

Building and enabling digital teams

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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 second guide in a series 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.

Our first guide, *A new era of digital leadership*, set out the key questions board members can use to check on progress of the digital agenda, and prompt board-level discussions on how to take things forward.

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 bespoke 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**.

BUILDING AND ENABLING DIGITAL TEAMS

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EXECUTIVE SUMMARY

- Digital teams are the cornerstone of building a digital organisation. Supported by effective governance, they are the muscles that enable your organisation to be responsive, open, efficient and agile, and to successfully deliver ever more transformational services.
- Whether an organisation is predominantly building or buying technology, good digital teams are identifiable by three main characteristics: user centred design, agile ways of working and a knowledge of how to build and operate modern internet technologies. Executives need to be as comfortable with these key concepts as their teams.
- Digital teams are not simply a rebrand of your IT department. And responsibility for establishing them can't just be delegated to your board digital lead or chief information officer (CIO). They require boards to revisit their operating model to remove traditional silos between IT, clinical and operational teams, and between IT and their wider service improvement capabilities.
- Boards have traditionally faced many barriers when attempting to establish successful digital teams. These include challenges around funding, recruitment and retention, and insufficient headroom to develop new services while maintaining multiple legacy systems.
- COVID-19 has created a powerful impetus for change. It has demonstrated how the NHS can use simple technology to rapidly transform service delivery and ways of working. But perhaps its biggest impact is as much about creating the cultural conditions where digital teams can take root: a greater clarity of purpose, freedom to act and focus on delivering minimum viable services in weeks not months.
- As boards seek to embed these changes, there are important lessons to be learnt from across the NHS and other sectors about what good digital teams look like and the role of boards in enabling them to drive digital transformation.
- These lessons include the need to build digital teams that are diverse, while sharing a common 'digital mindset'. They also highlight the importance of establishing senior digital leadership either on the board or working very closely with it.
- To enable these digital teams to flourish, boards will need review operating norms, including funding arrangements, how assurance is managed, what skills are valued and recruited, and how performance and progress are monitored.

INTRODUCTION

In our first guide we introduced the definition of digital as “applying the culture, processes, business models and technologies of the internet era to respond to people’s raised expectations.”¹ Since its publication, the Digital Boards programme has engaged board members from over 100 NHS trusts. A key question has been “what capabilities do you need to execute this vision of digital transformation?”. The answer for the NHS, as with other sectors, is this: the unit of delivery for digital transformation is the team.

Nothing is done without teams. They are the foundations on which transformation is built. Highly skilled teams supported by effective governance enable your organisation to be responsive, open, efficient and agile. Teams are your culture, your strategy, your capability, and your only way of getting things done. Investing significant effort in creating the best possible teams, and the best possible conditions for them to thrive has to be the top priority and are a precondition of success.

In this guide we will be exploring what a good digital team looks like, how to build one, and where to start in order to support boards who want to build their digital capability.

We will also look at how boards can enable effective digital teams by establishing governance that supports exceptional performance, and explain how boards can set themselves up to operate at the speed of trust rather than the speed of process.

Digital teams are the cornerstone of building a digital organisation irrespective of whether you’re mostly building or buying technology, and they are the muscles that allow you to be able to successfully deliver ever more transformational services. This is about leveraging the digital opportunity to improve health and care outcomes for all patients and service users.

What they are not however is simply a rebrand of your IT department. Although there are overlaps, digital encompasses new skills, new tools, new culture, and new operating models. All board members need to understand what a good digital team looks like and their role in enabling digital teams to flourish as a key driver of wider organisational transformation.

1 <https://nhsproviders.org/a-new-era-of-digital-leadership>

THE CHALLENGES FACED BY TRUST BOARDS TODAY

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- **Trust boards continue to face internal and external challenges that make digital transformation difficult and inhibit the development of digital teams.**
- **These include finding sustainable funding, managing legacy systems, siloed working, managing risk, visibility of traditional IT, recruitment and retention, and buy versus build tensions.**
- **These factors can make digital delivery feel slow and undermine the confidence of trust boards in their own digital capabilities and expertise.**

Trust boards face several ongoing challenges when it comes to delivering digital transformation, both external and internal. Many of them will undermine efforts to build and run effective digital teams.

- **Funding:** the current approach to investment is rarely in support of the development of digital teams. In recent years, the pattern of digital investment across the NHS has tended to make large pots of capital funding available for specific programmes that trusts have to bid for. This encourages a feast and famine cycle that incentivises one-off expenditure on systems and ‘solutions’, while inhibiting long term, strategic approaches that provide sustained operational funding for teams. In turn, this has created a situation where many trusts still lack basic core infrastructure. This approach to funding is sometimes compounded by an unclear national policy environment.
- **Managing multiple legacy systems:** many of the benefits of digital transformation – in terms of user experience and efficiency – comes from “switching things off”, as much as introducing new ways of working. However, various constraints have meant trusts remain reliant on legacy systems, with all their associated costs, such as patching, ongoing maintenance contracts and an increased vulnerability to cyber attacks.
- **Visibility of traditional IT:** often the job of a trust IT department is invisible, and mostly about keeping the metaphorical lights on. The department’s energy is spent managing legacy systems while trying to juggle requests from across the organisation for new digital products. Some chief digital officers (CDOs) or CIOs speak of their work being like an “iceberg”, where only 20% is visible to most of the trust. If this is the case, it can be difficult for boards to appraise the work of their IT department and have realistic expectations of what they can deliver.
- **Working in silos:** the IT function within trusts often sits separate from the transformation, operations and clinical teams. Without proper engagement and buy in, this can lead to change that is IT-led rather than service user-led. This disconnect between technology and the rest of the organisation tends to rule out generating any significant benefit from digital transformation. Instead, adoption of digital solutions tends to be slow, or worse, service users (patients or staff) avoid adopting new ways of working altogether.

