Resetting the
Digital Premium

A report from the Good Governance Institute (GGI)

February 2022

Executive Summary

This paper is about the digital future in health, housing and social care.

It builds on our first paper, *Unleashing the Digital Premium,* published in 2020 and explores in more detail four themes at the heart of the digital premium: place, predictive technology and population health, security and wellbeing at home, and new digital standards.

Section 1 explains the context and purpose of the paper and the interactive methodology which has provided the framework and content for *Unleashing the Digital Premium*. Case studies and quotes from thought leaders and experts, drawn from interviews and focus groups, are used to illustrate key arguments and learning throughout the report.

Section 2 explores what we mean by the digital premium and why it matters. Prompt questions for boards and themes and insights are shared to stimulate discussion and provide focus at national and local levels in a rapidly changing environment.

Section 3 takes a hard look at the health, housing and social care environment and the changes that are most affecting quality assurance. After identifying the dynamics involved the section concludes with a focus on how governance can enable the digital premium against this background.

Section 4 examines the effective use of digital technologies, focusing on the role of leadership, skills and data. Issues of balance, empowerment and ownership are explored in detail.

Section 5 provides a practical checklist of questions for boards, making the case for good governance as essential to securing future change at the pace and scale needed.

The main argument is that connecting digital "thinking and doing" with good governance enables proper stewardship of public assets and the public interest. This connection grounds strategic digital issues in real accountability, not just in organisations but in new networks, systems and collaborations between organisations on which the future of health, housing and care depends.

Resetting the Digital Premium

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1.
Introduction

All organisations can have positive and lasting impact on the world by taking digital transformation seriously.

This paper outlines how digital can be embraced across public services in a smart and innovative way. Based on learning and collaboration between sectors, we focus on the practical steps that can be taken to achieve this digital premium and make a real difference to the lives of people and communities.

Comments and insights from leaders and peers in the field are quoted throughout to ground the paper in what works, along with both up-to-date analysis and practical resources to help boards get to grips with what they need to do now.

This is the second paper about the power of digital transformation and how governance can really enable change which the Good Governance Institute (GGI) has developed for Legrand Care. The focus on improving the world fits with what both our missions as modern organisations.

GGI exists to help create a fairer, better world. We aim to build the maturity of governance in all organisations so they can play their part in building a sustainable, better future for all - from the smallest charity to the greatest public institution and from start-ups to the well-established private sector organisations that work in partnership with the public sector and contribute to the public good.

So, it makes complete sense for us, in this paper, to turn our attention again to digital technology, as it now plays such a pivotal role in both driving and enabling improvements and achieving truly sustainable outcomes for people and communities. Addressing the risks and challenges involved, our focus here is on how best to unlock the enormous potential for positive impact from digital through good governance.

Legrand Care has a track record of excellence and innovation in this area. GGI was delighted to be approached by Legrand Care in the Autumn of 2019 with a grant to develop a national white paper on the digital premium.

Now we are together presenting this second white paper about resetting the digital premium. We have achieved this with invaluable input from colleagues across housing, health, social care, third sector, technology providers, and government.

The paper sets out the case for resetting the digital premium. We believe a different approach is now needed to unleash innovation and achieve radical impact. This means going beyond minor efficiency gains or settling for low-level changes. We suggest boards need to play a much greater role in driving change by placing digital transformation at the very centre of their strategic decision-making. A set of strategic prompt questions are set out in Section 5 to support the board in growing understanding and, more importantly, achieving change which lasts.

GGI would like to thank Legrand Care, as well as all those who so generously contributed their time to take part in the discussion events and interviews that have informed the content of this paper.

1.1   Context and purpose of paper

The UK and the world have undergone huge change and upheaval over the last couple of years. Much of the focus has been on the COVID-19 pandemic and its impact on many across the world. The scale of loss has been huge. The need for innovative support to people and communities has also been driven forward. Changes have moved fast, supported by innovation in the way things are done. Much of this has been driven what only digital can deliver. It is a different world which requires different solutions.

Many organisations have moved swiftly into a more 'digital first' approach to the delivery of core services. There are new digital opportunities across health, social care, housing and the wider public sector, which organisations need to navigate.

Legrand Care and the Good Governance Institute have identified four themes which are set to shape the future:

I.   **Place**
II.   **Predictive technology and population health**
III.   **Security and wellbeing at home**
IV.   **New digital standards.**

This report explores these issues in detail to shine a light on best practice examples and case studies, to highlight potential pitfalls for health, social care and housing organisations seeking to improve their digital suite, and to provide a series of key recommendations and questions that board members (and others) can ask themselves when trying to assess their digital positioning.

This report has been developed as a practical guide for board members about digital maturity and how to develop it within their organisations.

1.2   Our methodology

This is a collaborative report. We brought together individuals from across housing, social care, local government, health, third sector, technology providers and partner organisations.

Using targeted engagement – interviews, correspondence and surveys - we researched content and multiplied impact by connecting with decision-makers, as well as undertaking a series of webinars that provided an opportunity for cross-sector discussion to appeal to senior leaders.

This was carried out in four stages:

•   a survey of digital leads in the health and care sector
•   desk-based research on policy and cases of best practice
•   further intelligence gathering from events and interviews that have already taken place
•   a multi-sector expert group engaged in events and 'editorial boards', to inform the paper with key questions and insights.

1.3   The future context

The move to digital services is imminent. What will make this move successful is ensuring new digital services are embraced by communities, staff and senior leaders, and that experiences from past successes and failures in implementation are learnt from. It's also important to look at the changing landscape around digital and what this means to approach. With evermore focus on sustainability and open data it's imperative that organisations consider digital approaches and products in a holistic way as an integral part of all strategic decision making, vision and even core values for the organisation.

As this paper will show in more detail, there is a series of thinking and approaches that will allow organisations to be ahead of the curve with the resetting of the digital premium:

1.   The pandemic has undoubtedly accelerated a realisation of the benefits and possibilities offered through unleashing the digital premium. This momentum should be grasped by organisations and further strengthened through the new force of partnership and system working that has arisen from the pandemic and through government policy.

2.   Organisations that demonstrate a real commitment to system and partnership working are likely to be those that best unleash the digital premium. Shared digital strategies at integrated care systems

(ICSs) (or even pan-ICS level) with input from all partners that will be delivering population health outcomes from housing to social care, will ensure shared high-level outcomes are agreed that then support strategic purchasing, the sharing of data, talent and resource and avoid unhelpful silo working. The value of data is highly recognised in the private sector, often being added to a company's net worth. More needs to be done by boards in the public sector to recognise data as a crucial asset with a central role in delivering system working and meeting population health outcomes.

3. Despite a strong political and organisational will to unleash the digital premium, this will only be truly effective in improving outcomes for individuals and communities if they are able to take advantage of what is on offer. Focusing on those who are facing the greatest barriers to realising the benefits of digital, understanding why and then building solutions into place-based and partnership strategies will help provide assurance that sections of society are not left behind in this fast-moving environment of digital transformation. Equally important is ensuring that technology is designed in partnership with and for its users and their different needs. Start with the person and the value will follow. Understanding when technology is not the answer and when human intervention is likely to provide the best outcomes is also important. As part of this we must also take into consideration those who cannot use technology for health reasons and those who do not want to use or like technology.

4. Community value can also be delivered by thinking about the other end of the digital supply chain to the end user. How can procurement policies for delivering digital transformation programmes support local skills, business and social enterprise?

5. The benefits of deploying new technologies are substantial but organisations must keep a strong eye on ensuring that they are used in a way that upholds democratic values, human rights and privacy. This is particularly important when using AI and similar predictive technologies and when they are operating in people's most private space, their own home.

6. Organisations that develop the right policies, procedures and governance approaches now will reap benefits both for themselves and their services users. Spending the time looking at how to procure, the management of technology, consideration of data usage and sharing and what impact digital transformation will have on service users ensure delivery is ahead of the curve.

At the end of this report there is a set of core questions for boards to ask themselves to help consider how to be the most digitally forward and innovative organisations for patients, people in their care and citizens alike.

2.
The digital premium in health, housing and social care

Our previous paper, *Unleashing the Digital Premium* identified these five prompt questions for boards intended to stimulate thought about the board's unique role in supporting digital strategic transformation:

1. **What efforts is your board making to embrace the transformative potential of digital technology within health and care?**
2. **How are your stakeholders being engaged as part of developing and delivering this digital strategy?**
3. **What expert advice and information does your board have access to in relation to digital?**
4. **What data do you collect, and what data should you be sharing with others?**
5. **In what ways is your board collaborating with others from across a range of sectors in order to achieve the best outcomes for the communities you serve?**

Further prompts were also included which are also set out below to aid productive discussion in relation to unleashing the digital premium:

*   See the digital premium as an **opportunity** to be embraced, and not a threat to be avoided – boards should **embrace risk** within established assurance frameworks.

*   Be **proactive** where possible – digital transformation is a live and dynamic issue, and retrofitting is always harder and less effective than **building it into systems** from the outset.

*   Value the importance of **inter-agency collaborations** and start the conversation – building relationships, openness, and **removing boundaries** can be powerful forces for change.

*   Reflect on the need for **education and communication** - consider how you do this for yourself, your staff and your service users.

*   **Improve your awareness** of the potential of the digital premium to help the communities you serve – and **put plans in place** to reap the benefits.

*   Reflect on the digital position of your organisation and define a **clear digital strategy.**

*   Set your sights **internationally**, not just nationally – there are lots of places to take practical inspiration from.

*   **Don't** simply replace current systems with **digital add-ons**. There are lots of opportunities to **improve and redefine services** with appropriate digital support.

*   **Consider the user of the technology** – those who may struggle to access or use the technology for health or other reasons and how you could engage with them in different ways.

When researching and developing this paper we reflected further on the research from the initial paper alongside other areas of transformation within the health, social care and housing spheres to develop the set of four core themes (set out in diagram 1) used in this report to provide a framework for resetting the digital premium.

Diagram 1

Theme	Insights
Place	**Value the importance of inter-agency, and start the conversation – building relationships, openness, and removing boundaries can be powerful forces for change.** *Why: because the move towards integrated care systems means that new combinations of actors will need to come together to serve local populations (in new terminology "at place level"). Digital transformation can impact people and communities in different ways. Strategies based on local need will help ensure that transformational change positively impacts our communities and supports wider place-based health and care outcomes.*
Wellbeing and security at home	**Reflect on the need for education and communication – consider how you do this for yourself, your staff and your service users. Put service users at the centre of managing their own care and wellbeing.** *Why: the analogue to digital transfer poses a risk to phone-based security alarms. Communication will be key to addressing this. Health and care strategy is increasingly focused on empowering individuals to manage their own health and wellbeing through digital technology. Citizens are increasingly looking to do this in the comfort and security of their own home.*
Predictive technology and population health	**Improve your awareness of the potential of the digital premium to help the communities you serve both now and into the future – and put plans in place to reap the benefits.** *Why: 1) Predictive technology has grown more sophisticated in the last two years, and the policy landscape has developed on this issue.* *2) Post-pandemic there is a greater emphasis on understanding population health in macro and micro scales.* *Harnessing the power of digital and data to make evidence-based decisions, including identifying and acting on inequalities in health, care and wellbeing will positively impact population health outcomes.*
Rebalancing the value chain	**Use digital transformation to support local communities to thrive including local suppliers, not just the larger organisation.** *Why: this helps to make use of and develop local skills and employment and brings benefits to communities, service users and all organisations within a care chain.*

3.
The health, housing and social care environment

3.1   The pandemic

The pandemic has undoubtedly accelerated digital transformation, both in terms of the availability of and investment in digital technology and in terms of culture and perspective, as more organisations and service users have experienced transformative opportunities first-hand.

