 'start with user needs'. GDS' experience showed that by focusing on experience, the savings would come – the UK government saved over £3.5 billion on digital and technology between 2011-15. However, the GDS was never set a savings target – deliberately. Such targets were recognised as warping incentives when delivering services, leading people to make the wrong design, technology, policy and procurement choices, which leads to bad services, which are then not used, and therefore

do not make savings. Focusing on user experience makes it more likely an organisation will find itself in a virtuous circle, rather than a vicious one.

Staff engagement

Without staff in every part of an organisation playing some role in digital transformation at the right point and time, it generally fails. If digital transformation is delivered (or perceived) as a top-down, management consultant-led exercise where staff are 'managed' through the process, it is almost guaranteed to not work as intended.

Successful digital transformation recognises that frontline staff are very likely to offer many of the keenest insights on user needs that need to be addressed – both of patients and service users, and from themselves. These are usually uncovered and addressed by making frontline staff an essential ingredient of a multidisciplinary delivery team, rather than through occasional consultation. Digital transformation is best thought of as a combination of a mandate (from the top of an organisation) and a movement (from within the organisation, at all levels).

Many trusts will have a group of staff very willing to get involved, provided they're given a team to be part of, the time to commit to it, and a level of empowerment to get on with it without distraction. In government, GDS had a mantra: 'find the angry people' – shorthand for those who were passionate and committed to the organisation, and desperate to fix the broken things they could see.

More generally, the response to coronavirus has seen a change in clinical attitudes towards digital. In recognition of the urgency and challenging nature of crisis response, more are willing to tolerate imperfections in new services and ways of working, provided they are continuously improved upon. This tolerance, and a greater appreciation for starting with a 'minimum viable product' quickly rather than waiting for a perfect solution to arrive much later, is a behavioural shift that is essential to making digital change stick.

Like quality improvement methodologies, the point of digital should be to get the best from all staff, improving not just quality of care, but also reducing the day-to-day frustrations that impact job satisfaction. It should make it easier for staff to perform the tasks they are best at and automate or eliminate those that are drudgery. It could mean clinical staff operate at the top of their license. Returning to the carer's allowance example, the DWP reduced headcount in the carer's allowance unit by 11% due to the efficiencies brought about by the digital service, yet a staff survey showed that 91% of staff preferred working with digital claims as opposed to paper submissions.

CAMBRIDGE UNIVERSITY HOSPITALS NHS FOUNDATION TRUST

Inspiring the workforce to embrace digital

"The board has to have the vision to make that leap into a digital future."

DR EWEN CAMERON, DIRECTOR OF IMPROVEMENT AND TRANSFORMATION

The context

Cambridge University Hospitals NHS Foundation Trust (CUH) is a university teaching hospital providing acute and specialist care across the east of England.

In 2014 the trust deployed *Epic*, a new electronic patient record (EPR) system. This 'big bang' implementation presented a number of challenges for the organisation, and a major incident was declared one week after go-live. Since then, CUH has worked hard to ensure it has the right culture, workforce strategy, transformation capacity and training plans in place to align its digital vision with the wider trust strategy. The board has made clear that future investment into its digital programme is linked to continuous improvement, safety, transformation and connectivity, rather than simply technology.

The challenge

One of the lessons learned from the *Epic* launch was about clinical engagement. Clinicians had expressed concerns during the EPR deployment that they felt were not taken on board by the trust leadership. While *Epic* had lots of technical capabilities one senior leader described the situation as "owning a sports car but driving it in gridlocked traffic". The CUH board has worked hard since then to regain the confidence of the clinical community. Emphasis is now on building change management capacity and encouraging more integrated working between clinicians, operational and digital teams.

At the leadership level, the trust's chief clinical information officer as well as the director of improvement and transformation have strong links into the clinical workforce and feedback any frustrations or concerns to the board. There has been a greater recognition of the need to invest in staff training to ensure the benefits of new technologies can be realised over the long term.

The trust has built a narrative for staff on its digital journey, focusing on getting the building blocks in place to enable wider innovation, and highlighting the progress made to date: "we are better and more efficient as a result of implementing *Epic*, and we are getting better all of the time." The board believes establishing this narrative will support its digital strategy in the long term, regardless of any personnel changes at board level. The narrative has also been important in retaining and recruiting staff, not just to IT teams but also across the organisation: people want to work at CUH because of the progress it has made on the digital agenda. The trust's brand is intrinsically linked with its digital maturity.

The impact

Like many trusts, implementing an EPR system is important in laying the foundations for more advanced digital transformation. As part of the trust's response to COVID-19, order sets (a form of dynamic protocol used in EPR systems) have been developed that are guiding clinical decision-making on testing. This allows expertise about infectious diseases to be shared more effectively and leads to better consistency in the application of evolving trust guidance.

Junior staff members continue to come forward with ideas for new digital solutions and apps, reinforcing the trust's digitally innovative narrative. CUH is already beginning to think about the use of machine learning and artificial intelligence in radiology and cancer multi-disciplinary teams with the use of natural language processing.

Efficiency gains

While business case methodology can lead to false certainty and excessive focus on quantification, successful digital transformation can unquestionably yield cashable, economic savings. These are usually achieved in one of five ways: eliminating duplication, automating or eliminating processes, making effective use of Moore's Law (i.e. the cost of the same amount of computing power halving roughly every two years) when buying technology, shifting offline transactions to cheaper online channels, and eliminating 'failure demand'.