- **Managing risk:** digital transformation in the NHS is complicated, which makes controlling risk difficult. Implementing a trust-wide electronic patient record (EPR) – the foundation stone for true digital services – for example, can easily engulf the full efforts and energies of a trust board, at the expense of other digital programmes. In many ways, digital transformation will always require a “leap of faith”. But as the Academy of Medical Royal Colleges have noted, there is a potential tension between a technological attitude of “move fast and break things” and the ethical principle of “do no harm” in healthcare.²
- **Recruitment and retention:** the NHS, and the wider public sector, can struggle to attract staff with specialist digital skills. In urban areas, this might be because the NHS is competing with other industries for the same talent, while in rural areas there may simply be a skills shortage.³ NHS trusts, in common with many public sector organisations, also often lack a clear career path for digital specialists to progress within the organisation, with too few digital and technology roles at senior and board-level positions. Some inevitably choose to progress their career elsewhere. What’s more, during these initial phases of the pandemic, we know many digital specialists working within the NHS, like much of the wider workforce, risk burnout and exhaustion from several months of working long, intensive hours.
- **Buy versus build:** the complexity and expense of digital technologies means there will always be a need for the NHS to work with the IT and technology sector. But many trusts grapple with decisions about when they need to build their own bespoke solutions in house, and when to procure existing solutions from external suppliers. There are numerous considerations for both, particularly around costs, interoperability – both internally and externally across an integrated care system – and future proofing. Neither way is inherently right or wrong. Decisions are complicated by lack of resources, availability of skills, and the market’s tendency to over promise.

Taken in combination, these factors make establishing digital teams a difficult task for any NHS trust. Reliance on central funding and capital investment puts trusts in a reactive position, undermining efforts to build sustainable capability and deliver long-term strategy. This in turn means that board conversations can become too focused on the tactical elements of transformation, with more time spent discussing funding and fixing what is broken, rather than on opportunities and outcomes.

Creating digital teams has also sometimes been allowed to fall into the ‘too difficult’ category, with a concomitant tendency to outsource components of digital born of a lack of confidence and a mentality of “not being good at IT”. However, in responding to COVID-19, many trusts have been forced to confront these challenges head-on.

² <https://www.aomrc.org.uk/reports-guidance/artificial-intelligence-in-healthcare>

³ Health Education England’s wider *Digital Readiness* programme is seeking to address this by creating an uplift of digital skills, knowledge, understanding and awareness across the health and social care workforce. For more: <https://www.hee.nhs.uk/our-work/digital-readiness>

WHAT DID COVID-19 CHANGE?

- **Trusts have made huge leaps forward in implementing digital alternatives to face-to-face interactions during the pandemic.**
- **Many of these have been underpinned by relatively simple technology and tangible changes to culture, processes, governance and ways of working.**
- **The pandemic has provided boards with clarity of purpose, freedom to act at pace, and focused minds on delivering minimum viable services.**
- **Boards are identifying the learning and what can be applied more consistently, and at scale, in order to sustain and accelerate the positive cultural shifts within their organisations.**

Given the systemic challenges faced by trusts, many might have expected the COVID-19 pandemic to have created a digital meltdown in the NHS. However, in many cases, the opposite has happened. Trusts accelerated their adoption of digital technologies at breakneck speed, changing service delivery and ways of working almost overnight. But perhaps the biggest impact has been to create the cultural conditions where digital teams can take root as part of a more fundamental transformation of health and care.

As one acute trust chief executive has said, COVID-19 has provided her board with clarity of purpose, freedom to act and a focus on 'minimum viable service' when it comes to digital. Boards now face the challenge of sustaining these cultural shifts, while supporting teams who continue to juggle business as usual with new ways of working.

COVID-19 has accelerated three emerging trends that are critical if digital teams are to flourish.

Pace

The necessities of the crisis meant that trusts have had no option but to deliver changes quickly. Rather than go through extended governance processes and sign-off procedures taking weeks or months, more autonomy and authority has been delegated to teams charged with delivering prototypes, testing and experimenting with different approaches before rolling them out to the wider organisation. Achieving this increased pace of delivery also involved more ruthless prioritisation of the IT department's efforts to focus on fewer projects at once.

CASE STUDY

Kettering General Hospital NHS Foundation Trust

During the peak of the pandemic the agendas for the digital hospital committee were condensed and discussions focused on immediate COVID-19 challenges. Since then the agendas have been broadened again but with a built in “show and tell” element that will still enable decisions to be made quickly.

Purpose

One of the structural challenges faced by every trust is the need to balance different strategic priorities that may be in conflict with one another; not least the need to provide excellent care within a budget. Like crises generally do, the pandemic rallied the NHS around a clear and unifying goal, with many reporting there was a new culture and willingness to accept digital technologies in a way not done before. Discussions about new digital programmes were kicked off with the question “what problem are we trying to solve?”, with the answer provided by clinical and operational teams in the same room as their digital colleagues. As one CIO said, “this placed the levers of control in the hands of the customer,” putting digital at the heart of delivering the organisation’s core purpose, rather than sitting off to the side.

CASE STUDY

Bolton NHS Foundation Trust

During the pandemic the CIO worked closely with all the divisional and corporate leadership to identify their own service needs for a new machine learning tool. A business case has now been approved in principle by the board, and a new group has been set up to identify how each division will implement and make the necessary savings from the tool (rather than the IT team itself). With appropriate clinical leadership and involvement from the CIO and divisional/corporate leads, the group will also look to embed future programmes of work, maintain a focus on prioritisation and ensure benefits realisation. They will be held accountability for delivery with appropriate levels of scrutiny and transparency.