One chief executive of a health charity emphasised this momentum for change: "I think the other thing the pandemic has done is speed up the pace of change." However, well-laid plans from before the pandemic have been disrupted. Now is the time to use what we have learnt through the pandemic to put plans around digital transformation into action: "If you think about the NHS in its glory and the real sort of baptism of fire that it's gone through over the last 18 months or so, and its plans before Covid, [digital transformation] was an easy target to put into a paper, into a plan, but the reality was very, very different."

Clearly, being able to avoid personal contact via digital communication has had some readily identifiable benefits. One non-executive director of an NHS trust commented: *"There are lots of digital technologies that have enabled not just social distancing and reducing spread of infections, but in terms of sterilisation and disinfection of particular clinical areas."*

Another comment highlighted how the monitoring of health and increased access to wider support mechanisms has already been improved digitally: *"It's been invaluable in terms of monitoring of patients and ensuring that patients within community settings and patients in hospital are able to access not just family but able to access other support mechanisms."*

3.2   Changes in the policy environment

This is a fast-moving environment. Even since the launch of *Unleashing the Digital Premium* two years ago there have been significant changes which we set out below.

The role of procurement in addressing economic inequality, increasing social value, environmental sustainability.

Guidance from August 2021 states that NHS organisations will be required to take social value into account when procuring goods and services from April 2022.[1] It will mean factors such as local employment and decarbonisation will need to be considered when procuring anything, from consumables to entire services.

This is not a new policy from the government. It perhaps shows that the policy has been applied to health and care slightly later than other parts of the public sector. It is an extension of the guidance from September 2020 that all businesses seeking government work would be assessed against in terms of measure and impact set out in Diagram 2:

Diagram 2[2]

Measure	Impact
Supporting COVID-19 recovery	• helping local communities manage and recover from the impact of Covid
Tackling economic inequality	• creating new businesses, jobs and skills • increasing supply chain resilience
Fighting climate change	• reducing waste
Driving equal opportunity	• reducing the disability employment gap • tackling workforce inequality
Improving health and wellbeing	• community integration

Economic inequality is also an important theme that has emerged, and is growing in importance. One interviewee said: "If we want to really unleash our digital potential, then we must tackle poverty and all that goes with it."

The policy explicitly states that it aims to "level the playing field," so that "all bidders, irrespective of their size and type" can bid, including "the UK's small businesses, start-ups and voluntary and community sector organisations and social enterprises."

Inspiration for the government focusing on social value in procurement may have come from public sector pioneers such as Preston Council. They used their role as a big local employer and as an anchor institution[3] to generate economic benefit locally. 'Insourcing' made it easier for local companies to bid, in contrast to the common practice of outsourcing to national or multinational suppliers. The 'Preston Model'[4] achieved this, for example, by dividing multi-million-pound contracts for school catering into smaller ones. A local dairy could provide milk, another local farmer could provide fresh vegetables, keeping money in the area that would otherwise be lost to national and multinational firms.

The policy allowed the council to allocate funds on a basis other than the lowest price, and this had a positive multiplier effect on local jobs, which in turn reduced demands on council support services and reduced food miles.

How would social value metrics apply to health and social care procurement? Could it replicate the Preston Model? While there are unlikely to be similar local suppliers in electronics for example, due to globalisation, the principle could easily apply to a range of suppliers, including:

• support services that recruit locally and train apprentices
• local software developers and designers
• voluntary sector organisations that seek to offer opportunities especially for differently-abled people or ex-offenders
• food suppliers
• social enterprises that direct excess funds to the community rather than shareholders
• worker-owned businesses, which are shown to have higher wages and wellbeing
• Living Wage employment (recognising the cost-of-living challenges, notably due to the acute shortage of housing nationally, especially in the South East of the UK).

Is demonstrating social value a burden on public sector organisations? This is addressed in the policy where it is suggested that the framework, updated every few years, would most likely only involve a "relatively low administrative cost" to be borne through self-assessment by the supplier, with NHSE carrying out spot-checks.[5]

Payment mechanisms can play a role in this transformation. In a recent GGI article, respected health and social policy economist and GGI Faculty member Jacque Mallender argued that targeted use of provider payment mechanisms can help to deliver improved population health and integrated care[6]. Mallender recommends that integrated care system providers:

- develop a shared system-wide plan to guide 'strategic purchasing' across the system
- make sure the plan is backed up by realistic and achievable quality and financial targets set for providers and groups of providers.

3.3   Place-based knowledge, integrated care

As well as positive economic benefits, local knowledge is another major strength of procuring through, and partnering with, local organisations. One editorial board participant said that small, local organisations had unrecognised potential: *"Just understanding that the communities at that place level are full of amazing organisations that are so well connected, and could, with the right conversations and funding, pick up some of this work."*

A further comment was made on place-based organisations: *"There is such a role for those place-based organisations that will really understand, but which also have the connections beyond [larger organisations]."*

This potential is there in every local place and set of communities.

3.4   An ageing population

Insurer Aviva's *Thriving in the Age of Ambiguity*[7] report looked at the implications of changes in life expectancy and its pace. These can be quite profound and have an impact on people at work and at home. This leads to "the blurring between workplace and retirement", according to one non-executive director of an NHS trust. The social and economic consequences represent a significant dynamic where digital has a big part to play.

Diagram 3 - **Case study: digital technology providing social support**

The NHS in Staffordshire is investing in readily available technologies for people who may be at home by themselves for longer periods of time - those who are frail, suffer with poor mental health, or have physical long-term health problems.

This digital inclusion project provides people with a device for their homes, both to remind them to take core medications, but also to provide the benefit of companionship – through access to the radio and up-to-date news and weather.

Ron Daley, project manager for the Digital Inclusion Project, said: "The journey we have taken introducing digital technology into people's everyday lives has brought results much wider than the project ever envisaged. The benefit of these digital assistants in supporting people's health and wellbeing across all age groups, as well as reducing the impact on health and social care services, has been great to see."

And this pilot project could help tens of thousands of people combat loneliness. The Government Statistical Service (GSS) highlighted that 6% of respondents (approximately 3 million people in England) said they feel lonely often or always. A composite loneliness score was produced combining three indirect loneliness measures. A high score indicating loneliness was reported for 9% of respondents, approximately 4 million people in England.[8]

3.5   The public sector's response to climate change

Greening of procurement is another new regulatory change that healthcare policy-makers and providers must consider. NHSE/I is developing a framework through which up to 100,000 suppliers must demonstrate their progress towards carbon neutrality if they wish to keep selling goods and services to the health service. This includes explaining their digital approach.[9]

Following COP26 held in Glasgow in October-November 2021, the momentum towards net-zero emissions is arguably gaining momentum in thinking and doing. The term "net-zero emissions" is understood to cover all anthropogenic greenhouse gas (GHG) emissions.[10] In the 2018 IPCC Special Report, modelled pathways that limit global warming to 1.5°C with no or limited overshoot see global net anthropogenic CO_2 emissions decline by about 45% from 2010 levels by 2030 (40–60% interquartile range) and reach net-zero CO_2 emissions by around 2050.[11] Diagram 4 shows the dramatic scale of reduction needed in the next 30 years to limit global warming and the accompanying impacts on climate and life.

Global total net CO₂ emissions

Billion tonnes of CO₂/yr

In pathways limiting global warming to 1.5°C with **no or limited overshoot** as well as in pathways with a **higher overshoot**, CO₂ emissions are reduced to net zero globally around 2050.

Four illustrative model pathways
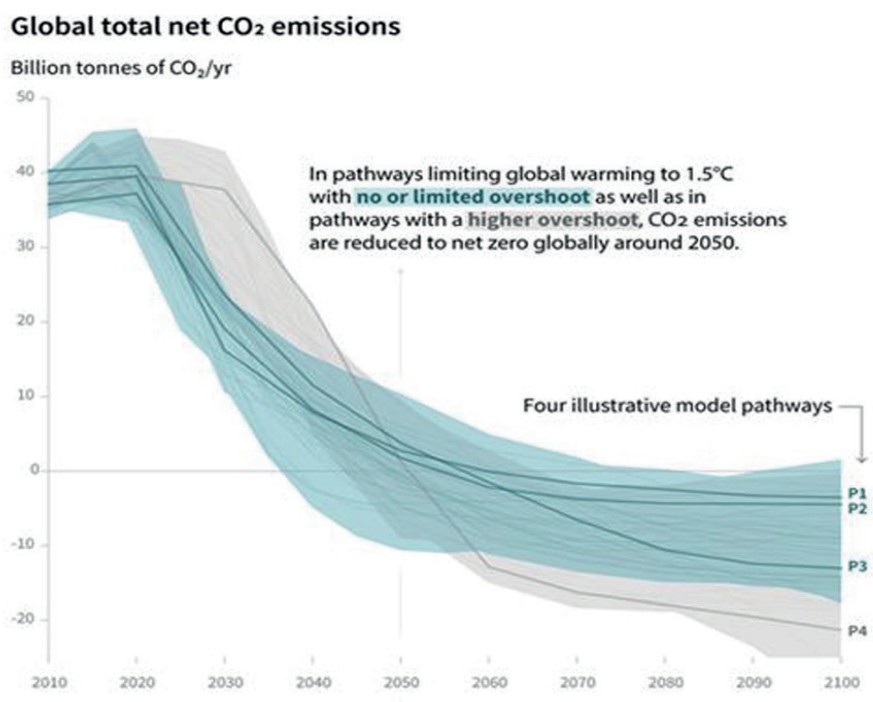
Diagram 4 - **Global emission pathways to limit global warming to 1.5C**[12]

Healthcare's carbon footprint can be partly reduced through a mixture of:

- national and regional structural policies (e.g., decarbonising energy supplies)
- regulations (e.g., building efficiency standards)
- innovation-led approaches (e.g., electrified transport networks) - which might only indirectly involve the health sector
- optimising the allocation of resources within the health system.[13]

Healthcare equipment manufacturers can play their part, through material efficiency in production. Healthcare providers can use products more intensively and reduce overall demand for product services.[14]

To support the net-zero ambition in health and care, each trust and integrated care system are now required to publish and implement a green plan that sets out their aims, objectives and delivery plans for carbon reduction.[15] The three-year plan is launching in February 2022.

