



# Progressing digital transformation in healthcare 2021

BT Enterprise in association  
with iGov Survey



# Contents

# Foreword

The NHS has faced exceptional demand over the last 18 months and has rightfully been praised for its heroic efforts in such challenging times – NHS clinicians, managers and system regulators have gone above and beyond.

Reflecting on the two decades I've spent working with arguably the best pound for pound healthcare system in the world, right now marks a pivotal moment for the industry, and we must embrace it. As COVID-19 continues to disrupt our communities, the way we interact with the world around us has dramatically changed, and the delivery of healthcare services has to also.

The rapid adoption of both new and existing technology has played a critical role in helping to manage the extra strain on resources. From the everyday – like giving patients the freedom to book their own appointments, to the exceptional – monitoring healthcare in the home remotely, and even setting up virtual wards. Organisations up and down the country have shown a paradigmatic shift.

A recent Health Foundation report found that 97% of people that have communicated with the NHS since the start of the pandemic, have done so digitally<sup>1</sup>.

This includes video calling, messaging, apps and medical devices. But the report also acknowledges that the NHS needs to “develop and improve these approaches before locking them in.” As healthcare providers plot their future, it'll be important for our colleagues in the NHS to step back and carefully review the technologies they've adopted.

It's not only an opportunity to build upon the impressive work already achieved, but to work with trusted technology partners to tackle some of the familiar challenges the NHS estate has faced with interconnectivity, and ensure that new digital processes deliver better outcomes for both staff and patients. This will help us fulfil the UK's ambition of high-quality, seamless healthcare for everyone – whether that's in the hospital, in the community or in patients' homes.

Speaking with my colleagues in the NHS, it's clear the desire to build a positive technology legacy for the future is widely recognised. Earlier this year, the Department of Health and Social Care launched a policy paper setting out new proposals for “joined up care for everyone in England.” At its heart, it argues that to achieve this, the NHS needs to improve collaboration, partnerships and integration.

BT has been a committed partner to the NHS since it started in 1948. Today, we're extending that partnership with health and social care bodies across the UK to reimagine the best digital infrastructure for health.

With experience working with complex health systems, like setting up the Emergency Services Network and connecting all eight Nightingale Hospitals, we can help healthcare providers embrace new ways of working and digitise systems that will be instrumental in improving the post pandemic backlog, so they're ready for whatever comes next.

I'm excited to drive this collaborative culture forward and shape innovative solutions to produce the best outcomes for our NHS colleagues. To better understand the way in which organisations across the UK are adopting new approaches to patient care in the COVID-19 era, we teamed up with iGov Survey. This report looks at the progress that's already been made, and the challenges, opportunities and prioritisation for the further adoption of digital services. Reviewing the need for an improved digital infrastructure, connectivity, and collaboration across the sector, to help healthcare organisations reach their future ambitions. We are resetting our work with the NHS in an authentic way and this document is just a start. We are listening. If you have any ideas, please do get in touch!



**Professor Sultan Mahmud**  
Director of Healthcare – BT Enterprise

1. <https://www.health.org.uk/publications/long-reads/securing-a-positive-health-care-technology-legacy-from-covid-19>

# Key themes

The data collected from our survey identified four key themes, which form the basis of this report.

## The demand for digital

Health leaders clearly recognise technology is key to joining up services and providing better patient care. Especially since the pandemic has accelerated digital transformation – and patient demand.

## Transformation: rising to the challenges and embracing opportunities

There are still significant barriers to transformation. Including the digital skills of both staff and patients. Plus a much deeper need for cultural change in healthcare organisations.

## Getting the foundations right: network, wi-fi and mobile infrastructure

The NHS will only realise its digital transformation goals if it underpins new technology with the right digital infrastructure. With a network the NHS can rely on, it can embrace new solutions.

## Working together to improve the experience and delivery of patient care

There's an enormous demand for new digital tools that will lead to better-quality, more responsive care. But limitations in staff and patients' ability to use and access these tools need to be addressed to see results.

# 1 The demand for digital

# The pandemic has highlighted the extensive technology issues in healthcare.

An overwhelming 91% of participants believe that increased demand has intensified technology issues, like information sharing between services. Given the demand for more joined-up services, this is a cause for concern. It also highlights the need for transformation on a much wider and deeper scale.

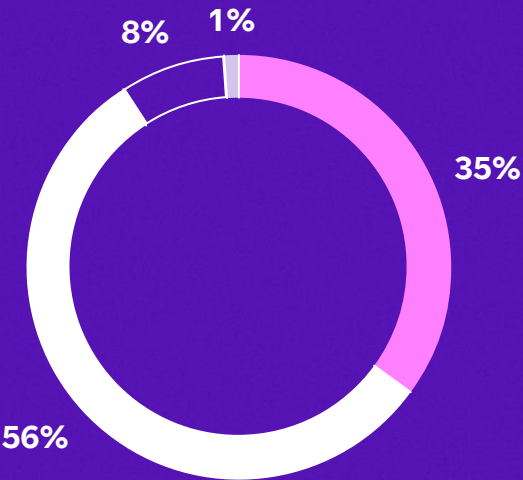
With this in mind, it's good to see that 62% of participants 'strongly agree' new pressures mean digital transformation is more important than ever before to improve how they work. And a further 38% 'strongly agree' they have to accelerate their transformation plans this year.

Plus, just short of three-quarters of our participants (73%) acknowledge that their network, wi-fi infrastructure and mobile technology continue to be critical to future transformation.