Priority

Many trusts introduced new gold and silver command and control structures as part of their response to COVID-19. As a by-product, in many organisations this approach also thrust digital into taking a far more central role in the trust's activities. Many CIOs and CDIOs reported having unprecedented access to their chief executives that helped expedite approvals and unblock problems.

CASE STUDY

Medway NHS Foundation Trust

During the peak of the pandemic Medway launched their own **innovation accelerator**. The Medway Innovation Institute funds pilot internal projects with £10k seed funding, all of which are rooted in quality improvement. One successful example was the rollout of wearables and remote monitors which meant nurses could keep a safe distance from COVID-19 patients. The director of transformation reflected that before the pandemic the trust may have not prioritised these projects because of a lack of capacity, or because they may have become tied up in governance and business case approvals. Now three months on since launch, the institute has registered over 80 innovation projects and the institute's tech start up-style 'fail fast' ethos will be important as the trust begins its EPR journey in 2021.

To retain this sense of boldness and agility boards are now looking to identify the positive behaviours that need to be sustained over the long term.

The bottom line is that clear purpose and priorities at leadership level combined with empowered teams is the key to successful digital transformation. It also requires organisations to be both digitally able (i.e. competent in using digital technologies)⁴ and digitally willing (culturally ready to harness their transformation potential)⁵.

The response to COVID-19 has both demonstrated a clear track record of digital delivery within every trust and a crucial shift in mindsets. In short, it has created a powerful impetus for more far-reaching change.

4 Health Education England's digital capability framework provides a self-diagnostic tool to support individuals identify their digital skills learning needs and signposts to further support: <https://www.hee.nhs.uk/our-work/digital-literacy>

5 For more: <https://www.thehtn.co.uk/2019/10/27/interview-series-james-freed-cio-health-education-england>

WHY AND HOW DO YOU BUILD BRILLIANT DIGITAL TEAMS?

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- **Combining appropriately skilled, empowered people into multidisciplinary delivery teams is the single most important step you can take towards a successful digital transformation.**
- **You need people who understand the fundamentals of user-centred design, agility, and internet era software engineering, working in tandem with clinicians, operational staff and others who intimately understand the organisation and the services it provides.**
- **You may need to look in new places and re-examine your processes to find the different skills you need, but there are existing networks and collateral from people who have done this before that can help.**
- **It is essential to ensure your teams are diverse and reflective of the people you are trying to reach and serve.**

Teams are at the heart of much of what the NHS stands for. Hierarchies still exist – every organisation has them, whether implicit or explicit. But the concepts of multidisciplinary,⁶ empowerment and agility are now commonplace in clinical service delivery. Digital teams are no different. Putting the right skills together and focusing them on outcomes rather than outputs delivers results.

Digital organisations support their teams by being responsive, open and efficient. This does not happen by accident. Successful digital organisations put governance in place that monitors quality and coherence, but allows their teams to work at the speed of trust rather than the speed of process. Embedding this requires an acceptance of ‘servant leadership’ from executive teams; a recognition that their role is primarily to serve the team by first setting strategy and direction, and thereafter removing blockers to successful delivery as they arise.

In this chapter we will explore how an organisation can build and enable strong digital teams.

⁶ Multidisciplinary is meant here in the digital rather than clinical sense: bringing together operational, clinical and digital staff to design and implement new digital solutions. One CDIO described these as “fusion teams”.

What do we mean by a digital team?

Whether an organisation is predominantly building or buying technology (it will never be entirely one or the other), good digital teams are identifiable by the extent to which they demonstrate a 'digital mindset'. The cornerstones of a digital mindset are:

- **Agile:** the team understands the power of feedback loops and iterating in short cycles, experimenting, and scaling experiments that work.
- **User centred design:** the team understands the role of design in delivering great products and services, how the design process works, how to conduct user research, the fundamentals of prototyping and journey mapping, and how screens can and should look. They also are able to make sure services are accessible for people with disabilities.
- **Continuous delivery:** shorthand for modern, iterative cloud-based development techniques, sometimes called devops. The team understands how to build and operate modern internet technologies and how they can be applied.

These three elements create a virtuous cycle. Design gets to the heart of the user's need, agile provides the means to iterate and experiment, and modern technology makes that rapid iteration possible. Taken in combination, these traits should support digital teams to experiment quickly, abandoning ideas that don't work before any big investment is made in them, and scaling products and services that are successful.

Executives need to be as comfortable with these concepts as their teams. The effects of applying a digital mindset to a whole organisation often challenge many of the operating norms it has; be that in terms of how financial decisions are made, how assurance is managed, what skills are valued and recruited, and how performance and progress are monitored.

CASE STUDY

Lancashire and South Cumbria NHS Foundation Trust

The digital function within the trust is being aligned to its four locality networks and one specialist network. The intention is for each network to be supported by a designated digital leadership team containing clinical, adoption and performance leads that are focussed on enabling each networks specific priorities. The networks will also be supported by a senior lead from the digital team who will ensure that intelligence, transformation and operational services are effectively connected into each network. The ambition is to change the dynamic of the digital services team so it evolves from an internal support service into an agile and proactive digital transformation function that is fully embedded into the trust's frontline services.

Minimum viable digital team

The required skills mix of a digital team will depend on the circumstances, but there should be variety. Having a preponderance of one particular skill (such as strategy, clinical experience or IT) is usually a sign of imbalance. Teams should be collectively good at solving different types of problems over time.