Diagram 5 - **NHS Green Plan – Main areas for action**

▶ workforce and system leadership
▶ sustainable models of care, digital transformation
▶ travel and transport (the UK recently announced that its planned ban on the sale of new petrol and diesel cars and vans would be brought forward to 2030[16])
▶ estates and facilities
▶ medicines
▶ supply chain and procurement
▶ food and nutrition
▶ adaptation.

NHS Green Plans

One study of Indian manufacturers framed a distinction between 'technology push' and 'demand pull' when considering sustainable development.[17] Technological breakthroughs will be necessary for net zero in healthcare. However, the way we use what we already have matters a great deal. Technological optimism will not deliver our climate commitments, argued a leading academic at the University of Manchester, who says that rather than relying on technology, we need to look to the solutions that are ready now.[18] *The Economist* is more bullish, citing the speed at which COVID-19 vaccines have been produced, prominent breakthroughs, a tech investment boom and the adoption of digital technologies during the pandemic. These are "combining to raise hopes of a new era of progress."[19]

Turning to demand, in the UK we have certainly seen a shift in consumer attitudes demanding more sustainable products including digital approaches, which the WWF has dubbed an 'eco-awakening.'[20]

One third of UK consumers want to shop 'responsibly', according to recent consumer research.[21] It is more questionable whether patients receiving healthcare are sensitive to this issue, as they naturally have their immediate care on their minds and are not placed to decide between care providers based on their eco-credentials, especially less visible ones such as digital products, as they might with toothpaste. With budgetary constraints at the forefront of healthcare procurement professionals' minds, the new government guidelines provide a policy push in the absence of a demand pull. The aforementioned Indian study states that HR and managerial professionals have a significant role to play, by making strategies and policies clear and easy to understand so that they are implemented successfully. Suppliers of these technologies are very environmentally aware and are doing everything they can to reduce waste and help the environment with clear target on environmental and CSR targets.

3.6   Mental health policy

Since our last paper in 2020, policy has developed in a number of ways. Arguably the most important are the proposals to reform the Mental Health Act.[22] The government hosted a public consultation from in early April 2021 on a set of proposals to reform the Act. As part of the legislative reforms it highlights four new guiding principles that people working to provide care will need to consider while carrying out their duties. They are set in Diagram 6.

Diagram 6[23]

Principle	To deliver, make sure:
Choice and autonomy	People's views and choices are respected
Least restriction	The Act's powers are used in the least restrictive way
Therapeutic benefit	Patients are supported to get better, so they can be discharged from the act as quickly as possible
The person as an individual	Patients are viewed and treated as rounded individuals

Alongside the White Paper the government has produced an impact assessment in which they have estimated likely costs and benefits of implementing the proposed changes to the Act.[24]

In May 2021 the House of Commons Library produced a briefing on mental health policy in England[25], outlining the recent history of the NHS pandemic response relating to mental health. This focused on managing limited capacity. In its first phase, in March 2020, NHS England & NHS Improvement issued guidance on managing capacity and demand within inpatient and community mental health, learning disabilities and autism services for all ages[26] - including how digital products could support this. The guidance also set out ways to maximise capacity in mental health services, such as redeploying staff to work in more critical areas and reducing non-essential activity. A second phase followed shortly afterwards.[27]

This House of Commons briefing note highlights various studies which examine the impact of the pandemic on mental health: the House of Lords Library briefing *Coronavirus: The impact on mental health*[28]; the Parliamentary Office of Science and Technology (POST) analysis of *Mental health and well-being during the Covid-19 outbreak*;[29] and a NHS Confederation report which frames a 'rising tide' for mental health needs in the pandemic.[30] It considers what mental health services need to prepare for the expected surge in demand. It also highlights how the health and care system can 'reset' the way care and support are planned and delivered in the aftermath of COVID-19 with approaches including digital products.

Chapter 2 of the NHS Long Term Plan also sets out action the NHS will take to strengthen its contribution to prevention and health inequalities,[31] and on 22 July 2019 the Government published its Prevention Green Paper.[32]

3.7   Mental health expenditure

The NHS England website provides an overview of mental health service information and data, including national mental health expenditure. It states that the intention of its recent Long Term Plan is to reaffirm the service's commitment to what is sometimes called 'parity of esteem,' or in their words *"putting mental health care on a level footing with physical health services"*.

To support these ambitions the NHS has made a renewed commitment that funds for mental health services will grow faster than the overall NHS budget, creating a new, ring-fenced, local investment fund worth at least £2.3 billion per year by 2023/24. This is intended to represent a meaningful commitment to increase mental health funding, though whether it is enough to meet rising demand will be tested in the months ahead.

3.8   Data and digital

The English government states in a 2021 consultation on the mental health act that it *"is committed to working with all the organisations involved in the operation of the act to bring about improvements to data collection and to new digital approaches to service delivery."* This is *"a critical part of building a modern mental health service that can more efficiently respond to patients' needs."*

The government notes that *"This ambition has been accelerated during the pandemic period in 2020, which has served to highlight the benefits that digital can bring."* [33]

3.9   The NHS has developed and publicises an app to support mental health, NHS Mental Health Help - Mental Health & Wellbeing[34]

In a May 2020 NHSX blog post, *How the NHS is using digital technology to support people's mental health*, the author outlines a five-step process for digital product development.[35] To cascade the use of digital tools in this area, NHSx supports a mental health digital playbook, which acts as a library or repository of resources aiming to *"provide support to clinical teams and organisations that are looking for digital tools that support the delivery of patient pathways."*[36]

Case study: Grand Union/Mind

Grand Union Housing Group has been engaging with hoarders in collaboration with Mind using digital engagement with digital technology. This approach is beginning to realise benefits.

One of the people trialling this service, Helen, said: "I'd been in my last house about 20 years, with my two youngest children. About 10 years ago, I had a new kitchen fitted, but I never managed to put everything back that had come out of there. I left boxes still sitting in the living room.

"Looking back, I realise that it was probably grief that stopped me in my tracks. I'd just lost my mum and trying to get organised at home, even just the housework, felt overwhelming.

"Katy from the Wellbeing Support team called me to assess the situation… it was an incredible feeling to know that someone was there, someone actually cared."

The NHS Confederation report *Rising Tide*[37] recognises significant positive benefits in the way digital services can free up valuable capacity, citing that "digital approaches will assist with restoring services." But it also warns that "staff burnout and social distancing will make this a major challenge." The pandemic has made this even more acute, according to those interviewed for this report.

In spite of progress the report identifies four mains issues which still need to be addressed in relation to digital support in mental health, including:

*   **a balance between online and in-person care is needed:** "Reductions in bureaucracy, leaner ways of working and the use of digital solutions helped to transform service delivery. However, the right balance will need to be found between online services and those delivered in person, as feedback from service users tells us that digital solutions are not always appropriate or easily accessible."[38]
*   **internet access is incomplete:** "Digital approaches will continue to form part of care pathways for patients. But feedback from service users tells us that digital solutions are not always appropriate or easily accessible. Around 4.8 million people in the UK have never used the internet and providers are looking into repurposing equipment for service users who do not have the technology to access digital services."
*   **the physical infrastructure is lacking:** a non-executive director of an NHS trust said: "One of the issues within the acute sector is the state of the buildings, which does not enable connectivity, and immediately causes a level of disadvantage to patients who are actually within an acute setting."

- **funds to meet additional costs are hard to secure:** "There are also additional costs for providers relating to implementation and sustaining digital solutions that have not been factored into existing national financial allocations."[39]

4.8 million
people in the UK
have never used the internet

This suggests a more personalised approach is needed. As one interviewee, a chief executive of a health charity, explained internet access can be either stress-inducing or stress-reducing depending on the person:

"It's not a one-size-fits-all picture. So, if you think about somebody with a mental illness who's got a general anxiety disorder and they use the internet a lot and they are on their constantly checking their social media or looking for information about the pandemic, what you might actually get as an outcome there is somebody that ends up feeling far more anxious and distressed than they would if they'd never gone onto the internet.

"Equally, if that person had gone onto the internet and used it to connect, through social media, with family and friends to stay in touch and reduce their feelings of social isolation, the outcome for them would be completely different. So, as I say, it's a very sort of subtle picture."

The report's recommendations are summarised in Diagram 7.

Diagram 7[40]

Principle	To deliver, make sure:
Share access to digital platforms	NHS trusts must look at practical ways they can better support and integrate third sector partners, such as supporting access to NHS Charities funding and sharing access to digital platforms
Improve funding	Additional, long-term funding is required to support the increased use of digital approaches
Listen to service users	The experience and views of service users must be taken on board when looking at what innovations are maintained post-pandemic

3.10 Partnership working in mental health

The NHS increasingly signposts patients and support workers to additional support outside its services. Its website includes guidance on how to get help from a mental health charity, including searching through a platform called the Hub of Hope.[41]

This is complemented by a greater emphasis on prevention through use of data in those partnerships. For example, primary care networks are being both encouraged and required to use population segmentation, risk stratification tools and local clinical intelligence to identify older people with moderate frailty and/or multimorbidity at risk of adverse outcomes. The importance of this work is that it is connected directly to offering clients proactive and holistic support through community multi-disciplinary teams as part of an anticipatorycare service offer.

Local partnership models like this are becoming more evident and visible not just in the English NHS but across the UK where different partnership models are also encouraging greater collaboration to achieve specific outcomes for local communities.

3.11 Digital to analogue transfer -the 'analogue switch-off'

Technology enabled care services (TECs) have been in operation across the UK for over 40 years. The technology used to facilitate such services, whether in grouped living environments or within single dwellings, has largely relied upon analogue voice calls over the public switched telephone network (PSTN). The PSTN has over this time provided a reliable, low cost, easy to access and largely issue free medium for communications between the service user and the alarm receiving centre (ARC). Due to the age and increasing costs of maintaining these legacy PSTN systems, telecommunications providers are in the process of replacing them with a digital packet switched (IP data) network into the home.

The UK's old analogue PSTN will be switched off in 2025.[42] By then, every phone line in the UK will be digital, and calls will be routed over IP (internet protocol) rather than the traditional PSTN.[43]

This changeover has important implications for existing analogue TECs technologies. In many cases analogue TEC products will continue to operate but may become less reliable and certainly more complex to install and manage. Service users may require a mobile service into the home with some form of access for analogue devices. Therefore, service commissioners and providers clearly need to consider planning for this change now so the transfer can be smooth, and the benefits realised.

To truly realise the benefits of this revolution it is necessary to install a digital end-to-end solution using TEC alarm systems connected to a digitally enabled monitoring centre – as referenced in the 'unleashing the digital premium' whitepaper. Work has been ongoing for some time to provide an open and publicly available digital communications protocol built upon systems already deployed across Europe. However, there is one important change in the preferred method of communication. Digital units in the home will in the most part communicate using the mobile (GSM) network. The recent improvements in coverage and advances in roaming algorithms mean that there is now near universal mobile service availability. For service users, this means reliable technology availability wherever they are based.