The last of these is often missed. 'Failure demand' is the cost created by poorly designed services creating pressures elsewhere in a system. For example, an unclear appointment letter can lead to extra phone calls from patients for clarification, or appointments being missed altogether. When the Department of Work and Pensions (DWP) redesigned the online carer's allowance in 2015, rewriting and reducing the number of applicant questions reduced ineligible claims by 41%. As more people preferred to use the new online service, the number of expensive paper claims fell, saving the department more than £1m a year.

For most industries – and the public sector in particular – in practice, many of the economic savings that digital transformation yields do not make it to the bottom line, but are instead reinvested within the organisation. Digital transformation delivers efficiency gains in their true sense, rather than the euphemistic sense of 'cuts'; by successfully implementing new services underpinning by digital ways of working, trusts can reprioritise their resources to extract greater value from the same inputs. This way the efficiencies made from the use of digital are also heavily linked to quality improvements within services. For example, a virtual fracture clinic set up by one trust has allowed new patients to be assessed ahead of their appointments. This led to three quarters of new patient appointments being cancelled

by people who instead opted for GP-led self-management. This in turn freed up consultant time for urgent referrals from elsewhere in the trust.

System working

As well as improving the experience of discrete services within the healthcare system, harnessing the benefits of interoperability through digital opens up more opportunities to integrate different parts of the system more effectively, and give people more control over their own care.

This is a journey already underway, but there is great future potential. Better use of data will underpin the development of mature integrated care systems (ICSs). Local 'longitudinal' health and care records, such as *The Leeds Care Record*, will support the flow of patient data across organisations and drive improvements across the system. NHSX, in its tech vision, has made clear that open standards and sharing data are key to enabling digital technology to support the core ambitions of the long term plan.

Moving straight into sophisticated, centralised solutions without the right foundations in place is likely to lead to disappointment. But with the right structure and capability in place digital can play a role in moving care out of hospitals and integrating primary, community and social care, ensuring a seamless user-centred approach in which services are planned, coordinated and delivered around people's needs. Trusts are already beginning to agree system-wide investment priorities to ensure they have a pipeline of local digital programmes in place over the next few years.

Managing risk

Successful digital transformation of an organisation requires an open, honest, transparent examination of where an organisation is carrying risk.

Some trusts have observed what initially seems to be an increased risk appetite in response to coronavirus. However, as a general rule, the real change caused by the pandemic – and indeed most crises – is not necessarily an increased tolerance for risk, but a huge increase in the visible cost of retaining the status quo. Suddenly, the risk of doing nothing on digital, and how that might impact patient safety and quality, is drawn into much sharper relief.

All trusts will have built up risk in their legacy culture, processes, operating models and technologies. Old technology systems will generally be more vulnerable to cyber attack, and may be out of support. The Wannacry ransomware attack in 2017 was especially damaging to organisations that had not applied security patches, or were using older Windows systems that were past their end-of-life. Some public sector organisations have found their reliance on very old IT has even created a demographic problem – many of those with the specific coding skills required to run essential mainframes built in the 1970s and 1980s are retiring.

There are also less visible 'status quo' risks, related to processes that may have been unvisited for some time, accreting greater complexity over many years. For example, paper-based medication orders have led to tragic mistakes, errors in back-office systems have led to under- or over-payment of staff. Failure demand, as mentioned earlier, is often symptomatic of these risks accumulating – not least because it exerts further pressure on a resource constrained organisation.

Digital transformation will not wave a magic wand to make all these risks disappear – and indeed, will create some new risks of its own. However, the principles of this way of working, especially in terms of openness and incremental, iterative delivery, should make the 'unknowns' far more visible to the whole organisation, and put leaders and teams in a stronger position to manage and mitigate them.

Analysis and learning

While discussion of digital transformation tends to be focused on the 'front end' – the services that users can see – organisations only see the full benefits of these by building them on strong foundations. One of the most important building blocks is data.

While a huge amount is written about big data, machine learning, artificial intelligence, and the like, the truth is that very few organisations have the quality or quantity of data to do anything but relatively piecemeal, straightforward analysis. Many more do not even get this far. Much as improving the user experience of online healthcare should start with small, simple but powerful changes, the same principle applies to data architecture and analysis.

Digital transformation – and specifically, the creation and curation of secure and reliable data sources that fit within a well-defined architecture – opens up a wealth of further opportunities for trusts to use a combination of analytics and improvement science to underpin a learning culture and organisational development.

Balancing short-term wins with a long-term view

The benefits realised from digital transformation will be different according to the time horizon. The pandemic response has already shown many things that are possible in the short term, such as maintaining services through the use of video conferencing tools, or removing costs associated with paper based systems. The potential benefits in the medium to long term require staff to embrace sustained and ongoing changes in their ways of working. Only then can trusts look forward to realising the profound long-term changes that digital transformation can deliver: more integrated care across local systems, population-level interventions that target support where it is most needed and manage demand, decision making informed by sophisticated data analysis. Boards must keep an eye on this long view, and developments in areas like machine learning which have the potential to fundamentally change the future of healthcare, without being seduced into thinking their organisations can skip the hard work needed before being able to derive value from them.

4 PRE-CONDITIONS FOR SUCCESS

- **Digital transformation is most likely to succeed if there is clear leadership, a delivery team with a clear goal and mission, and a sense of urgency from the outset.**

All trusts have carried out digital transformation as part of their response to COVID-19. For example, one trust conducted 31,000 remote outpatient consultations in the first six weeks of the lockdown, up from the low thousands the previous year.

Based on Public Digital's experience across different sectors, there are often four pre-conditions that tend to set apart the most successful and ambitious attempts at digital transformation. The first three of these are within the gift of the trust's board; the fourth is particularly relevant for the current situation.