Whether your organisation is predominantly building or buying technology may impact the overall makeup of your digital team. In many trusts the status quo is to mostly buy, often (but not always) when it comes to larger systems fundamental to the trust's operations, such as an EPR. But it is still critical to retain the notion that you are delivering services to meet the needs of users, not just buying a 'solution'. A good digital team in a 'buying' organisation will need the appropriate skills to be an excellent and informed customer, not just during the initial procurement, but throughout the relationship with the supplier. The tail must not wag the dog. Your digital team will also do much to define working culture and how things are done and can set a trend for the whole organisation. And they are the transformation muscles to be built that will support and guide your organisation when it comes to the bigger projects.

The types of roles that are essential in a minimum viable digital team are as follows:⁷

- **Product manager:** product management as a specialism is one of the most important digital era roles. Product managers are leaders who care deeply about solving problems for users and achieving outcomes for the business. This vision is combined with the right technical and design understanding to be able to determine at a high-level how this can be done.
- **Delivery manager:** a key role to ensure that the team has the right environment to successfully deliver. They remove blockers to delivery, and use a variety of agile techniques and tools to ensure the team is happy and delivering value.
- **Designer(s):** There are several types of designers that are important to digital teams. An **interaction designer** focuses on providing clear and consistent user experience. They specialise in how users interact with digital products and services. A **service designer** is responsible for the end-to-end journey of a service and focus on ensuring that a user can complete their goal. A **content designer** is responsible for creating, reviewing, and iterating the words used across services and digital products. Content design is particularly important in health where language and concepts can be difficult for people to understand.
- **User researcher:** responsible for helping the team understand users and their needs. They regularly test products with users, and ensure that the team understands how the feedback translates into changes to the digital product or service they are working on. It is important to actually observe users trying and often failing to use a digital product, because what users do is different to what they say.

⁷ These are inspired by the teams outlined in the government's service manual <https://www.gov.uk/service-manual/the-team/what-each-role-does-in-service-team>

This concept isn't new to the NHS and is similar to the work done by trusts to understand patient journeys and staff shadowing.

- **Lead developer:** the lead developer writes, adapts, maintains and supports the computer code underpinning your service. When you have more than one developer in the team this role is often then referred to as the tech lead or architect. The tech lead works with the team to help understand the best way to technically solve particular problems for users.
- **Lead clinician:** this is particularly critical when the focus is on the delivery of good clinical outcomes and therefore needs to be clinically led. And while it is not always the case that you would be delivering a clinical service, clinicians are nonetheless always vital champions and stakeholders for any type of healthcare transformation. Your lead clinician should have an interest in technology and the basics of user centred design.

One word of caution however, it can often be the case that a clinician involved in a digital project becomes de facto "in charge". Unless that clinician also has professional product management or service design skills, this is a mistake. Clinicians are highly skilled individuals, but delivery of digital services is a specialism in its own right. In this situation pairing a clinician with an experienced product manager leads to the best results. A new generation of clinical product managers represent a compelling new hybrid.⁸

A complete set of job descriptions for the key digital roles (with the exception of lead clinician) are available online.⁹

Diversity

As well as having a diverse skill set, it is important to ensure there is true diversity of thought and experience within your team. If trust leaders consistently seek answers to problems from people who look the same and think the same, the answers will remain the same too. This tends to be a challenge in the wider technology sector, where only 15% of the workforce are from Black, Asian and minority ethnic backgrounds and women comprise only 19% of the workforce.¹⁰

Diverse teams are more effective teams. There is strong evidence to suggest that a more a diverse workplace improves innovation, efficiency, productivity, staff engagement, wellbeing and retention, and decreases staff absenteeism and sickness. In the NHS it has also been shown to improve patient care and better patient outcomes.¹¹

Establishing digital teams that reflect the diversity of the community you serve is also critical as trusts grapple with the challenge of ensuring digital services are genuinely inclusive.

8 <https://topol.hee.nhs.uk/digital-fellowships/updates/what-does-a-clinical-product-owner-do>

9 <https://www.gov.uk/government/collections/digital-data-and-technology-profession-capability-framework>

10 <https://www.diversityintech.co.uk>

11 <https://www.nhsemployers.org/-/media/Employers/Publications/The-power-of-research-in-driving-change.pdf?la=en&hash=0B07DFA4F4FD50C8AF1C2E75C9D23335E9D00F44>

Diverse teams are more likely to seek out a wider range of user experiences and viewpoints that have traditionally been overlooked, designing services and delivering outcomes that better meet user needs as a result.

This is equally about diverse leadership. Around 20% of the NHS workforce is Black, Asian and minority ethnic and 77% are women. However fewer than 10 women of colour are in senior digital leadership roles across the trust sector.¹² And at board level more generally, only 7.5% of executive directors are from Black, Asian and minority ethnic backgrounds.¹³ It is the board's role to lead from the front: set out a compelling vision, be clear on the interventions, and establish an accountability framework to measure success.¹⁴ When recruiting digital teams specifically organisations will need to:

- **Review your recruitment practices:** many organisations are already strong on the basics of diverse recruitment. Make sure these are covered, doing things like checking job adverts for language that is biased towards particular genders, to widen the pool of people applying for roles.
- **Actively find new networks:** several networks (such as the Shuri network, led by women of colour in digital health and care including CIOs, CCIOs and aspiring leaders, or OneHealthTech, a volunteer group that promotes under-represented groups to become future health innovation leaders) are helping connect under-represented groups. They will be valuable sources of advice, guidance and potential team members.
- **Speak to others:** many parts of the NHS have learned from their own initiatives to improve diversity on what has worked (and not worked for them). Share ideas with peers.
- **Use commercial levers:** The NHS' commercial processes allow for a cultural fit score to mark potential suppliers, incentivising more diverse practices among suppliers.