It is not just about calls. The change brings with it the need to review everything currently connected to analogue phone lines such as door entry systems, lifts, TEC and care devices.[44] **This includes care devices.** TEC alarms use a traditional landline connection. Telephone providers can supply mobile technology, which will convert analogue signals to digital, allowing users to continue using alarms as normal. This means that, during the digital telephone switchover, alarms will function exactly as they do now.[45] There are 176 alarm receiving centres in the UK, serving 1.3 million 'dispersed alarm' customers in private homes and 500,000 in care home schemes.[46]

As a result of these types of technological change the preventative power of digital has come into focus. Health, housing, and social care providers are becoming more aware of the data flowing from TEC systems and devices and the potential this connectivity has to predict when someone's health might deteriorate. By using digital intelligence, carefully sourced while considering permissions to collect data, to identify people at risk of an increasing social care or health need, care professionals can put pre-emptive measures in place.

Early interventions give more control to individuals, helping people of all ages to choose the care they want and empowering them to maintain their independence, wellbeing, and dignity at home for longer. A proactive approach also reduces pressure on councils, NHS services, and housing associations, by offering greater flexibility around service delivery and, ultimately, helping to create a more sustainable future for health and care.

It is surprising that some service providers are still not realising these digital benefits or unleashing their own digital premium. There is less than four years to go until the UK replaces its traditional public switched telephone network with a purely internet-based network.

Unusually for large infrastructure projects, delivery is ahead of schedule and the analogue switch-off may take place as soon as 2023. The end of copper network-based services in the 77 new locations – which include towns and cities across the four nations of the UK – is due for completion by 29 April 2022.[47]

As one interviewee commented, the scale has not been appreciated by all actors involved: *"It's thousands, if not millions, of people that are going to be affected by this. I've got a feeling that hasn't been noticed collectively very high up yet"*.

Diagram 8 - **Digital-analogue switchover: implications for TEC's**

Through devices called 'dispersed alarms', the TEC's industry allows elderly and vulnerable people to immediately contact someone for help in case of an emergency. The TEC's devices are bought directly from suppliers - either by the customer or by the adult social care department of a local authority - and installed in the home. They connect directly to the phone socket and the customer's phone is plugged into the device.

A pendant, usually worn around the customer's neck or wrist, communicates with the device using radio frequency (RF) signals. This means that in an emergency, the customer can simply press the button on their pendant and the device automatically connects them to an alarm receiving centre. Once connected, they can speak to the operator, who'll then alert either a carer or the emergency services, depending on the situation.

These 'dispersed alarms' are also used by over 500,000 care home residents, in what are called schemes. In these cases, each individual device in a facility is routed through a central communications room, which will in turn connect them to an alarm receiving centre. These devices are invaluable to care home residents, especially during night-time, when there are fewer members of staff available. Because the TEC industry provides such a vital service, it's crucial that the migration to digital phone lines is managed effectively, and all stakeholders understand the challenges involved.

Source: Openreach factsheet[48]

3.12 Concerns and issues

It is perhaps not surprising that change on the scale envisaged has raised a number of concerns among providers of infrastructure as well as providers of services, for example, Openreach highlights the concerns summarised in Diagram 9.

Diagram 9 - **Potential issues with moving to digital phone lines**

1	The new router will require a battery backup
2	Communications providers may not be aware that the customer has a TEC product that is dependent on a traditional phone line
3	Some TEC's devices are 20 years old and will need to be upgraded to digital comparative devices
4	The provision of an analogue telephone adaptor (ATA) port on the router will be up to individual care providers
5	Traditional phone line customers will need to migrate to a digital phone line and will need to use a router and voice over IP technology

The big danger in the crossover is that devices that rely on analogue phone connections to work – such as care and security systems – may cease to function without anyone noticing.[49]

There are many edge-case systems that rely on the telephone network, widely considered to be more reliable than the grid, to operate. Alarm pendants and buttons for elderly residents' assistance, emergency phones in lifts, the phones at railway crossings, building intercoms, traffic lights and motorway signals are just a few such systems that risk being forgotten about or overlooked.

"If they miss the deadline, it'll be because they can't leave anyone behind".[50]

This places increased importance on effective governance.

3.13 Effective governance in the use of digital technologies – a policy perspective

Digital transformation continues to be an area of policy focus for public services, including the NHS. The implications for governance at the interface between public and private sectors and between government and individual organisations are enormous. These bring a new set of governance challenges which are beginning to become apparent and should be addressed.

This is particularly prevalent in the transformative opportunities offered through the deployment of predictive technologies such as artificial intelligence (AI). The UK government released its National AI Strategy in September 2021 recognising its power to "increase resilience, productivity, growth and innovation across the private and public sectors".

The NHS AI Lab is developing a national strategy focused on the development and use of AI-driven technologies in the provision of health and social care. The strategy focuses on a number of areas that outline the benefits of using AI technologies in health and care settings, including:

- the use of smartphones to monitor long-term conditions from home, sending results directly to a person's GP
- their use by public health officials to identify patterns across a local area – providing alerts around potential public health emergencies
- their use by local authorities to understand current and future care needs in their area.

NHS Digital has formed a partnership with Amazon Alexa to use its voice-assisted technology to provide health information from the NHS website to support those with lower levels of computer literacy and physical mobility issues that impact on their ability to use websites.

Ongo housing association is using automated chatbots to answer tenants' queries. Through analysing its inbound call and live chat data, Ongo found that the majority of queries related to a small number of straightforward topics, such as making rent payments. It has developed an AI chatbot in partnership with its digital tenant's groups that allows customers to interact naturally with the system and is operational 24 hours a day. More than 85% of customer enquiries via the chatbot are now being answered without the need for human intervention. *"By harnessing the power of AI, we're offering our customers a more inclusive, accessible and consistent online experience than ever before – ensuring that no one feels left behind by the channel shift."*

NHS England and NHS Improvement have developed and deployed a COVID-19 Early Warning System (EWS). The technology works by learning from the data collected from previous Covid outbreaks such as bed use and 111 call volumes to model what might happen in the future. Local hospitals have been given access to the forecasting tool to help plan capacity for both COVID-19 patients and routine care operations as it provides up to three weeks of advance knowledge of how patient care might change based on variances in infection rates. The data store that sits behind the forecasting tool has also enabled ground-breaking research such as that undertaken by the University of Oxford, who have looked at risk factors associated with COVID-19 deaths.

Although the potential benefits for using AI technologies are great, it is important that strong governance is in place to manage risks and uphold democratic values, human rights and privacy.

One such risk is the reinforcement of bias into both the design and building of AI systems and in technology more generally. If the data used to train an algorithm contains societal biases against certain races, genders, or other demographic groups, then the resulting algorithm will too. Addressing rather than reinforcing inequalities is important. Organisations should clearly outline their approach to addressing risk relating to bias and discrimination from procurement or collection of training data, through to regularly testing and auditing systems and decision outcomes.

Equality impact assessments, used widely in the public sector, could offer an approach for this. As one interviewee and an associate at the Good Governance Institute said: *"I think the data is very, very important here if we're going to take an intelligent approach and not create a situation of double jeopardy where we're reinforcing inequalities that are there already."* We need to be mindful that *"people who design and code for systems that have digital technology in them are men, and they're white men."* As outlined in a 2019 post from the UK's Information Commissioner, *"[an] organisation's governing body will be responsible for signing off on the chosen approach to manage discrimination risk…while they will be able to leverage expertise from technology leads and other internal or external subject matter experts, to be accountable board members will still need to have a sufficient understanding of the limitations and advantages of the different approaches."*

Gender bias in technology is rapidly entering mainstream awareness. A New Yorker article from 2017 outlined *The Tech Industry's Gender-Discrimination Problem*. Later in 2019 we saw the publication of *Invisible Women* by Caroline Criado Perez. In November 2021, Sajid Javid, the Secretary of Health and Social Care for the UK, announced a review into medical devices following concerns, brought to the fore during the pandemic, that they may not work as effectively or, may work differently for people of colour: 'It is easy to look at a machine and assume that everyone's getting the same experience. But technologies are created and developed by people, and so bias, however inadvertent, can be an issue here too. So, questions like who is writing the code, how a product is tested and who is sitting round the boardroom table are critical – especially when it comes to our health." The review will also focus on gender bias looking at for example, how MRI scanners can be made more accessible to pregnant or breastfeeding women.

To give a tantalising insight into what is as-yet the untapped wisdom of a female view on designing policy, see an example involving ploughing streets for snow: *Why Sweden Clears Snow-Covered Walkways Before Roads*. Others have argued that gender equality should be at the heart of all policy.

Ultimately, if we are to avoid discrimination, we need to scrutinise for biases at the stage where technology developers and service providers are designing data collection. Naivety - believe technology is somehow neutral, that data itself is somehow objective and free from interpretation is not a sufficient excuse. As one interviewee from an insurer commented when thinking about data use and collection: *"You almost need to strip it bare and see what it is that I can't see in this data that is in front of me, and if I were to use this or train my AI or algorithm on this, who might I be impacting in a negative way?"*

The best results for AI, at least for the current time, may be based upon a human-computer partnership, where a computer is supervised and corrected. A common example can be seen in the world of chess, where - long after Deep Mind became the first computer to beat a grandmaster - teams of coders set machines against each other. A human-computer partnership outperforms them. So, one could say that AI is a tool to be held, not a vehicle left on autopilot; there are ethical and moral consequences of taking one's eyes off the controls. The same will be true for predictive health.

NHSX, the unit comprising teams from the Department of Health and Social Care and NHS England and NHS Improvement to drive the digital transformation of care, has released a report for the health and social care sector, *NHSX Artificial Intelligence: how to get it right*. The report outlines the importance of good governance in ensuring that ethics and regulation work together to support the safe use of digital technologies: "Regulation tells us what 'can' and 'cannot' be done whilst ethical frameworks[51] tell us what 'should' or 'shouldn't' be done".

From a regulatory perspective, the UK Information Commissioner's Office (ICO) has released guidance on AI and data protection, which outlines an approach to AI governance and risk management. Accountability is a key principle under data protection law requiring organisations to take responsibility for compliance and being able to demonstrate that compliance with data protection law. Aligning internal structures, roles and responsibilities, training requirements, policies and incentives to an organisation's overall AI governance and risk management strategy plays an important role in achieving this. The ICO's accountability framework has been developed in supporting organisations in meeting these requirements.

The UK government has recently updated its Data Ethics Framework to encourage responsible innovation and act as a practical tool to support the public sector at the planning, implementation and evaluation stages of deploying new technologies that rely on the use of data. It focuses on three key principles also found in data protection - transparency, accountability and fairness - and guides organisations through specific questions, allowing them to score, assess and take action to support the ethical design and use of data.

The evidence standards framework for digital health technologies developed by NICE has also recently been updated and supports organisations such as technology developers and research funders, and evaluators such as commissioners, in evaluating the user and system benefits of deploying digital technology. The evidence available on the benefits of digital technologies, as opposed to drugs and medical devices, is generally lower due to how quickly technology is developed, the challenges faced by smaller technology companies in accessing clinical trial expertise and research funding and the requirement for additional expertise around matters such as data security and privacy. These challenges have created barriers to digital health technologies being commissioned, and inconsistencies across the UK in how commissioning decisions are made. This framework seeks to redress that balance by supporting organisations to identify a set of evidence standards that show the value of digital technologies in the UK health and social care system.