Clear leadership

No government has successfully embarked on digital transformation of the public service without a senior political leader at the helm to act as figurehead, top cover and chief 'un-blocker' of internal obstacles. In the corporate world, the same thing could be said of the chief executive.

While digital transformation should be the collective responsibility of the whole board, it is undoubtedly more likely to enjoy greater impetus when it is a public focus of the chair and chief executive from the beginning. This unambiguously aligns the incentives of the whole organisation towards delivering on it, rather than leaving it in the domain of one executive, or worse, none at all. This commitment, combined with a leadership style that encourages a culture of innovation and delivery, is a powerful catalyst of digital change.

MILTON KEYNES UNIVERSITY HOSPITAL NHS FOUNDATION TRUST

Establishing clear digital leadership across the board

"Board members need to embrace digital in the same way they see trust finances – they don't have to be an expert but it's a core part of the board's business and part of everyone's role."

PROFESSOR JOE HARRISON, CHIEF EXECUTIVE

The context

Milton Keynes University Hospital NHS Foundation Trust provides a range of acute services in the centre of the country.

The trust's strategy for the future must address a rapidly changing local environment, with the population of Milton Keynes set to grow to 500,000 by 2050. Alongside this a large undergraduate university is set to open in the city in 2023, further boosting growth.

The challenge

The board at Milton Keynes has segmented its digital agenda into three pillars, supporting patients, clinicians and professional support staff, in order to make it an integral part of all board portfolios. For example, when it comes to the trust's EPR, while the medical director may take a lead on its clinical capabilities, the finance director is more interested in automating administrative functions. This makes the digital agenda more manageable for the board. It also means every executive is actively engaging in digital transformation, which in turn builds the confidence of the non-executives.

The expectation at the board is that digital is treated in the same way as the trust's finances: not everyone is an expert, but it remains a core part of the board's business and a key part of everyone's role. It is why the trust has decided not to appoint a chief information officer to the board: digital is not owned by a single board member.

The trust believes leadership in action is always needed and that cultural change starts at the top of the organisation. The board encourages a no-blame culture and gives digital leaders a clear remit and enabling environment.

The board has also focused on getting the technical basic infrastructure in place first and an incremental approach subsequently to build board confidence and risk appetite.

The impact

Over time this approach has paid dividends. Sometimes this has meant having the courage to step back and not rush projects. For example, the board took the decision to delay the second phase of the trust's e-CARE EPR rollout because in the long run they knew this would cause fewer problems. At other points it has meant experimenting with innovative partnerships, such as its collaboration with a supplier on a new patient portal which can write directly onto the EPR.

The trust's approach to digital leadership has served them well during the response to COVID-19. Like many trusts, Milton Keynes quickly adapted to support remote working, expand digital communications and improve processes for information sharing. Each board member has supported this work by continuing to lead the agenda through their own portfolio. When the board meets, executives are challenged about what has worked well and what can be dropped as the trust moves into the next phase of its COVID-19 response.

A team

Board leadership is an essential prerequisite for digital transformation, but strong steers from the board table have to be complemented by digital and clinical practitioners – doers – on the ground who can deliver something tangible by making the best use of that top cover.

A common mistake made by digital transformation programmes is that the first team tasked with delivering comes from only one part of the organisation, or worse, one specific discipline. Typically, this might be a strategy, policy or IT team. In Public Digital's experience, the first team leading a digital transformation programme should be small, empowered, multidisciplinary and have the skills within it that make it possible for them to 'show the thing' – i.e. to build prototype services that can be used by real people. Technical architecture diagrams, strategy papers and impressive slideware aren't enough.

Of equal importance is that the first team is not wholly dependent on management consultants or outside contractors. It is completely reasonable to use external support to cover gaps in internal capability – either service designers or user researchers. Longer term these skills may be brought in house through the upskilling and development of existing staff. This is important to do in order for an organisation to become an informed buyer from the market, regardless of a preference to build or buy digital services.

CUMBRIA, NORTHUMBERLAND, TYNE AND WEAR NHS FOUNDATION TRUST

Empowering teams to deliver digital at scale

"It's about organisational development and continuous improvement rather than kits and wires."

JOHN LAWLOR OBE, CHIEF EXECUTIVE

The context

Cumbria, Northumberland, Tyne and Wear NHS Foundation Trust (CNTW) provides mental health and disability services and support across the north of England.

In recent years the trust's digital strategy has been underpinned by three key principles: a mobile first approach that is embedded into service design, prioritising the development of patient facing services, and ensuring success in technical infrastructure to enable quick scaling of digital programmes.

The challenge

The CNTW board is clear their role is to create an enabling environment for delivery teams and devolve appropriate decisions to the frontline. Board leaders act as digital champions within their own organisation and across their system.

The informatics team are viewed as 'transformation enablers', and so the board seeks to understand the barriers faced by this team and how they can be overcome. Crucially, the board-level digital champions understand some of the work the informatics team undertakes won't deliver instant benefits. For example, although the trust rolled out a new EPR system in 2010, the board admit it took them up to three years to fully appreciate the benefits.

Crucial to the success of the trust has also been the test and iterate approach taken to rolling out digital tools. The disparate nature of service delivery at CNTW allows the informatics team to test different digital tools in 'model teams'. Launched in 2010, these frontline, clinical teams use lean methodology to use, test and feedback on different digital technologies. This expert feedback is crucial to the informatics team, who focus their efforts on solving issues within each team before scaling and rolling out to the rest of the trust.

The impact

The 'model teams' approach gives the board practical examples of the challenges and opportunities facing frontline services. The informatics team can easily demonstrate the value of digital solutions to the trust. The board believes this approach has made digital more tangible and means they have a better understanding of how digital can enable the delivery of services.