How to hire digital professionals

To build your first team, you may be able to start with the networks of your existing digital staff. If not, the first steps will be to find where digital professionals meet. At technologist meetups and hack days product managers, design and coders can be found everywhere. These are rooms full of people who have given up their free time and scarce skill to work on problems you want to fix. It's not a bad place to start.

It's important not to forget that there will be exceptional people already in your organisation whose job titles may not match the ones you're looking for. The best will adapt to specialise in these new roles if you invest in their skills. The Topol review outlined how the NHS can support these changes through training programmes, CPD, sabbaticals and secondments, as well as board-level focus on creating a culture of learning and development.¹⁵

12 <https://shurinetwork.com/wp-content/uploads/2020/06/The-Shuri-Network-Achievements-Summary-2020.pdf>

13 <https://nhsproviders.org/inclusive-leadership/bame-representation-and-experience-in-the-nhs>

14 As outlined by Patricia Miller OBE, chief executive, Dorset County Hospital NHS Foundation Trust:
<https://nhsproviders.org/news-blogs/blogs/leading-from-the-top-on-diversity-and-inclusion>

15 <https://topol.hee.nhs.uk>

CASE STUDY

Kettering General Hospital NHS Foundation Trust

All roles in the trust's digital portfolio now include Tom Loosemore's definition of digital in the job description: "All members of the digital leadership team will strive towards 'applying the culture, processes, business models and technologies of the internet era to respond to people's raised expectations'". **Recruitment practices** are therefore closely aligned with the trust's digital vision.

Regardless of an organisation's existing digital capabilities, there will always remain a need, at times, for contractors, either independent or via agencies. This is a useful approach to get started or deliver self-contained projects that require more people to implement. However, it's important to ensure the most critical roles, especially product management, are filled by your organisation. It's also possible and indeed sensible to pair more junior members of your digital team with more experienced contractors to expose them to the relevant techniques and skills.

CASE STUDY

University Hospital Southampton NHS Foundation Trust

The trust has committed to creating a pipeline of digital talent nurtured within the organisation. Over a number of years through inclusive leadership, flexible recruitment and succession planning they have become a magnet for good digital staff. The trust's IT directorate has even employed a developer who now works primarily from Portugal. The trust tries not to be over reliant on one or two stand out individuals to deliver digital. At the same time the team isn't afraid to bring in contractors on short term contracts when work needs to get done.

As the NHS strengthens its focus on working across integrated care systems (ICSs), many trusts are beginning to think about what digital team capabilities they need to operate across a system footprint. Some trusts are beginning to pool resources and establish shared ICS digital teams. These teams tend to be hosted by one organisation but work to transform patient pathways across multiple trusts, as well as primary care, social care and the voluntary sector. We know that harnessing digital opportunities at the system level opens even more opportunities to improve patient outcomes, quality of care and financial efficiencies. But as with the wider system agenda, trusts are having to work through the implications for joint decision-making and governance to ensure these teams can help realise this potential.

CASE STUDY

Frimley Health and Care ICS

The **Wavelength leadership programme** develops collaborative digital leadership across the ICS. Clinical, operational and digital staff from system providers, commissioners, and local authorities are brought together and supported to collaborate on digital transformation across the ICS and enable better alignment of digital strategies.

Going to market

While you absolutely need to have some core leadership digital skills in house, in a competitive marketplace it is not always practical to hire every new role on your team, particularly if you need to scale quickly.

While there is a strong tradition in health IT to go to the market to buy products, you shouldn't forget that you are perfectly able to go to the market for digital skills. The various call-off frameworks brigaded under the Digital Marketplace (G-Cloud, Digital Marketplace) have played a critical role in breaking the dependency on large IT suppliers and diversifying the digital supplier base and are very easy to use.

As with any temporary hire, there are of course risks: a focus on short term delivery that can be determinantal to longer term strategy. Boards will need to seek assurance that these risks are being properly managed.

In addition to your first delivery team you will also need people who can clear a path for them. These are the insiders who want change and know how to get things done. Transformation is, by default, going to need to circumvent some existing legacy processes and approaches – no mean feat. The key job of the board and leadership team is in legitimising workarounds, making it ok for the teams to take a different approach. This does not mean a carte blanche to ignore or rip up the current rules – rather it means empowering them to question the intent of rules that may have made sense once but need rethinking for the internet era.

LEADING DIGITAL TEAMS

- **The transition to a digital organisation impacts on all aspects of the trust – from its leadership and operating model, to how projects are managed and financed.**
- **Boards need to be as comfortable with the core concepts and ways of working as their teams.**
- **Boards are responsible for establishing senior specialist digital leadership within the trust particularly from the clinical workforce to ensure effective clinical engagement.**
- **Boards also need to provide the space for a multidisciplinary approach to flourish – ensuring that services are designed with all of digital, operations, and clinical viewpoints represented.**

Digitally-minded organisations operate differently to IT driven ones, and can feel quite different as well. The key litmus tests of a digital organisation include:

- **Leadership:** digital and technology is viewed at the board level with the same importance as finance or quality and is seen as a core enabler to the organisation's goals.
- **Approach to developing new services:** digital teams are inherently agile in their approach, testing with users and iterating solutions. They favour outcomes over outputs.
- **Finances:** digital organisations fund teams not technology, adopt blended funding models (combining revenue and capital) and factor in life cycle costs.
- **Operating model:** digital organisations are characterised by small pieces, loosely joined in a flat network, with professional skills united through communities of practice.
- **User centricity:** above all, digital organisations are user centred, investing in deeply understanding user needs. They have the humility to never assume they have the right answer.