3.14 Governance in action

The most important conclusion here is the importance of good governance. As with all good governance, boards and organisational leaders will play a critical role in the success of digital transformation programmes.

The Good Governance Institute has identified three key things boards can do to ensure they are well placed to deliver digital transformation:

1.   **Ensure that all board members understand the issues:** digital transformation should not be delegated to one individual on the board. It needs to be an issue on which the whole board is engaged and accountable for.

2.   **Lead by example:** board members should, wherever possible, utilise and promote the use of relevant technologies.

3.   **Put in place a culture that supports digital adoption:** Sonia Patel, the National Chief Information Officer in England, has argued that "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 technology and data services." Boards need to be thinking about how they develop a culture that supports and promotes the use of digital solutions across roles and grades.

4.
Effective use of digital technologies

This section turns attention to what will help to ensure that the future use of technology is ethical, effective and accountable. It explores some of the most important tensions and pitfalls that leaders need to keep in mind and address. It ends with a helpful checklist for boards.

4.1   Remembering the human aspects of digital

For many members of the public digital can still be a challenge. They can see the benefits but have difficulties with what it really involves them to do. Adopting a sound change psychology and a personalised approach are important here.

One deputy medical director of an NHS trust we interviewed asked patients about the perceived value of physical equipment: *"We set up some telehealth-supported living. We put in a load of what we call peripherals, which included a device with an app on it and a blood pressure monitor, and we got two bits of feedback. One is that they found all the physical equipment really quite invasive, but they liked the feeling that somebody was looking after them."* A further challenge was about user experience for a significant minority: *"probably 15-20% of our clients really struggled with inputting data."*

A chief executive of a health charity highlights the emotional factor to overcome: *"You have to give people what they want from using digital, in order to get them through that first hurdle; get them through the fear factor."* Like an effective teacher-student relationship, trust and respect is the foundation of learning: *"You have to get people through that phase and develop a relationship in order to get them to then go on that journey."*

Personalising the approach is essential to sell the change, so that people see the benefits for themselves and can imagine a new technology's positive impact on their lives. A chief executive from a housing group stressed the importance of: *"An individual tailored approach to whoever it is you're dealing with and working with to try and get them to see what is in it for them. That is the stuff that will get them to engage. It will require patience, it will probably be expensive, but it will pay dividends in the long run."*

Personalisation also needs to reflect the reality of people's capabilities and capacities. One interviewee, the chief executive of a charity supporting people with learning disabilities and mental health, commented: *"We're very used to using lots of techs, simple technologies, whether it's enuresis alarms, epileptic, etc., etc. We've moved away from buildings designed with a lot of technology in them because the technology was too general and it wouldn't work for certain people because of their learning disability or their physical disability, whatever it was."*

4.2   Preparing people for technology

Buying a new gadget, cutting edge though it may be, will not solve problems unless the users receive effective support to use them. All technology has a learning curve, and this must be appreciated and built into implementation. Sometimes users may feel apprehension as a result of their own perceived lack of knowledge and understanding - even when the technology is relatively easy to use. A head of a TEC's program we interviewed said: *"Increasing awareness of the potential of ease of use of modern-day technology by consumers is key."*

Issues with ownership and understanding are natural if technology is simply parachuted in without after-care. As one interviewee, the chief executive of a charity supporting people with learning disabilities and mental health, commented: *"During Covid, you understood very quickly how cut off a lot of people were and, of course, everybody rushed out and purchased loads of tablets or gadgets, whatever. But so many people needed support to use these gadgets. It is important to think about the person. So, start with the person. Build it around them and the value, in a sense, will follow."*

Co-design is a powerful way of empowering users. The chief executive of a health charity told us: *"If you internally feel 'you're in control of your life, then your health and wellbeing outcomes will be much better, because it builds your autonomy and that builds your health and wellbeing. So, if we involve people in designing how they use the internet, how they use other technologies within their living environment, whatever you put in there, if they're involved, the outcomes will be better. If people feel that those things are being done to them, you can guarantee the outcomes will be less than the value of the kit or whatever else you put in that you try, with the best will in the world, to improve their existence."*

Co-learning is another way of improving the chances of successful change. This involves treating users as sources of knowledge. One interviewee posed this question: *"Is there anything we can learn from our citizens to guide them through this transition, and indeed ourselves?"* This can apply equally between all aspects of digital: *"in the hardware citizens interact with, data collection, and indeed the way it is used effectively."*

4.3   Digital leadership of system and place

The fundamental changes in the structure of the care system underway in England bring both opportunities and challenges. National guidance on integrated care systems design was published in June 2021[52]. In a response article[53], GGI executive director Mark Butler asked some challenging questions about implementation with regard to systems, skills and people:

- Can local leaders make the break from centralised accountability? Is there real rigour around what this means in practice?
- Will compassionate leadership - defined broadly as acting with integrity and through collaboration - deliver on the hard-edged challenges of capacity and transformation?

Integrated care boards and integrated care partnerships will play an important leadership role in setting the strategic vision, including defining outcomes and values, for digital transformation across the communities they serve. Equally important will be the active collaboration with and involvement of partners at place in setting the strategic agenda and delivering change on the ground.

One interviewee, the chief executive of a housing group, commented: *"In terms of realising the benefits of telehealth, the NHS in general, and I think particularly trusts, need to collaborate and to learn what works well, where, when and why, and how."*

A non-executive director of an NHS trust described this as being about *"collaboration and really working right across the board with both commercial as well as community and third sector organisations."*

One interviewee, the head of a TEC service, suggested we need to think about places beyond housing. *"It's beyond the home. 'It's within the community because the community supports individuals within communities."* Digital has a role to play: *"And... technology supports communities to do so."*

Smaller technology providers can also play an important role in delivering holistic, bespoke and community-based services, but they may need support as part of partnership arrangements to access the data needed to develop their services. As the managing director of a technology-enabled care company pointed out: *"We've got some fantastic small tech providers there that are really struggling to engage with the big boys and get their products monitored through the big platforms. And if 'we're going to be able to engage and make a real difference to population health, we're going to have to be able to adapt and be bespoke and holistic."*

4.4   Strategic partnerships

Central to new ways of delivery are strategic partnerships. This may mean a significant change in mindset by leaders on all sides, a new cultural agreement between partners and greater clarity of shared strategic intent.

The chair of an NHS trust we interviewed commented: "At ICS level, and arguably more so at the place-based partnership level, you need a bit of a strategic approach that delivers the digital solution for the population you're serving rather than it being brought at scale up there."

As the Good Governance Institute outlines in its article on the ICS Design Framework[54], this will require a significant culture shift in how partnership organisations operate, moving from competition to collaboration, ensuring agility and pace in decision-making, partnership working at place level and, importantly, delivering transformation.

A further benefit for developing an ICS digital strategy with shared goals and outcomes under the umbrella of a health and care partnership will be the opportunity to 'level up' the digital maturity of those organisations that sit within it. This can be achieved both through the sharing of systems and technology and data, tailoring digital budgets and resources to organisations that may need more support and in sharing skills, learning and expertise across the system.

The ICS Design Framework outlines that ICS NHS bodies are expected to have a renewed digital and data transformation plan that is embedded within the ICS NHS body plan, that details the roadmap to achieve 'what good looks like', and that enables a cross-system approach to digital transformation. Similar requirements are in place across the UK. Each plan should include clarity on the roll-out of remote monitoring technologies to help citizens manage their care at home.

In governance terms a senior responsible officer (SRO) will be expected to be appointed and/or identified in every ICS with the specific purpose of overseeing governance and accountability for its digital strategy.

Boards are not short of further guidance and support about what good looks like. Each system and board needs to establish its own reference points but national guidance, including the What Good Looks Like framework for the NHS in England, provides a good starting point stressing financial, engagement and outcomes as well as review as among the fundamentals.

Diagram 10 - **NHSX's What Good Looks Like framework**

The *What Good Looks Like framework* developed[55] by NHSX provides guidance to health and care leaders on how to deliver digital transformation in an integrated and collaborative way to improve citizen outcomes, experience and safety.

It contains the following key messages that will have an impact on how the ICS delivers digital leadership through working closely with partners, organisations and groups at both system and place-based levels.

- The ICS should play a leadership role in setting a digital and data strategy for the system.
- Digital expertise and accountability need to be built into the ICBs leadership and governance arrangements.
- The strategy should be underpinned by a sustainable financial plan that all partners have bought into.
- The strategy should be built on wide input from clinical representatives across the ICS.
- Outcomes for delivering digital and data solutions for improving health and care should be identified through regular engagement with partners and citizen and frontline groups.
- Good governance should be in place to regularly review and align all organisations' digital and data strategies, the ICS cyber security plan, programmes, procurements, services, delivery capability and associated risks.

4.5   Rebalancing the value chain

Perceptions about the added value of digital are not always as clear cut and cannot be assumed. For example, at a practical level will a care home prioritise investing in anti-fall devices if the perceived 'value' of installing this device is only realised by an NHS organisation through the prevention of hospital admissions? One interviewee, the managing director of a care organisation, commented: *"I think there's a real challenge about who pays for health outcomes."*

These types of differences in perception and ownership of outcomes need to be resolved early in systems. Setting a digital strategy and defining a shared set of values and benefits, both across the system and at place level, is an essential first step. This should be clear about what digital transformation and investment will look like and should help accelerate collective action between elements of the system in delivering effective digital transformation, where the benefits for individuals are identified both before and after the changes. This will help provide a foundation for further joint action and investment and reinforce the habit of collaboration.

Realising these benefits requires a change in mindset moving away from organisational autonomy, competition and the separation of commissioners and providers to delivering outcomes through integrated partnership working. In many areas this has been slowly developing in recent years but is now central to future delivery of the digital premium. But moving from joint intent to collective commitment of resources requires more.

One of the interviewees said: *"If you have set an outcomes framework and an evaluation framework, which in a sense develops rewards across the system and enables collective effort, whether that's through a provider alliance or whether it's through a place-based alliance, a local care partnership or whatever, you then have to understand the way you allocate resources needs to be done in a different way. It doesn't need to go and arguably shouldn't go in many cases to an organisation in the old way that it did."*

During one of the Good Governance Institute's The New NHS[56] series of webinars, Mike Bell, chair at Croydon Health Services NHS Trust, outlined how the trust had commissioned work to obtain a joint understanding about financial and operational challenges in the system and commitment by partners to address them together. This was framed in terms of governance and contributions to achieving outcomes for local communities. This meant that for the first time there was a shared view of local challenges and opportunities and a collective vision around responsibilities for addressing health inequalities. The trust and the CCG ensured that risk and control were both shared equally, which changes the focus from historical patterns of short-term financial wrangling to longer-term stewardship of measurable progress for citizens.

As the relationship deepened, the partners began to address structural and governance issues, such as recruiting new executives as joint appointments between the trust and the CCG, effectively blurring the lines between commissioner and provider. The benefits of this partnership groundwork came to the fore during the pandemic. Croydon has 20% of London's care home beds but accounted for just 7% of care home deaths during the first year of the pandemic. The trust sees this as a demonstration of the clear advantages of joined up working between the trust, community services, primary care and the local authority.