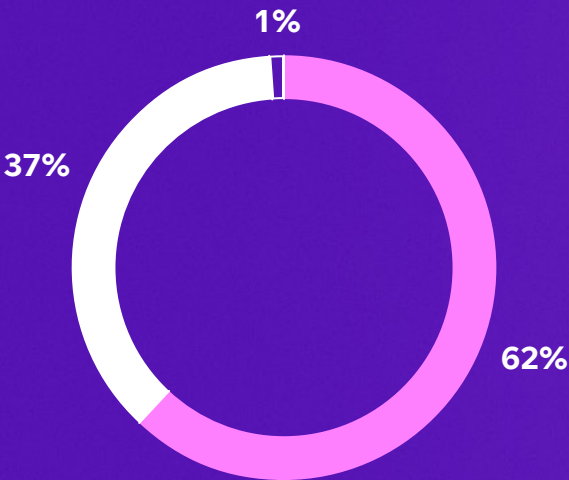
Figure 1: To what extent do you agree with the following statements?

Strongly Agree   Agree   Disagree   Strongly disagree

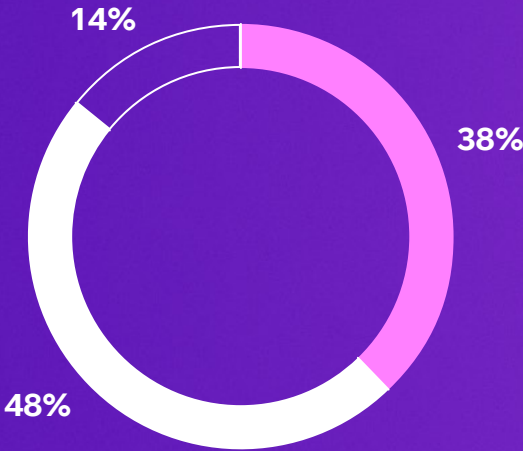
The increasing demand for services has exacerbated technology issues, such as interoperability and information sharing.



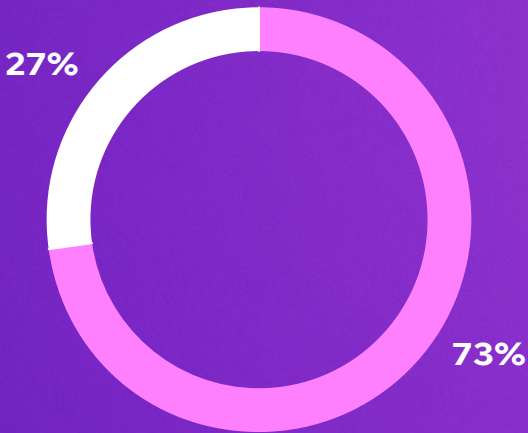
New pressures on services have meant that digital transformation is now considered even more of a necessity.



We have accelerated the timeframe in which we are carrying out our digital transformation over the course of this year.



Our network, wi-fi infrastructure and mobile technology is critical to our ability to continue future innovations in the delivery of healthcare.



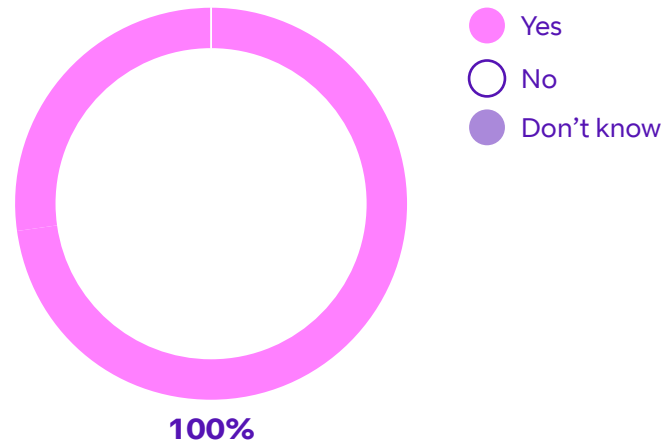
# 2 Transformation: rising to the challenges and embracing opportunities

# The demand for transformation is clear. But what's driving it?

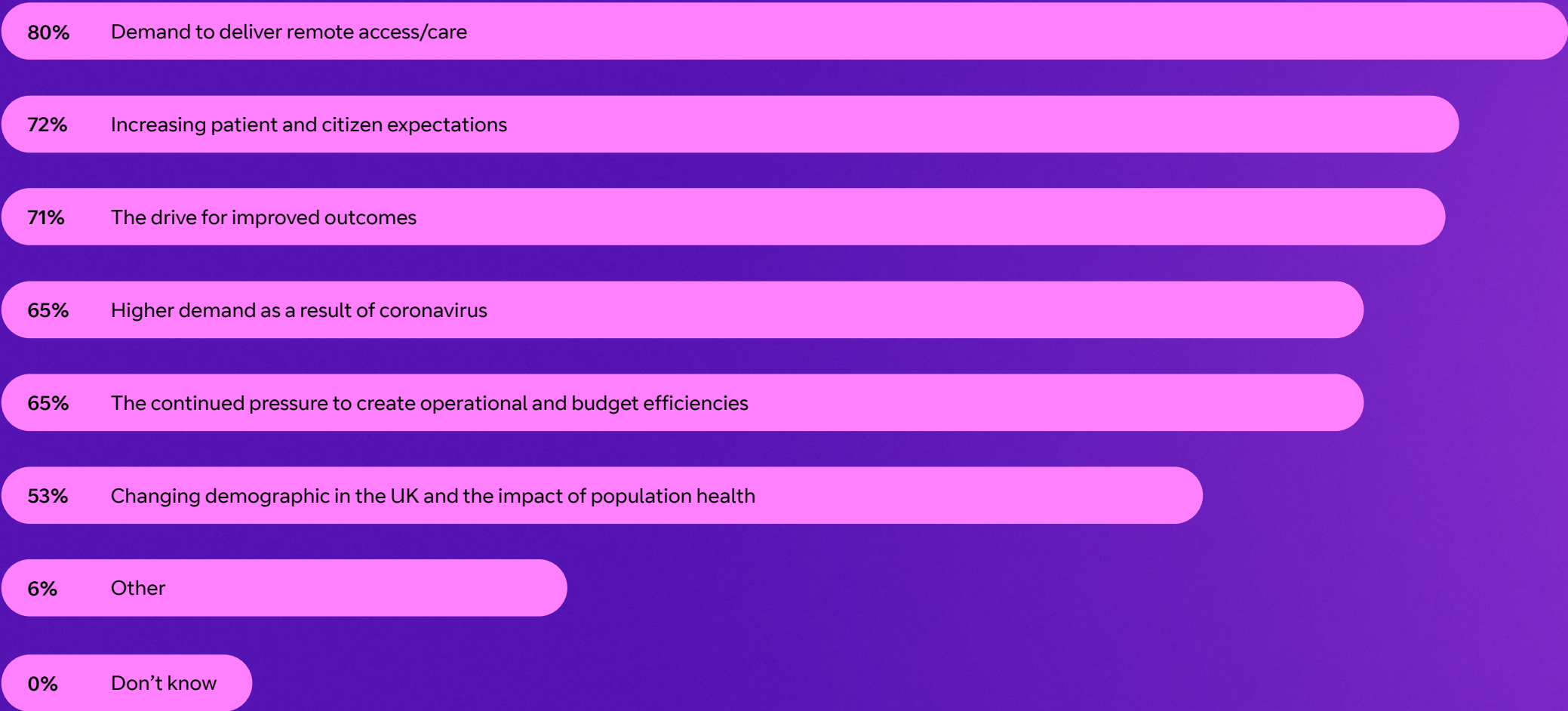
80% believe it's the need to deliver better remote access and care. While 65% specifically mention the impact of coronavirus.