When digital teams need to scale up, the delivery team itself does not get bigger. Rather once your minimum viable team has delivered something visibly and you need to do more, you then build another team (rather than make the existing team bigger). And the cycle continues.

Digital leadership roles

In the NHS, the key triumvirate of digital leadership roles is a chief digital officer or CIO¹⁶ a chief clinical information officer (CCIO) and a chief nursing officer (CNIO).

Clinical ownership of the digital agenda is vital. CCIOs and CNIOs act as the bridge between digital and front-line clinicians. They tend to perform two important roles: engaging the clinical community and winning “hearts and minds”, while at the same time combining their knowledge of patient care, digital ways of working and change management to drive service transformation. CCIOs and CNIOs often emphasise how their roles require the appropriate authority and resources to fulfil their potential.¹⁷ In order to strengthen and deepen this clinical leadership, trusts are increasingly identifying multiple digital champions across their digital teams.

CASE STUDY

Derbyshire Community Health Services NHS Foundation Trust and Bolton NHS Foundation Trust

Clinical ownership of digital is key to the success of any implementation. Derbyshire learned this after their electronic prescribing programme stalled. A chief clinical information officer with a strong and experienced clinical background and excellent people skills was recruited to listen, feedback, and challenge clinical views of the programme. The programme was then redesigned and relaunched successfully. At Bolton the trust has appointed a multidisciplinary team approach with several CCIOs and CNIOs who are from diverse professions including an Acute medical physician, ophthalmologist, dietitian, occupational therapist, senior nurse, radiologists and an operational business management champion. They all act as digital champions across the trust to represent the diverse population of staff.

Some trusts have taken the decision to appoint a CDO/CIO to their board. Others have not. Either way, boards must not lose sight of their collective responsibility for the digital agenda. Executive and non-executive directors reach decisions as a unitary board, which requires them to have access to specialist expertise. In turn, CDOs/CIOs must be able to access and influence board thinking, regardless of their own board status.

¹⁶ For some, there is a subtle difference between the CIO and the increasingly popular CDO or CDIOs within the trust sector. For example, the latter is an increasingly external facing role. For more, read: <https://www.computerweekly.com/news/252475168/CIO-interview-Toby-Avery-CDIO-Surrey-and-Borders-NHS-Partnership-Foundation-Trust>

¹⁷ For more on clinical leadership, please see the 2016 Wachter Review: <https://www.gov.uk/government/publications/using-information-technology-to-improve-the-nhs/making-it-work-harnessing-the-power-of-health-information-technology-to-improve-care-in-england>

This all points to the kind of experience a CDO/CIO needs. The best candidates are not necessarily those who have cut their teeth in digitally native organisations. They will likely be of the internet era but will also understand what preceded it, and will have experience of changing organisations operating with significant amounts of technology and human legacy. They will also have a good working knowledge of the technology of the internet, they should espouse the working practices outlined earlier in the guide – user-centred, open, agile, empowering. Any newly appointed CDO/CIO should have a clear vision for how an organisation can change and shouldn't be afraid of asking the difficult questions.

CASE STUDY

Alder Hey Children's NHS Foundation Trust and Liverpool Heart and Chest Hospital NHS Foundation Trust

The two trusts share a CDIO who sits on both boards. Like other executive directors, the CDIO has collective responsibility across both of the trust's activities. This includes digital as a portfolio accountability but also wider corporate director responsibility for other areas with other directors including quality, safety, finance and performance. The CDIO role requires the technical skills of a digital expert but also more general leadership skills. Working at board level exposes the CDIO to the problems and challenges faced by all executives. The CDIO has regular sessions and updates with executives and board members which helps ensure the board is engaged and supportive of the digital agenda.

In some trusts the role of technology and transformation has been combined. This speaks to the need to place technology as a core enabler, at the heart of any changes to the trust's operating model. When there are multiple roles with potentially overlapping territories, accountability for leading the digital team and its programmes do need complete clarity. It is equally dangerous to hire a CDO/CIO and hope that will be enough to make the transformation work: all board members need to take collective responsibility for digital transformation.

Bridging silos

In addition to ensuring different disciplines come together within a digital team, there is also a crucial task of ensuring that the team is connected to operational and clinical teams across the organisation. In a traditional arrangement there are typically silos between technically defined IT teams, clinical teams and ops or the IT vs transformation function. To harness the full potential of digital NHS trusts must bring these teams together around shared outcomes of improving services. Integrating digital specialists, operations managers and clinicians can begin to establish new operating models. To be a success this also needs collective board leadership and modelling.

CASE STUDY

Surrey and Borders Partnership NHS Foundation Trust

The digital and information directorate has developed a flexible approach, both in terms of how they work and who they work for. This has enabled them to work at greater pace and reflect changing competency requirements in the digital world. They aim to assemble teams from a fusion of operational/clinical, digital and information departments based on the competencies required. This differs from a project-team based approach which tends to focus on specific roles rather than competencies. The approach allows for a true codesign and cocreation, and proved particularly successful during the launch of the trust's single point of access. Since then they have adopted the use of fusion teams whenever delivering new services or capabilities to the trust.

Synergies are required at the board table too. Transformation requires engagement of the whole board and particularly from medical and nursing directors, the director of workforce, and the chief operating officer, roles that can traditionally be distant from the digital agenda. It can't be simply delegated to the CDO/CIO.