During the trust's response to COVID-19, CNTW was adept at scaling many digital technologies across the organisation, whether it be Microsoft Teams or new reporting systems. Staff at the trust are used to rapidly deploying, testing and then scaling new digital solutions.

A goal and a mission

One way to attract that first team – and for internal staff, it is often self-selecting – is for the trust to articulate a clear, compelling goal and overarching mission that underpins digital transformation.

The challenge of trying to drive organisation wide change is that the interconnected nature of problems within the NHS makes it all too easy to put forward objections or delays. "Of course, you're right that this state of affairs is unacceptable," the argument runs, "but once this project is finished in six months we'll be in a much stronger position to get started." The variant on this is, "Well, if you're going to fix x, then of course you'll need to fix y and z at the same time for it to be really worth doing." This tactic is sometimes described as 'collecting rocks'. It can be done forever.

To overcome this, boards need to agree on two things: a single, clear goal of something tangible the trust will deliver, preferably by a specific date. For the UK government, this was

GOV.UK. a new website that replaced 1,881 others. In Public Digital's experience, this goal should be relatively small, visible, realistic, low-risk and strikingly different from what is 'normal'. Achieving momentum, however small the beginning, is essential.

This goal can be set within the context of a broader mission. This is best tailored around the bigger strategic aims of an organisation: to provide a world-leading integrated health and care service, for example. The mission should elevate digital from being seen as purely a tactical response, or a tangential part of the organisation, to something that is central to the overall operating model. For trusts, it will be important to plan and deliver this within their wider strategic context, in line with the ambitions of the NHS long term plan.

SOUTH CENTRAL AMBULANCE SERVICE NHS FOUNDATION TRUST

Focusing on a clear digital journey

"Boards need to work out their journey, based on a crystal-clear understanding of where they are now and where they are going. Everyone needs a map, but the key part is the really honest conversation about your starting point and being realistic about priorities and pace."

WILL HANCOCK, CHIEF EXECUTIVE

The context

South Central Ambulance Service NHS Foundation Trust (SCAS) delivers services across six counties in the south of England.

The trust was established in 2006 following the merger of four ambulance county services. Since its inception, digital has been a key enabler for the trust's wider strategy.

The challenge

Given the breadth of service delivery at the inception of the new trust, the board had no choice but to invest in new digital systems. In short, integrating what had previously been four different ambulance services meant standardising processes and reporting systems. Digital was core to this work and the merger focused minds across the new organisation.

Since then, SCAS has continued to make progress on the digital agenda. Key to trust's success has been the clear staging of its digital journey. The first iteration of the trust's strategy was focused on integrating legacy systems, such as telephones and computer aided dispatches, while building resilience and reliability in its core infrastructure. Digital was the 'golden thread' to the new ways of working. The second stage, although more challenging, focused on 'renew

and replace', including the 111 rollout. During this work the trust began to shift its focus to how digital could support wider service transformation, ranging from decision support tools for staff, to more seamless interfaces with other providers, and expanding multi-channel access to urgent and emergency care for patients.

A key lesson the trust learned from its merger was to avoid embarking on too many business-critical changes at once, and to plan appropriately before the next initiative is started. At every stage, the board believes it is important to have an honest conversation about the organisation's starting point, and to be realistic about priorities and pace.

The trust's strategy is now focused on delivering system working. For this the board started discussions with a whole systems perspective and worked back to determine what this meant for individual SCAS services.

The impact

SCAS has now mainstreamed many of the basics of digital transformation. This helped build the confidence of the board and has increased its risk appetite, enabling the trust to focus on supporting wider service transformation through digital. The trust implemented the first fleet wide EPR and was the first to roll out mobile access to the NHS summary care record to its ambulance crews.

Since 2014 SCAS has hosted the National Pandemic Influenza Service, comprising an online and telephony self-assessment service. In response to COVID-19 the trust has rolled out the service nationally via 111, once again demonstrating its ability to spearhead new digital ways of working across the sector.

A sense of urgency

In January 2020 the NHS declared COVID-19 a serious, level 4, incident. Since then, the provider sector has been at the forefront of the NHS' response to the pandemic. From the frontline to the board room, trusts have gone above and beyond what is normally expected of them.

The NHS' initial response to COVID-19 saw the sector galvanise around a single, clear, vital, imperative. The number of priorities for one trust IT department dropped from 30 to just two. This proved instrumental in ramping up the pace and scale of digital transformation across provider organisations. Out of necessity, many trusts changed their ways of working:

- Integration of health and care: secondary care, primary care and social care worked closely together to ensure patients were seen in the most appropriate care settings. Organisational and budgetary silos were ignored or bypassed.

- Bureaucratic pragmatism: a lighter and more flexible approach was taken to regulation that allowed the sector to adapt at speed.
- Local empowerment: trust leaders were given a clear objective and asked to do whatever they thought was best. This was cascaded down throughout the provider sector, with frontline teams being able to change how they work.
- Mobilising partnerships: the NHS worked closely with a range of partners and voluntary organisations to achieve things it could never have done by itself.

As a result, trusts were able to successfully navigate the initial peak of the virus. As one trust leader said, the NHS is good in a crisis and can mobilise quickly in the short term.

There is an enormous opportunity for digital to continue to play a critical role in the reconfiguration of services, but boards will first need to understand how internal circumstances changed in order to give frontline staff the flexibility to work well during the first phase of the pandemic, and apply this learning in the incredibly challenging months ahead.

The impact of COVID-19

Trust boards have begun to examine the ways in which digital technologies were rapidly deployed and implemented to support patients, service users and staff during COVID-19. These analyses are informing ongoing preparations and planning for the next phase of the pandemic as well as trust strategies over the longer term.