One particularly encouraging sign is that the second most popular driver is an increase in patient expectations (72%). Historically, patient concerns about disruption of service and unfamiliarity with new technology have been a barrier to change. So one of the few positive legacies of the pandemic could be the public recognising the advantages of digital transformation.

Given the increasing pressure to change working practices in order to meet demand, do you believe that the digital transformation of systems and processes is necessary to sustain change in the long-term?



**Figure 2:** In your opinion, which of the following are the main drivers for digital transformation?



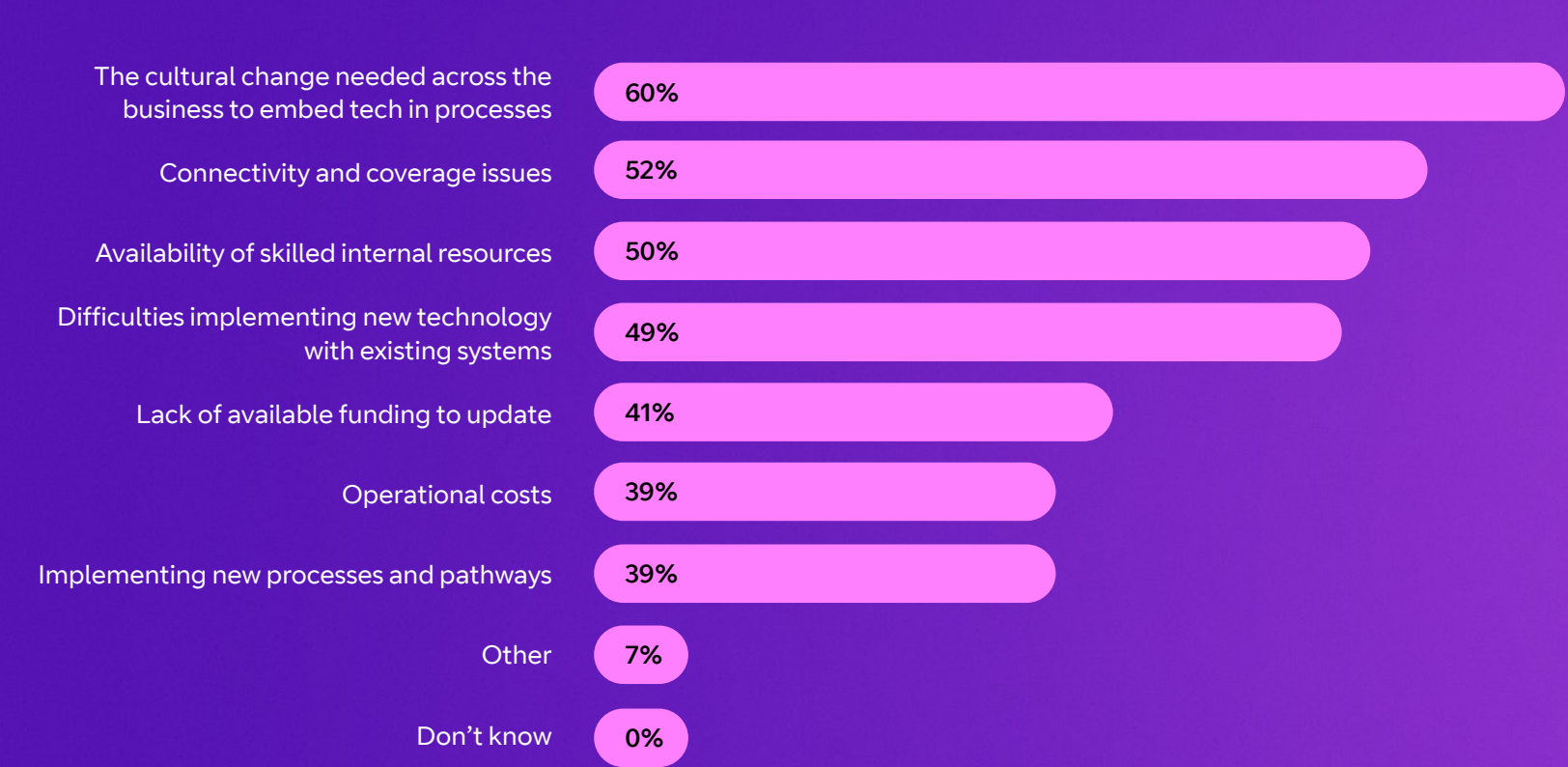
## So, what factors are standing in the way of a joined-up healthcare service?