CASE STUDY

Frimley Health NHS Foundation Trust

The trust's medical director will lead the new £108m EPR programme as part of efforts to engage the wider organisation in the digital agenda. In addition to this the board has appointed a new executive director of transformation, innovation and digital. They will focus on joining up the trust's organisational change programme that includes the EPR, a new hospital and the wider quality improvement work, while also educating the wider trust about what transformation really involves.

GOOD GOVERNANCE FOR DIGITAL DELIVERY

6

- **Boards need to set conditions for teams to thrive which means looking at processes and governance and making sure they are always adding value and meeting the needs of users.**
- **The most effective governance puts decision making in the hands of people who are best placed to act as they have the right skills, knowledge and context – all the while verifying that decision making is sound.**
- **To speed up delivery, bring assurance into the team rather than a distant gateway board. Escalate to the board when risks are of strategic importance.**
- **New types of governance, which brings teams and leaders together to see and discuss working software and report on issues, rather than comprehensive documentation, leads to richer understanding and dialogue.**

Effective governance is critical to the delivery of safe, high quality care. It can often be more difficult and complex in health than other sectors given the realities of information and clinical governance and the range of regulatory and national bodies involved. For boards, governance means obtaining assurance – confidence backed by sufficient evidence – that strategy is being delivered to meet the outcomes that have been agreed and risk is properly managed.

However keeping up with papers submitted to the regular drum beat of a governing board can make it hard for directors to complete the vital triangulation process of comparing what they read and are told, with what they see for themselves, in order to check outcomes are being delivered.

It is equally hard to ensure risk management processes are proportionate so that teams have appropriate powers to act. Overly hierarchical structures can disempower teams. Existing forums used to make decisions can sometimes become distant, far removed from the reality of delivery. This can lead to teams feeling the pressure to deliver to deadlines, deliverables and documents, compromising their own focus, rather than on users and the outcomes they are seeking to achieve.

Boards of digital organisations are able to turn this around. They focus on empowering teams so that decision making is in the hands of people who are best placed to act as they have the right skills, knowledge and context – all the while verifying that decision making is sound. New types of governance are used to bring teams and leaders together to see working software and report on issues, rather than comprehensive documentation. This leads to richer understanding, dialogue and makes existing assurance processes more effective. Teams empowered in this way give people agency, passion, commitment and make your organisation a pleasure to work in.

CASE STUDY

South Tyneside and Sunderland NHS Foundation Trust

A governance framework (access [here](#), with login) for the trust's global digital exemplar (GDE) programme was established by the trust's CIO in conjunction with the chief executive, who also acted as the executive sponsor. This sponsorship of the governance framework was key in that it provided authority to manage, challenge, and ensure project progression. At levels below the executive, clear intentions of the governance framework were set at an early stage which ensured there was no misunderstanding of the goals of the programme, which empowered teams to get on and deliver. Risk is now consistently managed and escalated through the framework.

Key principles of good agile governance¹⁸

Focus on outcomes, not deliverables

Digital strategies need to be more than shopping lists of technology against a list of dates. Board leaders need to understand and articulate the problems they want fixed and the outcomes they want to see, rather than place bets on a solution they have heard of. They must be both problem seekers and problem solvers, rather than simply recipients of information.

The unit of delivery is the team

A team is in charge of how it delivers digital products and services. There's no formal hierarchy within teams, even though they contain people from all levels of the organisation including board members. The service owner and team have the authority to make decisions and escalate (as well as deescalate) through an agreed and robust process. Good teams succeed when they have the right mix of skills, are empowered, and understand the outcome desired.

Assure as you go

Lengthy gateway approval processes designed by hierarchical organisations slow down agile delivery teams, by making them wait for decisions they are better placed to make themselves, and by interrupting the fast feedback loops that can enable a team to iterate and deliver value faster. A good digital team will have regular public check in points like showcases, and will be publishing information to enable people to see the quality and value they are creating. Assurance should be sought often not at 'big bang' stages.

¹⁸ More agile tools and techniques can be found in the GDS service manual <https://www.gov.uk/service-manual/agile-delivery/agile-tools-techniques>

Measure progress in different ways

Documenting is important but typically agile teams produce less long-form documentation, while still providing sufficient information to make robust decisions and provide proper assurance that risk is being managed effectively. Progress is recorded in user research notes, blog posts, weeknotes, test harnesses, release notes and verifiable metrics. Board members should get comfortable viewing prototypes and other more tangible examples of team progress.

Managing clinical and information governance

More than in other industries digital teams face the dual challenges of handling very sensitive patient data that occupies special categories under the relevant legislation, and delivering safe, quality clinical services. There is no doubt that the potential for harm from an error is greater in the delivery of digital healthcare services than elsewhere.

The application of good digital governance principles are no different in these areas. When clinical and information governance work best and meet their intended outcomes, the appropriately qualified specialist is within the team, empowered to make decisions within the risk management framework agreed by the board.

Including clinical safety and information governance, experts within the digital team have the added benefit of exposing them to new digital ways of working. There are very few official processes or governance arrangements that would not be improved by, for example, content design – the art and science of writing well for the internet.

The iterative processes at the heart of digital delivery are a powerful means of reducing both information and clinical governance risk, underlining the importance of moving beyond a reliance on gateway processes that are just not suitable for quick agile delivery.

CASE STUDY

Derbyshire Community Health Services NHS Foundation Trust

The trust's chief transformation and information officer (CTIO) leads a small transformation team and a larger information management and technology team. Across the trust **quality improvement methodology is embedded** and transformation programmes are designed to strike a balance between care quality improvement and assurance on safety. This is done by ensuring enough people within the team "know how far to push things", while the CTIO pre briefs members of the board on points of contention before board meetings. This approach has contributed to the current ICS-wide procurement of a shared care record in an ambitious 10-week window.