There are other examples of how to move to collective working across the UK. Each is different and reflects historical relationships and personal leadership styles.

Case study: Tameside Community Response Service

Tameside's Community Response Service is the first of its kind. At its heart is the way its technology is integrated into all its practices.

TCRS has been formed from Community Response Wardens, a clinical team based in the Digital Health Centre at Tameside and Glossop Hospital and Community Pharmacists. They all work together to offer service users the independence to stay within their own homes, with control over their own wellbeing and lifestyle, whilst also giving piece of mind for family and friends. The aim is to improve services and reduce unnecessary hospital admissions. The digital technology used, including Legrand Care Reach IP Alarm Units, is easily and quickly installed. This reduces any disruptive impacts upon the service user. The package of TEC products can be personalised for each user's needs, adding to the visible benefits of digital technology services.

The service has been designed to work around client needs to give them the right care, from the right provider, in the right location in an efficient and timely manner. The service aim is to empower clients and assist them to live as independently as possible with the assistance of digital technology, healthcare providers and community services within their own home rather than a clinical environment wherever possible.

One of the biggest challenges for the service has been changing the attitudes from well-established traditional methods for caring for clients in the community. New communication methods and digital technologies being introduced into the service and the service user's homes requires a change of mind-set. It demands a move away from traditional methods of care. The sheer scale of organisations involved takes a great deal of coordination, bringing its own set of challenges.

The vision of this scheme is ultimately to reduce admission or visits to hospital when this is either not required or not in the best interests of the client. This also means hospitals can keep beds free and emergency service call outs are then reduced.

In 2018, 2,822 ambulance call outs and 3,230 falls were prevented. 3,369 pill dispenser activations were made. But the greatest success is how all the different services have integrated together to create a cohesive and valuable service for service users, embracing digital technologies that clearly benefits their service users. This provides a foundation for the future and achieved their goal of working in partnership.

4.6 Integrated data for integrated care

The ability to share, link and analyse data across organisations is central to delivering high quality health, care and public services, including population health. The ICS Design Framework requires organisations to develop "a cross-system intelligence function to support operational and strategic conversations, as well as building platforms to enable better clinical decisions". To do this well requires leadership and understanding.

In a recent article[57], the Good Governance Institute explored some of the historic barriers to data sharing, including poor digital infrastructure, uncertainty by staff about when data can be shared outside of direct care teams and a lack of clarity around how data is anonymised. These challenges can be overcome through strong leadership in building understanding and a culture of good data sharing practice, including:

• ensuring professionals are given a clear steer about how and when to share data
• designing digital systems used for the sharing of patient data so that they support professionals to make the right decisions and to develop cultural change through doing
• ensuring that boards develop a clear understanding of the value of data as an asset and its central role in delivering their organisational strategies, including in developing system working and meeting population health outcomes.

As one participant, a chief executive of a health charity, commented: *"Engagement will become easy and seamless and maybe even one day you won't have to go and see 10 different specialists."* This expresses a long-term ambition but is something now within grasp through changes in technology and organisation around health, housing and care.

The draft strategy *Data saves lives: reshaping health and social care with data*[58], released by the Department of Health & Social Care, outlines plans for the creation of secondary legislation that will: "enable the proportionate sharing of data, including, where appropriate, personal information, for purposes of supporting the health and care sector (for example, for invoicing, commissioning, planning, analysis, policy development, audit and risk stratification) without breaching the common law duty of confidentiality."

This clarification will be important as fear of breaching patient confidentiality has led to confusion about how personal data can and should be shared beyond the direct care team, despite data protection law already allowing for this type of personal data-sharing to take place with the right safeguards in place. Building levels of confidence and trust, on which data sharing is built, can be helped by legislation and policy but it also requires strong team development and clarity at system level.

4.7   Predictive technology and population health

Decisions about where to focus energy and effort is important in achieving joint improvement to the health of the population. This may well require a challenge to previous priorities and reallocation of resources to make real impact.

One deputy medical director of an NHS trust talked about the need to focus on quality targeting of the population: *"Targeting people who don't automatically get targeted. I think that's how we should start looking at population health tools."*

A desire to learn from past mistakes was also stressed: *"It's a bit like when they introduced NHS health checks. The people who went to the NHS health checks are all the people over 40 who had excellent diets, went running twice a week and looked after themselves, and all the people we wanted to target and bring in and reduce their cardiovascular risk didn't come in. Maybe we need to use our digital tools to make sure we focus our efforts in the right area."*

One of the interviewees, the head of a TEC service, argued that determinants of health were still being under-appreciated, *"In terms of population health, it's about knowing what the determinants of population health are - if we're going to move into the prevention agenda and technologies. My fear and concern are that it gets focused down into health outcomes very quickly without understanding [...] the key determinants."*

Technologies are fast being integrated into people's lives to predict health outcomes and support with both preventative public health approaches and long-term conditions. One example is a start-up called Healthy Help. Based on smartphone data alone, the company can accurately predict up to 200 different medical conditions and when they will happen, which it claims is almost to the same level of accuracy as an insurance underwriter's predictions. One way it does this is by measuring Strava or Apple Watch heart rate figures. This reflects evidence that variability in heart rates have a predictive impact in terms of cardiovascular risk. But the app can go further than that, through understanding where people live and regularly spend time - looking at exposure to air pollution, air quality and their joint impact on respiratory illnesses.

One challenge which continues to take time and effort is the requirement during the move from analogue to digital to ensure that all digitally enabled devices and systems continue to meet high level safety and quality standards. This is particularly important in light of the increased level of cyber threats facing digitally enabled alarm systems. +

Indeed, research from the TEC Services Association and Local Government Association into the state of data and cyber security identified significant variations in the awareness and planning for data and cyber security[59] amongst TEC service providers. The areas of highest risk were found to be systems and processes for IT and data management, network security, and technology management.

4.8   The right data

One non-executive director of an NHS trust warned against simplistic application of data and extolled the need for critical thinking: *"Just because it's using data, just because it's using digital technologies, doesn't mean that it is true for everybody."*

But there are real benefits to be achieved - one interviewee praised *"a regional approach looking at population health"*, adding *"if we stop one person from going into hospital, actually yes, that supports the health service"*.

Clever though these technological breakthroughs are, we must recognise the limits of prediction and the associated moral and ethical dangers associated with using technology to predict individual health outcomes. A non-executive director of an NHS trust commente*d: "Would I want to know that I'm going to get dementia in the next five or ten years? If I have a 25% risk of getting dementia, what would I do with that information? It's so different for each individual. Is it helpful? Is it helpful because it empowers me to take some steps? Or is it not helpful? I think we're all drawn to [collecting data] because it gives us a level of, I'll have more certainty."*

"Every piece of information is supposed to help you advance your decisions."

4.9   Levelling-up the digital divide

Millions of people in the UK still live in areas without sufficient quality of internet access. The chief executive of a housing group we interviewed told us they work in an area of south Northamptonshire that doesn't yet even have 2G.

The great divide between the haves and have-nots in terms of access to digital technologies and the skills and knowledge to use them will be ever-more impactful as the reliance upon technology to live our daily lives grows. When considering the provision of essential public services such as health, social care and housing, ensuring fair access and outcomes for citizens will be central to any digital and data strategy.

One interviewee reflects: *"We need a joint strategic needs assessment for digital tech across the system. [We] need to understand who is out there, what their needs are and how they can be supported through digital technologies that are understandable and usable for people."*

The Minnesota Department of Education has commissioned a Digital Equity Community Needs Assessment Report[60] that identifies and assesses actions taken since the beginning of the pandemic to address the digital divide, explains digital inclusion gaps, and recommends paths for sustainability in addressing them. The report uses a points-based system to identify the counties with the highest priority needs based on metrics such as access to a computer, household earnings, unemployment and access to education. Its findings inform the funding of a state-wide digital navigator programme to help digitally disenfranchised people set and achieve goals related to digital access. It also supports the case for a learner-centred approach to digital navigation and digital literacy based on an individualised education plan and through one-on-one instruction in digital literacy skills, and by connecting participants to resources available in their community.

Place-based organisations will play a major role in supporting the delivery of equal access and outcomes through the knowledge they hold about the specific needs of their communities. As the Good Governance Institute outlines[61], the notion of place is based on the idea that "public sector services of the future are tailored and can most effectively address inequalities at the most local level". High-level strategic conversations need to adapt to include local level conversations around digital need to avoid the introduction of "place-blind" initiatives. Existing health-related initiatives such as social prescribing could be used as a way of identifying individual digital need for access to health, care and community services, referring people to local educational, voluntary and support services to support them to improve their digital capabilities.

For example, one interviewee cited a piece of work carried out by the St Monica's Trust, funded by the Dunhill Medical Trust.[62] The RE-COV study demonstrated categorically, for example, that people in retirement villages and extra care housing organisations were better protected in the pandemic and had much lower death rates than people of a similar age in the general population. There are many examples of different approaches being taken across England and Wales, including:

- **East London NHS Foundation Trust** took the decision to approach its strategy development differently. It used an arts approach, deploying digital products such as video calls, to engage with colleagues, patients and local communities alike to gain as much insight as possible. This has led to one of its four core strategic goals being to "improve population health so that our communities are healthier and able to get more out of life". The trust has also worked with other local health and social care providers to find the best way to support and improve health in local communities. This has included the development of award-winning facilities in a local A&E to help people when in a heightened state of anxiety - "the Hope Wall project"[63] acknowledges the vital role that environment plays when supporting people in mental distress. Service users were involved in the project from the beginning and were a driving force behind its design and messages.

- **The UK government's Digital Skills Partnership (DSP)**[64] has been set up to bring together public, private and charity sector organisations at regional level to help increase the digital capability of individuals and organisations in England. It supports the whole skills spectrum - from the essential skills that help reduce digital exclusion to the skills workers need in an increasingly digital economy, and through to the advanced skills required for specialist roles.

- **The Cheshire and Warrington Digital Skills Partnership** is linking local and national programmes of support with local need. The focus of this support is the provision of devices for young people and vulnerable adults living in Cheshire and Warrington along with skills development training. Following the COVID-19 pandemic and through the Cheshire and Warrington Local Enterprise Partnership and its Getting Students Online initiative, businesses in Cheshire and Warrington have been asked to help get as many students as possible online quickly, so they can work remotely when they are away from school. The campaign has provided 390 devices, including access to data, to schools across Cheshire and Warrington.