Though cost is always a major issue in the public sector, our survey reveals it's no longer always seen as the biggest barrier when implementing new digital processes into ways of working. Instead, 60% say workplace culture is the most common challenge.

Around half of respondents also highlight connectivity issues (52%), a lack of people with digital skills (50%), and the difficulty of implementing new technology within existing systems (49%). With only 39% seeing cost as a barrier.

This suggests that the real challenge may be a cultural shift, which is something less easily solved. Healthcare organisations need to work with their teams to get everyone on board with new digital processes. Supporting them with training to create a real culture of digital transformation and bring about meaningful change.

**Figure 3:** What are the biggest challenges to your way of working when it comes to your connectivity (wi-fi, LAN and mobile) and IT infrastructure?



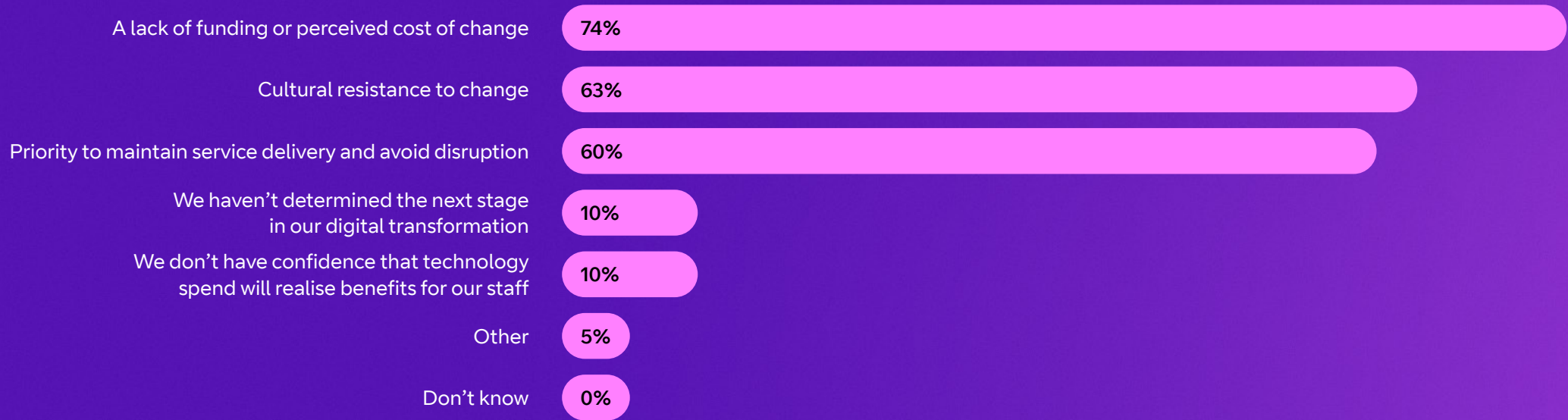
**“Cultural resistance is massive. Fear of the unknown puts people off and with COVID they use the excuse they are simply too busy. Digital projects feel like a constant push to drive forward.”**

Survey participant

Others expressed concern about the availability of skills internally. One participant pointed to a disparity between the complexity of NHS IT systems and the IT skills of staff members. Another was concerned about levels of confidence among staff.

Looking to the future more than half of participants expect cultural resistance to hold back transformation plans (63%). Plus the need to deliver services without disruption (60%), and funding issues (74%).

**Figure 4:** Looking ahead to the coming few years, are there any barriers that you believe prevent your organisation from moving forward with digital transformation?



# Participants believe digital transformation presents a big opportunity to improve care.

One thinks the pandemic has

“removed traditional barriers to digital transformation.”

While another believes coronavirus has helped

“support remote ways of working.”

Using data more effectively was also highlighted as a key issue. With one participant saying there's a

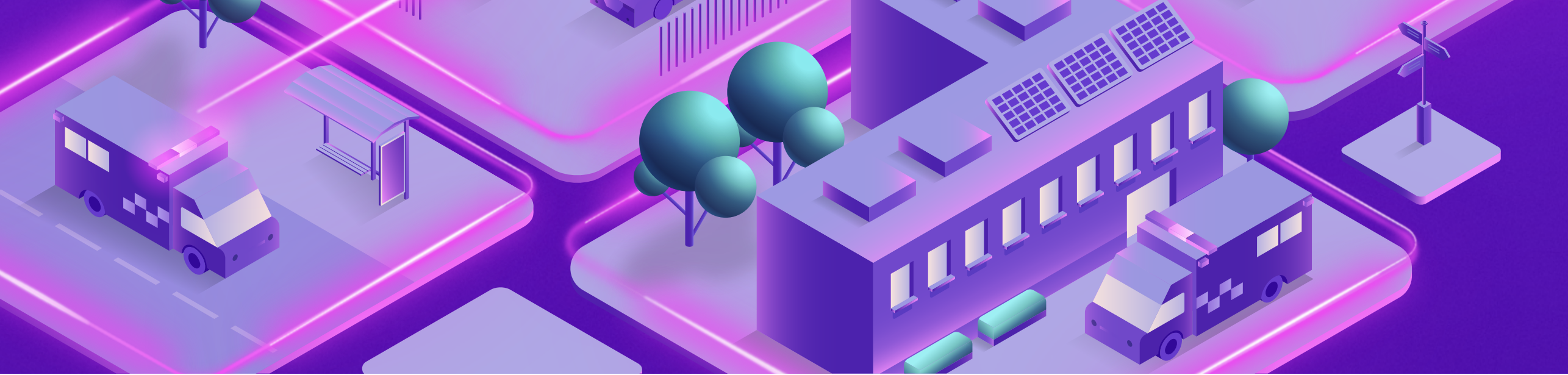
“universal acceptance that we cannot continue to have patient data trapped in organisational silos, when we know that patients need this data to flow between us as providers.”