Every board will have gained invaluable experience and education in implementing new digital systems and each board member will have insights to share.

Reviewing the initial response

Boards will want to understand what worked well and what didn't during the response to the first phase of the pandemic. This will help determine what digital solutions should be kept, what should be expanded and what should be dropped. For example, in April the video platform Attend Anywhere was centrally procured and made available to all trusts, at no additional cost to the sector. Many trusts took up this offer. However, some are now reviewing their use of the platform given the available alternatives that may better integrate with their existing systems.

Boards will also want to reflect on what patients, services users and staff have fed back on these new digital experiences. For example, many trust leaders accept that remote working, while necessary for many staff during the initial peak of the

pandemic, is not sustainable for everyone and that hybrid approaches will likely be needed over the coming months.

Some boards are also in the process of reflecting on the way digital has been successfully harnessed during the pandemic response in contrast to the anxiety traditionally associated with digital programmes. A reappraisal of many boards' approach to digital risks and opportunities and appetite for digital innovation is likely as a result.

Keeping the 'how' as well as the 'what'

Across the NHS many have said there is "no going back" to old ways of working. Boards will want to lock in many of the behavioural changes within their organisation, such as the innovative spirit within teams, and even some of the changes to existing trust processes, such as virtual town halls. That said, governance arrangements will need to be proportionate to the risks faced by the organisation. These risks will vary over time and so a board's risk appetite should not necessarily remain fixed.

Boards will also want to ensure consolidation and consistency across services. As one trust leader has said "we get the greatest benefits when we impact the greatest number of people". This may require the continued upskilling of different parts of the workforce, while some have warned there may be less tolerance of imperfection during the next phase of the COVID-19 response.

Longer term, some trust leaders have accepted that the progress and changes made on digital during COVID-19 will require them to be more ambitious with their digital strategy. Many trusts have been taken by surprise by how quickly and willing staff, patients and service users have adapted to new digital ways of working. This may suggest there is a more receptive environment in which they can advance digital services. For some this may mean recreating the conditions of the COVID-19 'burning platform' and not accepting old behaviours and attitudes to digital transformation.

FACTORS THAT HELP OR HINDER DIGITAL DELIVERY

5

- **Every trust attempting to apply digital new ways of working is likely to face similar structural challenges that require changes in other parts of the organisation in order to maintain the desired pace and quality of delivery.**
- **Procurement, recruitment, financial approvals, governance, technology decision making, communications and leadership tend to be high on the list.**
- **Unblocking issues where the existing processes and culture in these areas are hindering delivery is more likely to accelerate digital delivery than pouring more resources into the problem.**

If the four pre-conditions of digital transformation are satisfied – clear leadership, a team, a goal, and a burning platform – organisations are often set for success (see chapter 3). A board's attention may then be turned to parts of the existing organisational structure that could make it easier or harder for trusts to adopt digital ways of working.

In the UK government, digital teams working in a variety of central departments on new or redesigned digital services between 2013 and 2015 came to describe something called the 'square of despair' – four seemingly universal organisational challenges that slowed down the pace of delivery.

To these four, Public Digital has identified at least three further sources of systemic frustration. These challenges are far from unique to government, they're equally common in large businesses and charities. While every industry endures their own special dysfunctions, all of them tend to encounter some version of these seven at various points in their digital journeys. Within the trust sector some may be perceived problems and there will be varying levels of severity.

Public Digital has set out seven challenges below.

Governance

Problem> **The rhythms, artefacts and pace of traditional governance run counter to the needs of rapidly iterative, agile delivery teams.**

Many large organisations run according to a rhythm of monthly boards, project steering boards and stakeholder advisory committees, fed by an industry of reporting and paperwork. These meetings expect papers, not prototypes. The point of steering boards is usually to ensure every affected part of an organisation gets to have a say, not to play a part. Such meetings usually conclude with the team leading delivery taking back many comments and actions.

Traditional governance models can swamp digital delivery. For agile service development to work, the delivery team's role must be just that – to deliver, rather than spend a

disproportionate amount of time servicing the needs of boards. Each affected part of the organisation is represented within the delivery team, there to actively contribute. The project sponsors come to 'show and tell' meetings of live prototypes and ask the tough questions there. The role of those sponsors meetings is to give the sponsors actions; points where they need to go and unblock issues elsewhere in the organisation. This inversion of traditional governance represents a major cultural shift for many organisations and will not happen for every project overnight. When it works well, it demonstrates how boards can still receive the assurance they need through a more dynamic, 'real time' engagement with delivery teams.

Following good agile governance principles go a long way to increasing pace while sacrificing nothing in oversight:

1. Don't slow down delivery
2. Decisions where they're needed, at the right level
3. Do it with the right people
4. Go see for yourself
5. Only do it if it adds value
6. Trust and verify.

Funding and investment appraisal

Problem> **It is as effortful to ask for a small amount of investment to try new things as it is a much larger amount.**

Too many discussions about digital transformation focus on benefits as defined through the lenses applied by traditional 'Treasury-style' business case methodology. While quantified benefits have their use as tools of persuasion, there are several problems with this style of investment appraisal. The lengthy, bureaucratic nature of business case development encourages central teams to ask for large capital investments over many years rather than smaller, operating expenditures over shorter periods (why ask for a small amount when it takes the same effort and time to get more?). This encourages long-term speculation based on assumptions and hypotheses. This kind of prediction is appropriate for controllable, fixed environments, but translates poorly when applied to fast changing environments like digital healthcare services. It can also see central fundholders falling in love with the process of benefits realisation reporting rather than the outcome that is sought.