- **One Digital** is a programme involving Age UK and four partners, Digital Unite, SCVO, Clarion Futures and Citizens Online, to support older people in areas of high digital exclusion to get online or develop basic digital skills. Delivered through a network of local Age UKs, the programme has recruited, trained and supported 670 digital champions who provide a number of services from 1:1 support in people's homes and IT drop-in sessions through to larger scale community events. The programme reached 18,638 older people to promote the benefits of digital technology and supported 3,997 older people to learn new digital skills. The positive impact of the programme saw wider benefits than simply improving digital literacy, including the social benefits of enabling participants to digitally connect with one another and their family and friends. One of the participants reflected: *"It's perhaps become more important for us all to be on this sort of technology now, to have learnt something. Really, it's an absolute godsend now that we're all isolated, most of us are widowed people or on our own, and to be able to communicate with one another on WhatsApp and things like that is absolutely wonderful."*[65] 67% of people over the age of 65 use the internet daily now.[66]

- **Technology Enabled Care Cymru** published a report in August 2021[67] outlining the current position of TEC in Wales. Two thirds of providers surveyed are planning to change their TEC service offering. The 2025 deadline for the transition to digital TEC due to the telecom analogue switch-off is something all councils surveyed were aware of. However, only three councils stated that they currently use digital alarms as part of their operational service, only 19% have a plan to migrate their services to digital, and 67% are worried about the digital transition. Providers highlighted a range of challenges to implementing change to their TEC services, which include the need for evidence of the benefits, lack of digital skills and resource, market immaturity, and the need for a national strategy. Work still needs to be done to take both providers and services users on this digital journey.

4.10 Digital skills and inclusion

The current statistics on digital skills in the UK are sobering. In 2018, 8% of people in the UK (4.3 million people) were estimated to have zero basic digital skills. A further 12% (6.4 million adults) were estimated to only have limited abilities online.[68] The Centre for Economics and Business Research (CEBR) estimated that 7.9 million people will still lack digital skills in 2025. However, 1.5 million people came online for the first time during the pandemic.[69]

The disparity between individuals with basic digital skills varies considerably across the regions of the UK. For example, Wales has the lowest level with 66% of the population holding basic digital skills, while the southeast of England has the highest rate at 86%[70]. However, disparities also exist at a micro community level. Place-based organisations can play a key role in identifying these disparities and finding solutions to how they can be best addressed.

To illustrate this, North Hertfordshire contains a higher percentage of individuals with basic digital skills at a high level but digging below the overall statistics shows a different picture. There are different levels and skills at a community level.

Diagram 11
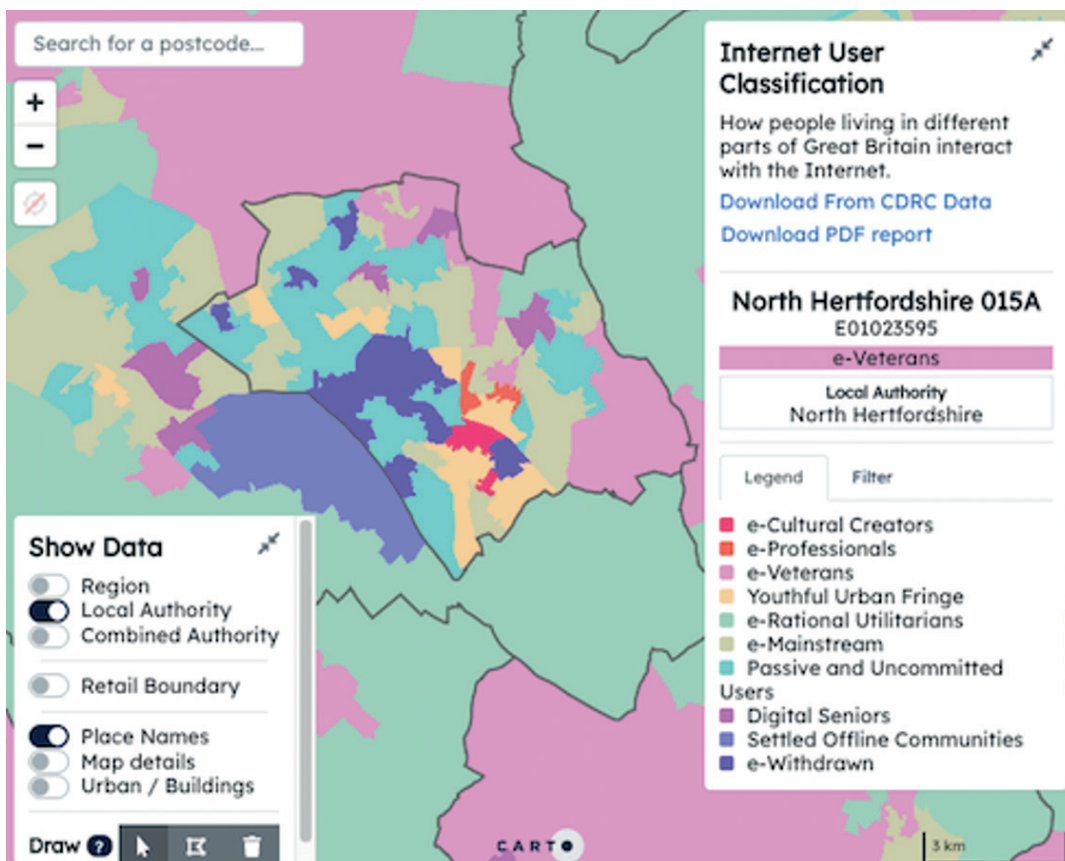
This type of intelligence can inform targeted practical action. Lambeth Digi-buddies[71] pairs local volunteers with people seeking help with IT skills to help people overcome individual barriers to accessing digital services. Practical solutions can be found to common problems, including people not having the facilities to get online or connect to the internet through to addressing lack of the skills or fears around cybercrime or losing important information. The programme has supported more than 1,000 people through a network of more than 60 local volunteers.

Digital exclusion is not just about skills. It can often come down to a number of social factors, including poverty and access to infrastructure and digital services. The chief executive of a third sector mental health provider said: *"One thing that's clear is the pandemic has actually exacerbated and created much more digital exclusion amongst communities, and that is particularly building on the back of the socioeconomic inequalities that were already existing. So, I think we've got much more of a picture of the haves and the have nots. We need to think about that when we're planning on how we deliver services digitally."*[72]

The chief executive of a housing association commented that: *"If we want to really unleash our digital potential, then we must tackle poverty and all that goes with it."*[73]

Grand Union Housing Group is undertaking some work around whole house costs. They believe that, if you live in a home, you ought to be able to heat it and access digital services in it. They are looking at developing a rent-setting model that is affordable and takes into account people's need for heat and hot water, as well as their need for digital.[74]

The chief executive of an independent living charity told us: *"If it works for the most excluded, then it will work for everybody. I think as long as we focus on that group and think what we need to do to bring them inside the tent, then everyone else is going to be quite happy and it will come up with better solutions and fewer people feeling that this stuff is threatening."*[75]

Before launching into new and exciting digital programmes, there is therefore an argument for focusing policy and resources on levelling up the digital divide as a first priority for public services, so that individuals have as fair and equal access as possible to the benefits that digital can bring. As one housing association chief executive argues: *"We have to get the digital base layer right first"*.[76]

A registered nurse and vice-chair of an NHS foundation trust outlined how her trust has undertaken a digital assessment as part of the process for procuring and commissioning the build for a day centre for people with learning disabilities to ensure that digital opportunities are identified and built into the project from the outset. She said: *"One of the things that was really important was to have a really good assessment around the possible digital technologies that would enhance and provide better opportunities for improved outcomes for patients. This was something that was new."*

Case study: Merthyr Valley Homes, Gellideg Estate, Wales

A survey by Merthyr Valley Homes (MVH) found that 80% of residents on the Gellideg estate in Merthyr Tydfil in Wales were affected by welfare reform, however less than a third were online. With Universal Credit on the horizon MVH wanted to bring the internet to its communities to ensure that its tenants had sufficient broadband access in order to complete and manage their Universal Credit and pay their rent.

The new Digital Merthyr solution was funded by a grant from Nominet Trust and supported by the Creative Coop. MVH identified potential in replicating a network model called Guifi-net, which is a specialist self-managed community network that has connected 35,000 people in Catalonia, Spain. MVH used its links with the local community centre and primary school to identify which households did not have home broadband and prioritised these households to first receive the installation.

The system was initially offered free of charge with no need for a landline. Looking ahead, the idea has been to charge the connection as part of a tenant's service charge.

4.11 The internet of things

The introduction of the 'internet of things' into social housing offers huge benefits for both tenants and landlords, helping both to take a proactive role in managing their homes. By the internet of things, we mean the network of physical objects that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data with other devices and systems over the internet.

The connected home or smart home utilises the internet of things to adapt the home environment to meet an individual's personal needs or requirements. Connected intelligent systems can be installed within a home environment to fully integrate control over dimming and switching of lighting, AV, heating, energy efficiency, home automation, security and door entry and even next generation assisted living and TECs devices. Dependent on needs this can start small or be scaled up to full home automation.

Smart locks can, for example, let a resident who is at work open their front door so that a repair person can fix a faulty boiler, reducing costs associated with missed appointments and avoiding time being taken off work. Smart leak sensors can detect water escape and activate smart stop-cocks before major damage is caused, saving costs of repairs, protecting residents' home contents and the inconvenience of remedial work.

Case study: internet of things

Maryhill Housing in Glasgow initiated a project to fit sensors into people's homes that monitored temperature, humidity and CO2 levels.[77] The project was funded by the Scottish Government and was a partnership with CENSIS, Hyperoptic and iOpt Assets. The project also included free digital inclusion classes for residents.

The Peabody Group, a long-established housing association group in London, had to spend well over £1 million on repairs and compensation for residents for issues arising from damp and mould from properties that they took over the management of in 2014. They piloted the use of IoT technology [78] to address some of the issues. They installed over 140 Switchee smart thermostats to identify damp and condensation. The pilot resulted in fuel poverty being reduced, with households saving 15% on average on their heating bills, as well as resulting in significant CO2 reductions. Peabody saved £219k in long-term remedial costs.

Despite the clear benefits of introducing internet of things and similar technologies into people's homes, organisations need to think carefully about the impact on individual privacy when fitting these devices and collecting information about day-to-day activities.

Having a clear purpose for collecting information and being transparent and open with people about how the data is collected and used, and who will have access to it, will be as important as educating people about how to use the technology itself.

Privacy by Design principles[79] will help organisations to design digital transformation projects in a way that meets legal and ethical requirements. Privacy by Design is a methodology originally developed by Ann Cavoukian in 1995. It takes a broad view of a system and its data relative to seven principles.

Diagram 12 - **Privacy by Design principles**

1. Proactive not reactive; preventive not remedial
2. Privacy as the default setting
3. Privacy embedded into design
4. Full functionality—positive-sum, not zero-sum
5. End-to-end security—full lifecycle protection
6. Visibility and transparency – keep it open
7. Respect for user privacy—keep it user-centric.

All boards should be aware of these principles, promote them and ensure they are applied in their systems.

There are other illustrative examples from housing during the pandemic which have learning for health and care when applying the internet of things.

- Social landlords have relied on monitoring and communication systems to keep vulnerable residents safe but also to enhance their quality of life as social isolation has become widespread.
- Supported housing providers have also moved from a reactive approach to one that is more proactive. For example, data from TEC systems has been used to identify residents at risk of falling and put preventative measures in place such as wellbeing calls and daily reminders to take medication, stay hydrated and keep active.
- Housing providers have found ways of rapidly deploying used 'plug and play' TEC that is managed via the cloud, allowing more flexible alarm call handling and helping large swathes of staff to work from home.