But there's also concern that healthcare providers could mismanage their transformation:

“The rush to digitise and the new opportunities to consume data results in a temptation to forget to ask the question ‘Why are we digitising this process?’ We should be asking ‘is this paper-based process one that should be digitised or can we do it differently, better or not at all?’ Digital change needs to be informed by clear and bold clinical advancement.”

3

Getting the  
foundations  
right: network,  
wi-fi and mobile  
infrastructure



**To deliver digital transformation effectively, organisations must make sure they have solid foundations in place.**

When asked to rate their current wi-fi and mobile set-up, it's perhaps unsurprising that participants highlight system inoperability and legacy systems as the most common issues.

The challenge of sharing information with other healthcare providers also ranks high on the list.

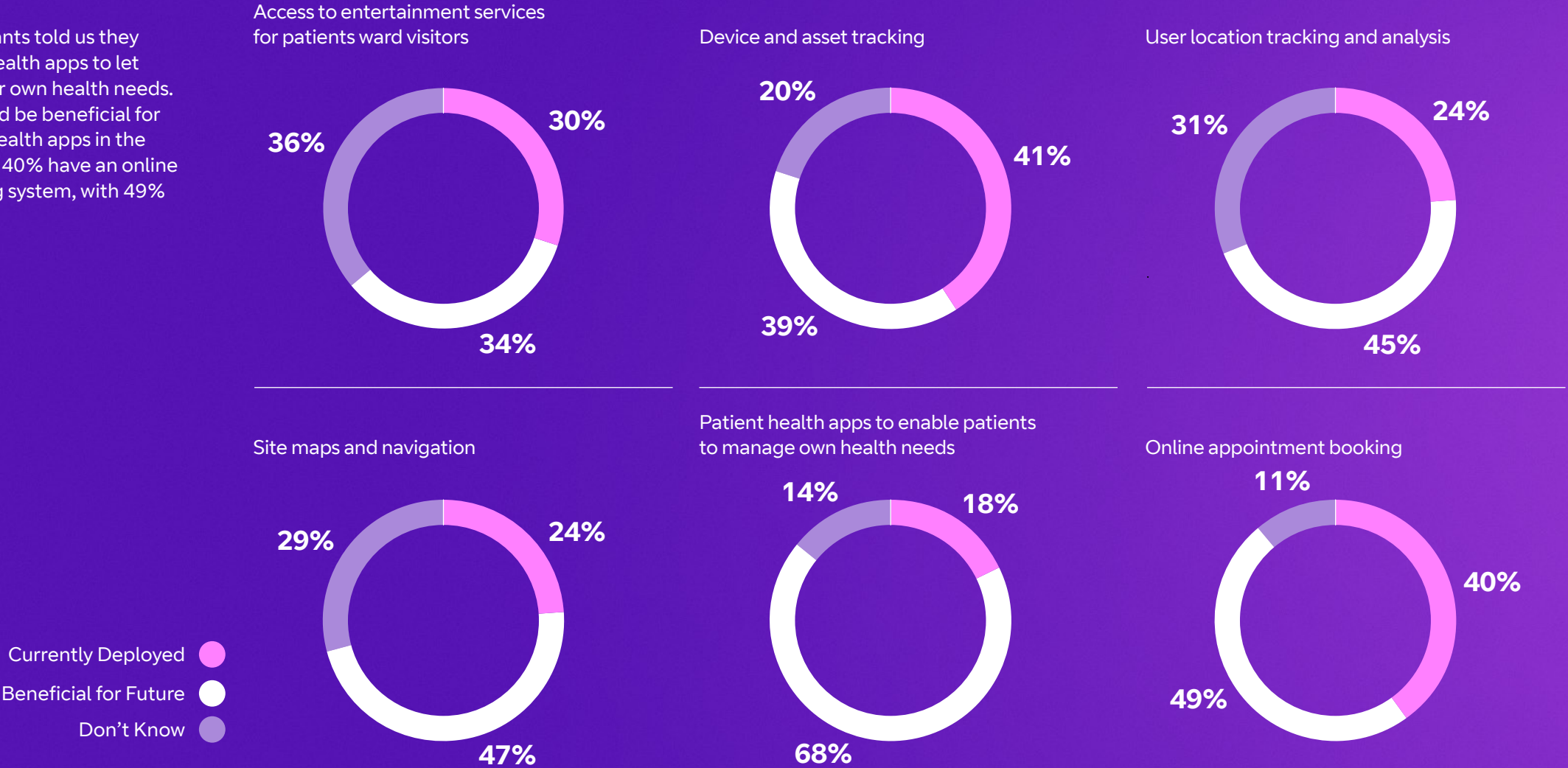
Figure 5: What challenges/limitations does your current network, wi-fi and mobile infrastructure present?



We also asked what technology services had already been implemented. The results suggest there's still a heavy reliance on manual processes across the sector.

Only 18% of participants told us they already use patient health apps to let patients manage their own health needs. But 68% think it would be beneficial for them to implement health apps in the future . Similarly, only 40% have an online appointment booking system, with 49% looking to get one.

**Figure 6:** Of the following list, which areas are currently deployed and which do you believe would be beneficial for the future?