Financial approval processes offering proportionate assurance to risk make it easier to release funds for small, low-risk experiments, and increase the level of scrutiny in line with the size of investment. This is easier said than done in the NHS, where central funding often comes with reporting requirements. But the NHS response to coronavirus has proved that this kind of financial agility is possible, the trick is reintroducing appropriate and informed oversight

without losing urgency. HM Treasury has drafted guidance on agile business cases that offers a template precedent for this model in large institutions.

Procurement

Problem> **We keep contracting the usual suspects without getting significantly better results, and we're locked-in to long-term supplier contracts.**

Often, the debate about procurement in digital transformation is framed as 'build versus buy'. This is a false dichotomy. The flaws in outsourcing all aspects of technology related delivery are increasingly well known, and have been a root cause in many major project failures. Particularly in the NHS, it does not make sense for every organisation to invest the huge resource needed for a permanent team able to build and run bespoke services.

In some respects, procurement manifests as a blocker in a similar way to funding – a set of experts becoming too attached to the outputs of a 'one size fits all' process, losing sight of the intended outcomes that require a more flexible approach. The consequences are similar, a default towards expensive, lengthy and complicated procurements that only a few players can fulfil. To support digital transformation effectively, procurement must not put up barriers to entry for an organisation to purchase the things it needs to deliver outcomes quickly and cost-effectively. In practice, those purchases are going to be a mix of commodity technology (infrastructure like hosting or WI-FI, where there is a strong and competitive market drawing down unit costs) and multidisciplinary teams of people who can build more bespoke services. Skilled digital procurement requires a shift in skillset from contract management with large suppliers through to becoming a much more informed customer of a technology market. For trusts, this can be done at the system level in order to support service integration and drive economies of scale.

Recruitment

Problem> **We cannot afford to hire the digital skills we need, and even if we could, they would not want to work here.**

Many organisations – particularly in the public sector – take it as a given that they will not be able to hire specialist digital skills they would ideally like, simply because they do not pay enough to persuade them to leave better remunerated positions elsewhere. Strikingly, these same organisations are often those most dependent on contractors working on expensive day rates.

While there is a pay differential between the public sector and others competing for the same digital talent, the public sector (and the NHS) has one huge advantage – it offers talented people the chance to apply their skills towards making an enormous difference. Careers in the NHS also offer good job stability, which is particularly important in the current climate. Many trusts already understand that the NHS arguably has one of the strongest hands to play in the world.

Several factors may be preventing public sector organisations from making the most of this advantage. This can sometimes come down to a gap in self-confidence and communication of this unique opportunity for digital recruits. It is also important for potential recruits to believe that they will be put in the right organisational environment to make the difference they crave, regardless of how appealing the mission is. Being able to convincingly communicate these messages is often the best way to recruit new digital talent.

Communications

Problem> **We cannot work in the open, and share best practice (as well as code, design patterns, user research findings).**

A defining cultural feature of digital transformation is working in the open. Day-to-day openness – publishing blog posts about what a team has delivered this week, for example, or publishing regular social media updates – plays a very different role to traditional organisational communications. Whereas the traditional comms world tends to be the broadcasted, occasional pushing of messages from the top with minimal right of reply, digital comms is conversational, responsive, regular, and about 'pulling' people in. It is the difference between publishing a blogpost and emailing a document. 'Publish, don't send' is a good maxim.

A lot of corporate communications can be fundamentally about risk management and tend to be tightly controlled. For digital transformation programmes, this method too often lacks speed and authenticity. It also makes sharing best practices and scaling the story across the organisation much harder. Even so, switching to working in the open is a cultural challenge, because it requires the organisation being comfortable with speaking in new voices and on new media – and with different, lighter editorial safeguards. That said, if GCHQ can manage it, very few other organisations have an excuse. In recent months many trust leaders have adapted to new forms of communication techniques, publishing online board updates or holding town halls via Microsoft Teams.

Technology

Problem> **Security says 'no' all the time, frustrating our attempts to design for usability, and we do not know what technology choices to make, when.**

Underlying technology is obviously a major contributor to the speed and success of any digital transformation programme. For trusts, the most important considerations are likely to be some combination of dependency on old legacy systems, interoperability with the wider health and care system and security and legal risks.

Large-scale technology projects often induce anxiety around a board table. As one senior trust leader admitted, mishandling a 'big bang' electronic record system launch remains on the list of things that can get a chief executive sacked. Beyond the NHS, the root cause of technology disappointment is often that technology has been thought of as a hygiene factor

of the organisation – essentially, another part of the planning – and therefore not considered as integral to the organisation's overall strategy. Leaving technology as an add-on can be a recipe for trouble. The same can be said of security. Usability and security are not inherently incompatible, what is incompatible is fully designing a service, then thinking about security as a separate piece at the end, at which point all the necessary protections ruin the design (and badly designed services lead people to use more insecure workarounds.)

The other hindrance to effective consideration of technology is seeing it as a homogeneous category. In the healthcare world especially, technology is shorthand for a dizzying array of different things. Some of these things are established and well understood, such as telemedicine and remote monitoring, others are at the very cutting edge, such as artificial intelligence and population health. Taking the same approach, with the same people, in the same organisation conditions, tends to end in failure.

Leadership

Problem> **Senior leaders do not engage with the digital transformation programme, or perceive it as purely operational, rather than of strategic importance.**

While the energy and expertise to deliver tangible outcomes from digital transformation will come from the practitioner levels of an organisation, the effort as a whole cannot succeed without strong, diverse and inclusive leadership.