LESSONS FROM OTHER SECTORS

7

Based on their experience of working in governments and business around the world, Public Digital has compiled a set of questions board members can ask themselves about teams and governance in their organisations. We believe much of this can apply to the NHS. It is not an exhaustive list but these questions are intended to kickstart wider discussions that can engage and focus whole boards on the organisation's digital capability.

1. Do you talk about digital services, or IT projects?

Organisations that are further along their digital journey understand that at heart they deliver services to users. The NHS is advanced in this area compared to other public sector bodies, but does the concept of service delivery rather than project delivery also apply to digital? Is the same user oriented, outcome based, iterative approach one you would apply to delivering a clinical service the same as you would for a digital one?

The language used to describe digital initiatives reveals much about an organisation. IT or digital "projects" are one-offs; things to be done and then forgotten, move on to the next thing, and require the completion of a list of tasks. Digital services aren't one-offs, they live on, evolve. Digital services are actively designed, with due care and attention to what people think of them, whether they are used, and whether they work.

The digital mindset combines the disciplines of user centred design, agility, and the use of modern internet technologies. Having staff or representatives on the board who are able to talk about products and digital services rather than projects will help move your organisation in the right direction.

2. Who designs your services and how?

Examining how your new services are designed, by whom, and where the discussion takes place, will tell you a lot about how digital your organisation is.

True transformation happens when the edges of traditional and new disciplines meet. You will design the best services and meet the needs of your users most effectively when you bring together multidisciplinary teams. This means bridging traditional silos between digital experts with internet era skills, and clinical operations, and support staff. Digital and technology should not be an afterthought but at the core of any forthcoming change.

3. Is specialist digital knowledge represented at the top table when key technology decisions are made?

During board discussion, the combination of clinical leadership, executive roles and non-execs provides for well rounded, collective decision making on key issues. The same should be true for digital. If digital is fundamentally about rethinking operating models as much as delivering new technology or services, then the vision and drive for that change needs to come from the top as much as it does from a ground-up movement.

Making decisions about technology without having access to specialist expertise is risky. Creating the right environment for digital teams to flourish is almost impossible unless there is some understanding at board level of what is required.

As well as leading to more informed board discussions, the benefit flows in the other direction too. Ensuring you have specialist digital knowledge at the top table when key technology decisions are made helps senior digital leadership more closely align their strategy aims and objectives with that of the organisation at large.

4. How are you hiring people?

Repeating the same approaches for bringing new skills into the organisation will lead to the same results. Senior product leaders are not simply going to be looking on NHS Jobs, or probably any other job site. If you truly want to start to diversify ways of thinking and skills it may require you to look in some non traditional places.

This might mean leveraging networks, going to conferences or advertising in different places. It may also mean bending some of your normal rules, as the reality of hiring new and sought-after skills means that by default you may need to do different things.

It's also about thinking about your offer. Working in digital healthcare is one of the most intellectually challenging and rewarding sectors out there. Use this to your advantage.

5. Does your team look like who you are trying to reach?

The best way to build services that work for everyone is to make sure that your team, at any level, reflects the people who will be using them.

If the answer to this question is "no" then the follow up is, what's your plan? Are you looking at your recruitment practices and checking job adverts for language that is biased towards particular genders for instance? Are you actively finding and working with new networks (such as the Shuri network) who are helping connect under-represented groups? What are you learning from other trusts?

6. Are your board papers and meetings really telling you what's going on?

Board members are used to lots of information flowing to them (often in the form of papers), and extracting real knowledge remains a key challenge. The job of a board director is to balance what they read with what they're told and what they see.

But digital transformation means re-examining all processes and ensuring that they add value. It's about instituting new forms of governance that prioritise seeing servant leadership from board members, working prototypes over documentation, and a leadership culture of going to see delivery for themselves or asking for a demonstration rather than waiting for risks to be escalated through a report or committee.

If you are getting the sense that you are not getting value out of a particular governance process, [rethink it along these lines](#).

7. Does information flow to authority, or does authority flow to information?

Good governance for digital transformation should be simple and supportive. It should trust and empower, giving decision-making authority to teams so they can focus on delivering.

Good digital governance is about outcomes and behaviours over deliverables and documents, and doing away with hierarchies that add layers of process and drag. Instead teams should be encouraged to make their work open and transparent.

There will always be a role for leaders to guide and set goals or context, but good digital governance acknowledges that the team has the best knowledge of the problem it's trying to solve, and therefore the best chance of coming up with the right answer.

8. When was your last blog post about your digital transformation published?

One of the most powerful ways an institution can differentiate itself and attract a new type of skillset or leader or the attention of other stakeholders, is to interact with the outside world in a different way. Building digital organisations therefore means changing the way you communicate, and moving away from classic broadcast type communications to showing your working out.

Openness is a key attribute of digital organisations. Your public communications should be as much about clarifying strategy, attracting people, engaging suppliers and sharing knowledge. Your blog is where you put your news and successes but also what you've learned and mistakes you've made. It is your brain on the internet over time and needs to be authentic. Many trusts have blogs but do they explain the thinking that's going on above simply the facts. Do they talk about digital at all?

Things that will change if you're doing communications well may include things like how many people are sending CVs that show they have different experiences, how often are members of your team being invited to speak at conferences, and how well recognised are you as an employer of digital people.

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www.nhsproviders.org/building-and-enabling-digital-teams

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 foundation trusts and 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.

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One Birdcage Walk, London SW1H 9JJ
020 7304 6977
enquiries@nhsproviders.org
www.nhsproviders.org
@NHSProviders

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Registered charity 1140900
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Registered Office
One Birdcage Walk, London SW1H 9JJ