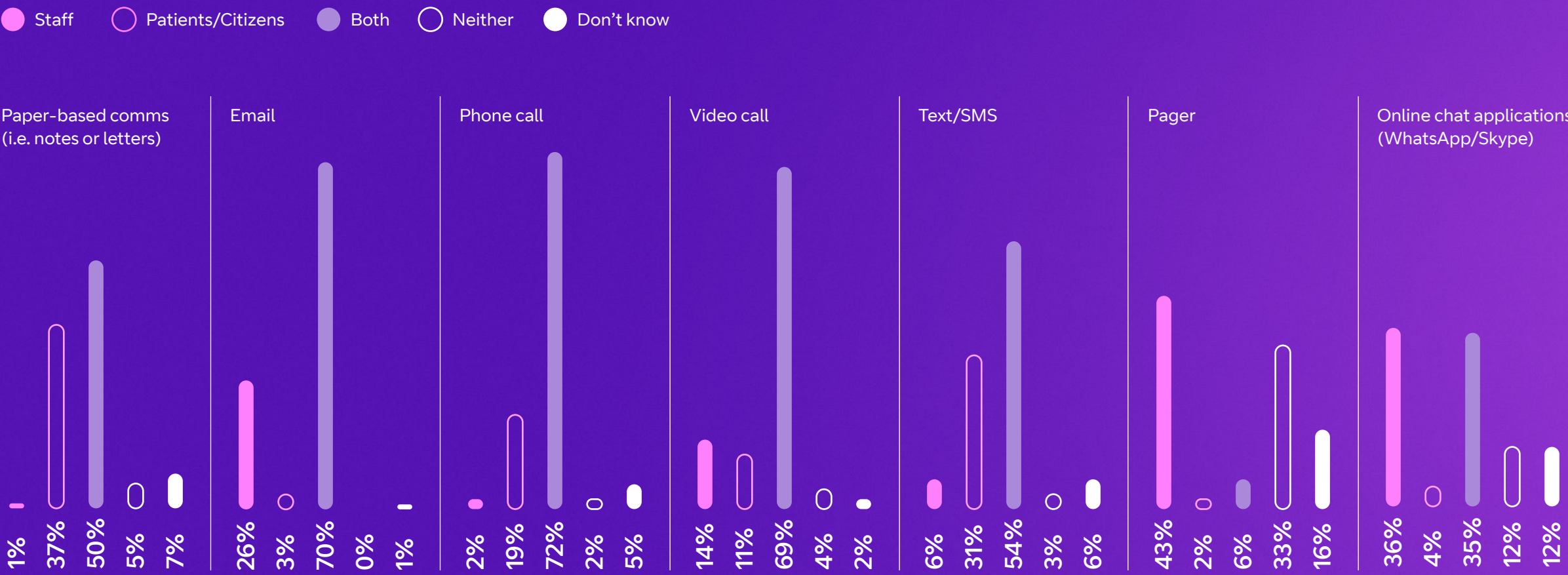
# 4 Working together to improve the experience and delivery of patient care

# Digital channels are increasingly critical to the NHS.

Email has now overtaken paper-based communications between staff and patients (70% to 50% respectively). While many are also now communicating via video calls (69%). Text alerts are also widely used (54%), particularly for comms with patients (31%). And 43% still use pagers for staff.



**Figure 7:** Thinking about the way in which your organisation currently communicates, which of the following channels are used to communicate with staff, or with patients and citizens?



It's not surprising that our survey found that 98% of respondents have seen an increase in demand for remote services over the last year.

Many providers have been striving to increase remote healthcare for years and this has only been accelerated by the pandemic.

**Figure 8:** In the past year, have you seen an increasing demand for health and care services to be available remotely?

Yes

98

No 0%

Don't know 2%

%



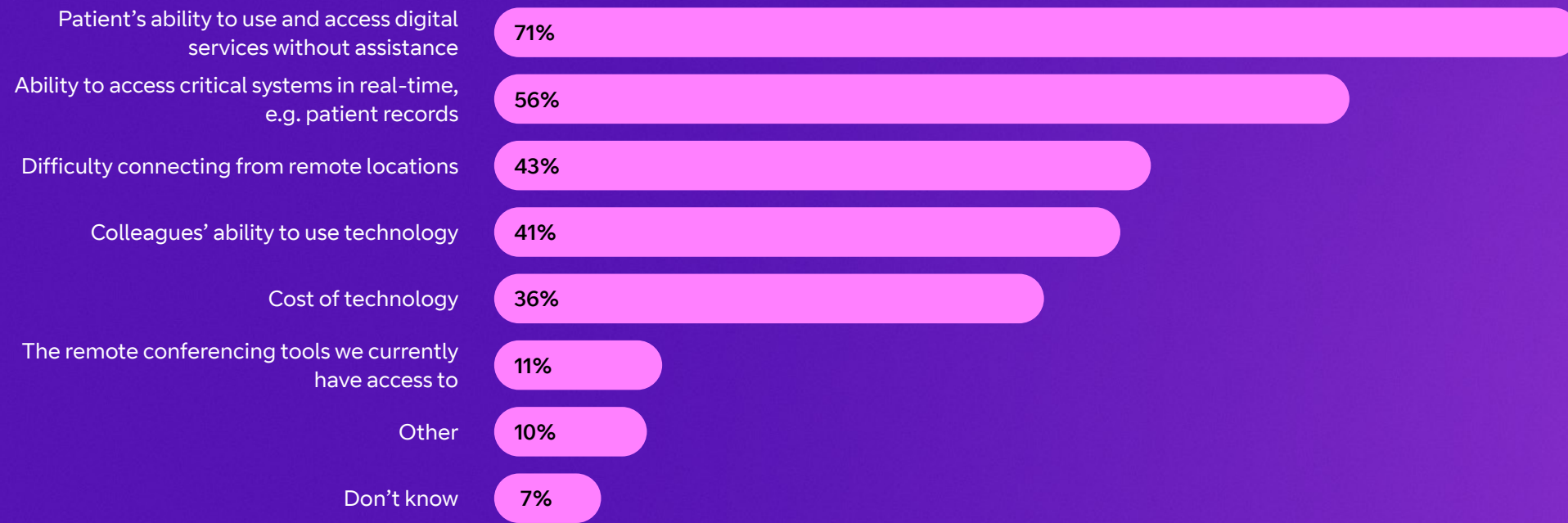
# Delivering healthcare remotely remains challenging.