Almost all digital delivery teams should, by definition, be challenging the norms and defaults of the trust as they make progress in building new services. For them to move quickly, they will need to feel they have 'top cover' from leaders who have empowered their teams to get on with overcoming those obstacles, and – as a rule – expect them to seek forgiveness rather than ask permission. Providing this mandate requires a relationship of trust and a particular attitude to risk. It does not mean that leaders allow teams to go rogue, it is about giving the right group of people a clear mission and considering the risk of delay or maintaining the status quo as being greater than the risks inherent to challenging it. The more permissive environment in the NHS in response to COVID-19 has demonstrated how much more quickly change can happen when staff feel empowered to act . It is important leadership is representative of patients, service users and the wider workforce. This reduces decision-making bias and supports staff engagement, which will ultimately improve performance and innovation within digital teams.

6 LESSONS FROM OTHER SECTORS

- **While all NHS trusts have certain characteristics and contexts that are unique, the vast majority of the challenges leaders will face are the same across the sector, and indeed other sectors too.**
- **The section provides a set of questions that executives in other industries – and government in particular – have used to identify strengths and weaknesses in their own digital leadership.**

Based on their experience of working in (and with) governments and complex commercial businesses, the Public Digital team has compiled a set of questions every board member of any organisation could ask themselves about their own digital transformation. We believe much of this can apply to the NHS. This is not an exhaustive list, these questions are intended to kickstart wider discussions that can engage and focus whole boards and allow each member to assure themselves on digital.

1. How close are you as a board to what your users experience?

NHS leaders are used to 'walking the floor' – experiencing first-hand what their patients and staff are going through as they receive care or go about their working day. Exactly the same logic can be applied to the digital experience, in as unvarnished a way as possible.

From the first weeks onwards, teams working on programmes that deliver patient or staff-facing services should be showing their leaders 'clickable' prototypes and early versions of services. Scrappy is perfectly acceptable provided the early versions have enough fidelity to test assumptions about policy, operations and technology.

Strong digital leaders tend to demand sketches and prototypes, rather than papers, and ask what the team has learned by observing how users engage with them during user research sessions. They become worried if the team says there's nothing to see other than paperwork after the project has been running for three months or more.

Another facet of this is patient involvement in the governance of digital transformation, and their representation in conversations guiding the strategic direction of teams. This form of patient advocacy can be a valuable complement to user research at the frontline.

2. Are your discussions more focused on outcomes or outputs?

Many past digital transformation efforts have fallen victim to a form of 'metrics blindness'. This is where the KPIs intended to measure the programme's success all appear green on the dashboard, yet the service experience itself remains stubbornly poor in reality. The same charge can be made of focusing too closely on a project's deliverables as defined by the consultancy or vendor contract, and not enough on whether the outcome is actually what was intended.

Metrics and quantified performance measures have their place as signals of progress and momentum and can provide useful warning lights on the effectiveness or otherwise of digital services. However, many leaders are increasingly treating them as necessary but not sufficient. This is partly because metrics can be unreliable. It is also because of the perverse incentives that being too led by metrics can create. This is a familiar story if we think about NHS financial targets of recent years. These have put the focus on trusts delivering impressive efficiency savings through in year cost improvement programmes, without being able to match this with the investment required for long-term service transformation.

3. Are you seeing evidence that your digital programme is delivering visible value to patients in weeks and months, rather than years?

The COVID-19 pandemic has given a powerful and timely reminder to trusts that they are very capable of delivering significant change quickly and well, with the differences being experienced on the frontline within days. Successful digital transformation that replicates this effect does not mean that leaders need to instil a permanent sense of crisis. However, it does mean taking some elements of the environment that defined the successes of a trust's rapid response and making it possible to repeat them in more normal times.

Specifically, leading digital organisations have become well practiced in starting small with imperfect, minimum viable services, and iteratively improving them quickly based on new information. They've prioritised good initial projects according to things that are clear and obvious patient needs, rather than speculative technology solutions. Crucially, if things haven't demonstrated value at the frontline quickly, they've not pursued the experience and instead tried something else. This muscle of 'failing fast' is a sign of digital maturity in any organisation: strong digital organisations don't make fewer mistakes, they just make them more quickly, and more cheaply.

4. Who does most of the talking when the topic of 'digital' is raised?

A common theme throughout this guide is that digital transformation is a collective responsibility. This is not just true around the board table, it is equally important that a variety of different specialisms and perspectives are represented in the teams who are delivering.

Board members should be concerned if they perceive that the conversation about progress on digital transformation is entirely led by one particular 'tribe' within their organisation. Often this will be the IT team, but the over-dominance of any area – be it strategy, IT, finance or clinical – should be good grounds for asking questions.

Of particular worry should be if the conversation is being led not by an organisation's staff at all, but by contractors or consultants. While both groups may play an entirely appropriate and valuable role within a bigger digital team, over-dependence on external support for the programme's success creates significant risks for its long-term sustainability, and especially if that support is the leading voice.

5. Are teams in the trust empowered to experiment with new ways of working?

More than most industries, healthcare has a long history of experimentation that is central to its culture. A tension at the heart of every healthcare system is reconciling the need to nurture this experimentation and provide a route for scaling effective new interventions as quickly as possible, while maintaining consistency and coherence across a complex array of organisations.

This tension is one almost every large organisation encounters, and it cannot be conclusively resolved. However, an effective tactic for reducing the friction it creates is ensuring that the processes and culture of an organisation apply a proportionate attitude to risk. When the risk is low relative to the potential benefit – in terms of patient outcome, or cost, or staff engagement – organisations that carry out successful digital transformation operate with a high degree of trust in their teams. Every round of approval or piece of paperwork involved in trying something new – processes that are put in place as a substitute or proxy for trust – adds time, which adds cost, which changes the risk-benefit equation. This can lead to simple, quick wins being ignored.