When asked about the biggest barriers to delivering healthcare remotely, 71% say that a patient's ability to use and access digital services without assistance is an issue.

This suggests that taking advantage of the new enthusiasm for digital tools could require a big cultural shift in society at large.

More than half (56%) also say they don't have the systems in place to access critical systems (like patient records) in real time. And 43% have reported difficulty connecting from remote locations. While 41% are also concerned about their colleagues' ability to use technology.

**Figure 9:** What do you believe are the greatest challenges you experience when trying to deliver health or care services remotely?



When asked about remote healthcare, many participants raised concerns about excluding patients without digital skills or access.

One participant pointed to

“patients not being informed by their GP practices about the new model of delivery and the benefits of online/group interventions.”

But it isn't just patients' ability to access or use technology that concern participants in our survey. One suggests that

“clinical engagement” is an issue, and there's “resistance to change existing processes from business and clinical staff.”

A lack of suitable software and platforms is also a key point of concern. With one participant highlighting a lack of platforms available to facilitate remote health and care delivery, and that the “uniformity” of platforms is key.

# Conclusion

# Laying the foundations for digital healthcare: Beyond the pandemic



Kieron Salt  
Principal Technology Partner,  
Health & Social Care – BT Enterprise

Digital transformation in healthcare is not a new conversation. But the pandemic has accelerated the urgency for organisations to embrace innovation.

With new digital tools, services can be delivered more effectively, for less. Ultimately, it's about improving health and care outcomes for everyone.

Strong foundations are already in place. Our survey reveals that since the first lockdown, nearly all UK adults (97%) have used technology to communicate with the NHS. And the vast majority of which report an overwhelmingly positive experience.

However, there are still countless other opportunities for digital transformation across the NHS and healthcare sector, from preventative healthcare and anticipatory care, to in-patient care and ongoing support in the community.

Less than a fifth of respondents (18%) say their patients already use health apps to manage their own health needs. Even though most (68%) believe it would be beneficial to implement this. This is a disconnect that needs to be addressed.

# Improving access for all



What's clear is the universal need for joined-up care. Remote healthcare delivery, already underway prior to coronavirus, has been accelerated to relieve pressure from frontline services. But there's still more we can do.

Almost half (43%) of participants cite difficulties connecting from remote locations as a challenge for remote delivery. And even more (71%) highlight concern over the ability of patients to use and access digital services.

These challenges cannot be avoided. There are currently 4.7 million people waiting for operations in England alone<sup>1</sup> – the most since 2007. So the case for digital solutions that let everyone work more effectively, and more flexibly, must be prioritised.

In trials around the country, we can already see the potential for remote healthcare. Working with University Hospitals Birmingham, in 2019 we built a [5G-connected ambulance](#).

Using a mix of virtual reality (VR), augmented reality (AR) and real-time HD video feeds, it connects clinicians with paramedics. Enabling them to carry out ultrasounds on the move so by the time the patient reaches the hospital, clinicians are prepared and on hand to help. In 2020, we trialled a [Remote Diagnostic Station](#), which transports doctors from their surgery into their community.

It lets clinicians work with multi-disciplinary teams remotely, carrying out check-ups with vulnerable patients using a digital stethoscope, HD cameras and 5G-connected ECG monitor. This means they can triage early or prevent unnecessary trips to the hospital.

This is just the tip of the iceberg. By forming long-term partnerships with dedicated providers, frontline NHS workers can be freed from bureaucracy. So they can focus on what matters most – saving lives.

<sup>1</sup>. NHS England



# Enabling efficiencies through connectivity

Without the right digital foundations in place, it's difficult to realise the benefits of a data-driven approach to care. This is why there's a need for robust and reliable connectivity across the health sector.

We're a long-standing partner of the NHS and have the expertise to deliver the connectivity needed to make transformation possible while our mobile partner, EE, is the first UK network to launch 5G for businesses and consumers. And we can already see the transformative power of 5G for in-home healthcare.

We've also connected 180 NHS vaccination centres with high-speed fibre and wi-fi connectivity. So that staff can access patient records and deliver vaccines quickly and efficiently.

The need for connectivity is also critical, as highlighted during the pandemic, with 69% of clinicians using video calls to communicate with colleagues and patients.

As digital channels become the new way of working, NHS partnerships that can deliver connectivity and collaboration infrastructure, with reliable coverage, are more important than ever.

# Creating a culture of digital transformation

Cultural change is always a challenge. Especially in such a complex organisation as the NHS. Technology makes change possible, but not in isolation.

True digital transformation needs successful partnerships, reliable infrastructure, interoperability across organisations and a willingness to move away from how things have been done traditionally.

It must also have a purpose. Healthcare professionals, government decision-makers, and business leaders alike must ask themselves: what exactly are the benefits to digitising a specific process? Why should it happen – or why is it happening?

Our survey reveals that public expectations are no longer a barrier to digital transformation. In fact, patient demand is driving the adoption of digital technology within the institution itself. The culture towards technology adoption may have changed, but this must be shared throughout the NHS.

The pandemic has focused our minds on how technology can improve healthcare. But if innovation is to happen, the culture needs to change too.



# Lasting commitments: BT as a trusted digital partner

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Ultimately, we believe that long-term digital partnerships are key to providing truly joined-up healthcare.

It's these reliable and evolving relationships that enable smarter ways of working. It means organisations can adopt technology on a much wider and deeper scale, ensuring consistency across multiple systems.

But this partner must have a proven record of working with organisations of all sizes. That's where we can help. Whether that means collaborating with the many NHS trusts across the UK, or the smaller innovative businesses that are developing tomorrow's solutions, we can connect all the moving parts.

We know that digital transformation has the potential to benefit everyone, not just patients. So as a trusted technology partner, we take a 360-degree view to help the organisations we work with improve how they work across every business process.

Across the NHS, much progress has been made when it comes to delivering digital healthcare. While there is no cut-and-paste approach to adoption, the transformative potential is too significant to ignore as healthcare organisations plot their future.

By rising to the challenges that remain, the NHS can continue to look after all patients and staff for generations to come. And with the right digital tools, this can be done more effectively than ever before.

Kieron Salt  
Principal Technology Partner,  
Health & Social Care – BT Enterprise

# Methodologies and respondents' breakdown

# Methodology overview

The survey was conducted by BT Enterprise in association with iGov Survey.  
The project ran from Wednesday 20 January 2021 to Monday 22 February 2021.

85 individuals from 69 unique organisations participated in the survey, representing job roles across the NHS and Clinical Commissioning Groups. This included:

Business Development	General Practitioner	Project
Business Management	Information	Quality Assurance
Chief Executive/Deputy	IT Management	Records Management
Clinical	Marketing Communications	Service Delivery
Customer Services	Medical Director	Strategy
Digital	Operations	Technical Services
Education	Performance	Training and Transformation
Emergency Planning	Planning	Change Management
Engineer	Procurement/Purchasing	
Finance Management	Programme Management	

All participants have received a complimentary copy of the findings report. There was no inducement to take part in the survey, and BT Enterprise was not introduced as the survey partner.

## About our survey partner



iGov Survey collates information and insights on behalf of both public and private sector partners, covering a range of subjects that directly and indirectly support public service delivery. Its research team interprets what clients need to discover, and then turns this into digital surveys that enable granular reporting and analysis of market trends.

## Acknowledgements

We would like to thank all those who were kind enough to take part – and especially those who found the time to offer additional insight through their comments. We would also like to thank our partner, iGov Survey, for their hard work putting this survey together.

# Appendix 1: Participating organisations

Aneurin Bevan University Health Board	Healthcare NHS Trust	NHS Oldham CCG	Serco ASP
Ashford and St Peter's Hospitals	Hull University Teaching Hospitals NHS Trust	NHS Sandwell and West Birmingham CCG	South Central Ambulance Service NHS Foundation Trust
NHS Foundation Trust	Hywel Dda University Health Board	NHS Shared Business Services	South East Coast Ambulance Service NHS Foundation Trust
Barts Health NHS Trust	Lancashire & South Cumbria NHS Foundation Trust	NHS South Sefton CCG	South London and Maudsley NHS Foundation Trust
Berkshire Healthcare NHS Foundation Trust	Lincolnshire Partnership NHS Foundation Trust	NHS Supply Chain	South West London and St George's Mental Health NHS Trust
Black Country Partnership NHS Foundation Trust	Manchester University NHS Foundation Trust	NHS Warrington CCG	South West Peninsula Academic Health Science Network
Bradford District Care NHS Foundation Trust	Mersey Care NHS Foundation Trust	NHS West Hampshire CCG	South West Yorkshire Partnership NHS Foundation Trust
Cardiff and Vale University Health Board	Newcastle University	NHS West London CCG	St Helens and Knowsley Teaching Hospitals NHS Trust
Chesterfield Royal Hospital NHS Foundation Trust	NHS 24	Norfolk and Norwich University Hospitals NHS Foundation Trust	Stockport NHS Foundation Trust
Countess Of Chester Hospital NHS Foundation Trust	NHS Bristol, North Somerset and South Gloucestershire CCG	North East Ambulance Service NHS Foundation Trust	Tameside and Glossop Integrated Care NHS Foundation Trust
Coventry and Warwickshire Partnership NHS Trust	NHS Business Services Authority	North East London NHS Foundation Trust	Taunton and Somerset NHS Foundation Trust
Croydon Health Services NHS Trust	NHS City and Hackney CCG	North of England Commercial Procurement Collaborative	The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust
Cwm Taf University Health Board	NHS Digital	North West Ambulance Service NHS Trust	The Royal Wolverhampton NHS Trust
Derbyshire Community Health Services NHS Foundation Trust	NHS Dorset CCG	North West Boroughs Healthcare NHS Foundation Trust	University Hospitals of Leicester NHS Trust
Dorset HealthCare University NHS Foundation Trust	NHS Education for Scotland	Northumbria Healthcare NHS Foundation Trust	University Hospitals of Morecambe Bay NHS Foundation Trust
East Sussex Healthcare NHS Trust	NHS England	Oxford Health NHS Foundation Trust	West Midlands Ambulance Service NHS Foundation Trust
Epsom and St Helier University Hospitals NHS Trust	NHS Havering CCG	Oxford University Hospitals NHS Foundation Trust	Wirral University Teaching Hospital NHS Foundation Trust
Greater Manchester Academic Health Science Network	NHS Hillingdon CCG	Oxleas NHS Foundation Trust	Wye Valley NHS Trust
Greater Manchester Mental Health NHS Foundation Trust	NHS Kent and Medway CCG	Provide	Yorkshire Ambulance Service NHS Trust
Harrogate and District NHS Foundation Trust	NHS Lanarkshire	Royal Berkshire NHS Foundation Trust	Yorkshire and Humber Academic Health Science Network
Health Education East Midlands	NHS Leadership Academy	Royal Free London NHS Foundation Trust	
Health Education North West	NHS Leeds CCG	Royal United Hospitals Bath NHS Foundation Trust	
Health Education South West	NHS Leicester City CCG	Salisbury NHS Foundation Trust	
Hounslow and Richmond Community	NHS North West Leadership Academy	Sandwell and West Birmingham Hospitals NHS Trust	

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#### Offices Worldwide

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