The implication of embedding a more experimental culture is that it is also a more accountable culture, organisations where junior staff are empowered to act, and be responsible for their judgment. Healthcare has an advantage because this attitude is more common in medicine than many other fields. The challenge in healthcare is empowering junior staff across the system in clinical and non-clinical roles.

6. Is the trust set up to support scaling up of successful experiments across the organisation?

While having a culture of experimentation at individual and team level is necessary, it is not always sufficient for sustaining transformation. Teams may perform heroics in changing existing practices to deliver something with better outcomes for patients, but they may be doing so in a way that cannot be maintained. Sometimes this is because they are having to go at full tilt to do it and face burning out. More typically, it is because they fall foul of the innovation trap, where scaling the work up requires them to navigate processes – investment approvals, governance processes, national sign off, recruitment, procurement – that are ill-designed to maintain the pace of delivery, or assess their efficacy against a sufficiently broad definition of value.

Successful digital organisations have to develop a muscle for scaling their most successful experiments. In part, this will require them to challenge whether the existing 'sausage machine' for approvals is really fit for purpose, but it also demands a greater degree of ruthlessness in stopping experiments that aren't delivering. Every new project absorbs resources and leadership bandwidth, having too many on the go at once can leave an organisation with lots of impressive stories, but not enough improvement in outcomes. Prototypes that spend too long proving themselves solely in rarefied conditions that don't reflect the reality of frontline healthcare offer diminishing returns. Scaling up is about cutting losses as much as allowing the best bets to thrive.

7. Can you explain what your digital strategy has not prioritised, and why?

The principle of selectivity applies to strategy development as much as selecting innovations for scaling. Most digital strategies end up as a shopping list that provides comprehensiveness without direction. The worst examples amount to a long list of untested hypotheses, sprinkled with technology trends, and bookended by implementation timelines grounded more in hope than well evidenced expectation.

Good digital strategies share three qualities. The first is that it should be inseparable from the organisation's overall strategy: digital at the centre of an overall vision. The second is that it should be very clear about what it has decided to prioritise in terms of focus, and in what order it plans to deliver digital transformation. For example, there is little point setting grand ambitions for applying artificial intelligence to patient care unless your data architecture is built on strong foundations. Implementing new digital services of significant complexity may be less of a priority than a simple, well written text message appointment reminder service. Any strategy will involve trade-offs, the best organisations can articulate clearly what sacrifices they've chosen to make, and why.

Finally, when people hear strategy, they think of a weighty document written before any actual delivery takes place. Good digital strategies are short and written after having tested as many assumptions and trade-offs as possible in reality, a summary of what has been learned so far to inform a trust's choices about the future.

8. What have you turned off, or stopped doing, as a direct consequence of your digital transformation?

Good digital transformation is fundamentally a destructive process as much as a creative one. To get the most of it, you have to turn things off. The value in doing so is two-fold. Most obviously, turning things off – be they old systems, bureaucratic processes, redundant skills, and so on – is a tangible, measurable driver of efficiency savings within an organisation. These can be banked as savings or free up resources to be invested elsewhere. Just as importantly, the other compelling argument for turning things off is that if an organisation fails to do so, all a digital transformation programme can do is add another layer of activity, process and technology on top of the existing layers. This creates more complexity, confusion and frustrations with transformation programmes that don't appear to change anything much, other than creating more work for everyone.

9. Are you confident you have access to real-time feedback on what patients, staff and other key stakeholders need?

To build services that are capable of being iteratively improved upon, organisations need ready access to real-time feedback. Negative or unsolicited feedback tends to be the most valuable. The government digital service paid close attention to analytics on the citizens advice service website, as it was a good proxy indicator for issues with government services, for example.

The most effective organisations have put in place strong mechanisms for gathering qualitative and quantitative feedback. Strong qualitative feedback comes from structured user research, often conducted as ethnography with service prototypes. Quantitative feedback, in the form of web analytics, can also be invaluable in informing service design. Indirect feedback – where one watches what people do, rather than what people tell you – is significantly more reliable and powerful than direct feedback. Even in focus groups and surveys, people have a tendency to say what they think you want to hear or provide insights that are difficult to turn into actions.

10. Is the organisation taking opportunities to copy and adapt learning and work from other trusts, the centre (NHS Digital/NHSX) and other industries? Is it openly sharing its own work?

The comforting thing about digital transformation in the NHS is that every mistake or problem encountered by any trust will have been faced by several other organisations before. Sharing of advice and experience between peers across the healthcare system, and from other industries, can be an invaluable source of insight and confidence. The Global Digital Exemplar blueprinting programme was set up to facilitate much of this shared learning. Within the ICS/STP framework trusts are working closely to progress digital capabilities for all system partners.

Even more helpfully, there is a wealth of practical, open source tools available on the internet that trusts can adapt and copy in order to build their own services and prototypes. Code design patterns, guidance on the practicalities of ways of working are all readily available to pick up and use. The great advantage of these is they are the distilled essence of many years of false starts. Borrowing from others allows trusts to outsource years of mistakes, so organisations can get on with making (and learning from) new ones. Even if you were to only borrow from others to build prototypes that are thrown away based on context specific feedback, validating assumptions about where your context is unique and where it is not can save a lot of time and money.

Equally, trusts have a responsibility to be good contributors back into that pool of knowledge. The single quickest way to share this knowledge widely is to publish it on the web. Working with other central curators in the system – such as the team running the NHS service manual – will help make sure what is learned locally can help the collective effort across the NHS to use digital to transform health and care.

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