Although COVID-19 has highlighted the possibilities the internet of things presents, the challenge now is whether housing providers can unleash the digital premium consistently and on a sustainable basis. It has to be a matter of concern that many organisations in housing, health and care are still procuring analogue TEC equipment and using traditional infrastructure and processes.

Some but not all of this lack of forward momentum is down to cost and to shared standards.

The cost upgrading analogue equipment to digital is a real issue for many housing providers. Confusion is also common, particularly amongst social landlords with little experience of digital technologies. Without the right practices and processes, challenges around cyber security, safety and reliability may arise.

Regulation is crucial here. On technical standards BS8521-2:2020 or the NOW IP protocol[80] as it is referred to, is one example of increased coordination of core standards. NOW IP was agreed in 2020 by industry leaders and regulators to cover digital alarm systems and is a sign of progress to address differences between standards across housing, health and care. More can be expected in future.

Case study: Setting digital living standardss

The TAPPI Inquiry Report[81] has recommended the development of a 'minimum digital living standard' that sets out what is needed to live well and safely in a digital society. It recommends the review and update of planning policy and guidance and the regulatory framework for housing so that smart technology infrastructure is built into new homes. It also recommends the Disabled Facilities Grant is updated to support retrofitting and adaptations of homes for an ageing population – with a new 'Technology Facilities Grant'.

The report identifies ten 'TAPPI principles' to build technology into housing in a way that improves life for an ageing population, including involving individuals in co-producing the technology and ensuring it is person-centred so that they are in control of their environment, support needs and care.

Professor Roy Sandbach OBE, who chaired the TAPPI Inquiry, said the report *"speaks to technology as a contributor to proactive prevention of illness and related intervention. Healthy independence is the goal, with home technology playing its vital part throughout an individual's life"*.

4.13 A system mindset

By working in partnership across organisations at system, place and neighbourhood, innovative ways to identify and support access to digital technologies can be joined up and realised.

As a charity chief executive pointed out: *"We don't need another project recreating these things. We just need better coordination of it, and I hope that can be done through local partnership boards."*[82]

As an example, building a digital skills element into social care assessments can help identify both the type of technology that may best support an individual in their health and wellbeing and any additional skill-building support they may need to use it. This additional support can then potentially be provided by a local charity or organisation with a commitment to support digital inclusion. Such an assessment may also be used to provide useful anonymised data sets about the type of issues individuals face in accessing digital technologies, which can be used at a strategic, system level to inform resource decisions on wider digital inclusion programmes or public policy at place level.

Our work suggests that digital strategies also need to play into wider ICS and provider collaborative strategies around delivering value to patients and service users. Interviewees stressed the need for evidence about how is digital delivering value to individuals and improving health and care outcomes, not from different perspectives – monetary, quality and service user.

This was seen as a system leadership issue to get right, requiring a decisive move from defining value at an individual organisational level needs to a broader, more open assessment which connects digital technology directly to benefits to individuals and communities. Public reporting of progress in language the public understand was also seen as an important responsibility of new system leaders.

The overall conclusion was that this reporting also needed to go beyond short-term solutions and build ownership of longer-term impact and benefits. This is illustrated by two comments from interviewees

- A non-executive director of an NHS trust interviewed as part of this report underlined the need to develop flexible solutions: *"Industry needs to work - and the healthcare industry needs to work with professionals and patients to ensure that the digital inclusion, the data security and solutions are flexible because it's often the case that if the solutions are not very flexible and they're not tailored to patients' needs, then this can actually create, in itself, issues of equity."*

- A non-executive director of another NHS trust described a "short-term solution" where *"patients were given iPads and encouraged to have this level of connection with their primary care practitioners, but in the longer term, this is not the solution. We need to look right across the board in terms of how we can work better."*

4.14 Equipping and empowering staff

Achieving digital inclusion isn't just about empowering and up-skilling end users. Ensuring that staff have the understanding, skills, access to the right equipment, and can see the benefits of digital transformation will be just as important.

A clinical lead for a telehealth provider said: *"In terms of inclusion, whether or not people are offered digital solutions isn't always about whether the client wanted to take it up; it's whether our staff or our nurses actually felt comfortable or digitally literate enough to offer it in the first place"*.[83]

The NHSX What Good Looks Like framework outlines two main factors that demonstrate an organisation is working well in supporting its people through digital transformation:

- a workforce that is digital literate and able to work optimally with data
- technology and systems that are fit for purpose and support staff to do their jobs effectively.

Staff can underestimate the speed of change to digital and the benefits it brings. In 2010, the Royal College of Nursing conducted a study of 25,000 nurses and 82% said that they didn't think telehealth or telemedicine would actually improve or in any way change their practice. One might ask 10 years later, how wrong were they?

From the evidence we gathered it was clear successful organisations have provided:

- programmes of professional development
- frontline skills development
- peer support mechanisms
- training opportunities tailored to the jobs staff do.

This resonates with the recommendations of other research and guidance on development of capacity where it is needed by OECD and NHSX.

The Organisation for Economic Co-operation and Development 'Framework of Digital Talent and Skills in the Public Sector'[84] suggests the following actions when considering the contextual, skills and talent management aspects of digital transformation:

- **Building the right environment:**

  o be aware of the digital skills that a workforce requires to keep pace with digital evolution
  o communicate a clear and understandable vision of the role of digital and actively champion the benefits of digital government
  o demonstrate engagement by visibly endorsing and actively participating in the rhythm of digital delivery, reducing hierarchical layers and delegating decision-making by empowering teams as the unit of delivery
  o focus on digital professions that are user-centred and have specific objectives and roles
  o establish a learning culture that encourages and provides safety for employees to experiment
  o support different ways of working with necessary policies, tools and technologies.

- **Creating a path to a digital workforce:**

  o proactive recruitment strategies that promote the public sector as an attractive, trustworthy and transparent employer
  o well-designed, fair, trusted and attractive reward systems that support clear career planning
  o managers who emphasise job growth and professional development through multidisciplinary teams
  o investment in digital talents by offering regular feedback loops and mentoring programmes, and providing training in both formal and informal ways
  o encouraging job mobility and a diversity of career choices for public servants.

The challenge of building the right environment and creating a clear route forward on a digital workforce are again ones which fall to systems leaders as much as leaders of individual organisations to address – enabled by clear governance, which overcomes traditional divisions. Indeed, this could be seen as something that systems are almost uniquely able to address.

Similarly, a strategic approach will be needed and should be prioritised around removing barriers to growing digital skills The NHSX report, *Digital Skills in Adult Social Care: Rapid Evidence Review*[85], published in 2021, identified the following barriers experienced by staff in learning and developing their digital skills.

Diagram 13 - **Barriers to digital learning**

External barriers to learning and development

There are limited learning and development opportunities available to meet the needs of employers and staff.

Current opportunities are described as fragmented as there is no common goal to work towards.

Limited opportunities for peer-to-peer learning, which staff have reported as appropriate for digital skill development, are currently on offer although digital champion approaches are on the increase nationally.

The lack of common understanding and standards for learning creates issues as employers are not sure what digital skills should be developed in staff.

Organisational barriers to learning and development

Lack of investment in staff development or motivation to develop staff digitally from within the organisation, potentially linked to a lack of leadership.

Limited offer of support to access online learning and resources available for employers to help with workforce development.

Lack of resources to invest in staff development available at an organisational level.

Limited strategic vision/digital leadership/management support to upskill staff and embed learning within the organisation.

An assumption that learning will transfer across contexts, so for example if someone is able to use a smartphone, they are assumed to have the necessary skills to do other tasks.

The costs associated with upskilling staff, including the cost of the course itself, staff time out to participate in training, as well as potential costs for staff cover to allow this to happen.

Not all organisations have developed a supportive learning and development culture, which can act as a barrier for staff. Again, linked to leadership.

Workforce factors to learning and development

Finding the time to develop digital skills during a busy workday.

Lack of initial digital skills and literacy can act as a barrier to accessing learning and development.

Lack of incentive or motivation to learn new skills in this area.

Lack of opportunities to embed new skills within an organisation, meaning skills are lost.

This is a challenging list needing collective action. There are many examples where steps are being taken. For example, as part of its Digital Transformation Strategy, West Lothian Council has developed a Digital Champion programme[86], supported by Digital Unite's Digital Champions Network to support the council's shift to digital services.

The council started by undertaking an audit of digital skills among its staff using Scottish Council for Voluntary Organisation's Essential Digital Skills Framework toolkit.[87] As part of the audit, it also invited staff to act as digital champions, creating their own digital profiles promoting who they are, what they do and their level of digital skills and interest. This has helped the council to understand what gaps to fill with digital champion support. Once completed, digital champions get access to the training and support on the Digital Champions Network.

The University of Brighton created one of the first Digital Literacy Frameworks[88] in the higher education sector. This is an online resource that identifies the key digital literacies that academic staff at the university are encouraged to have. It contains brief rationales for each of the literacies and links through to online resources that help staff further develop literacies and digital skills. This is a model with wider application beyond higher education, but it also shows the important role universities and educational providers can play in creating a professional digital skills approach at system and place level.

Case study: Jontek Lifeline service

The NEW Lifeline service, part of Redditch Borough Council, is accredited to the TSA quality standards framework and prides itself on its person-centred approach. They provide monitoring services for several local authorities and housing associations across the country. The experienced team carry out TEC assessments for people with complex needs, to provide a suitable, often bespoke, package and will research new digital products to find a suitable solution.

As the UK moves away from the traditional analogue infrastructure it was New Lifeline's priority to ensure that they maintain life critical connectivity for the provision of Technology Enabled Care Service, taking into consideration the deadline of the digital infrastructure, as announced by BT and Ofcom, to be fully digital by 2025.

The NEW Lifeline Team monitored an increase in maintenance and support calls to service users who were already seeing the impact of the digital transition on their analogue devices, so this was a key driver in upgrading the Answerlink platform

NEW Lifeline are one of the first local authority-owned TEC industry providers able to offer an end-to-end IP solution increasing the reliability and durability of their service for the end user, combining the latest technology with the council's customer-first approach to be the best of both worlds.

4.14 Equipping and empowering users

We covered co-design and co-learning earlier in the report. This is a cornerstone of bring users into digital awareness.

The benefits of co-design were outlined by the chief executive of a charity focused on social inclusion and health promotion, who said: *"If you internally feel you're in control of your life, then your health and wellbeing outcomes will be much better if you're involved, because it builds your autonomy and through that, it builds your health and wellbeing."*

Building wellbeing takes time - some researchers have conceptualised wellbeing as a process of accrual rather than something a simple intervention can address all at once. Empowering users of digital technologies for health is the same. Increasing their agency will require a learning process, and a sense of agency or control in how it is done. As the chief executive added:

"If we involve people in designing how they use the internet, how they use other technologies within their living environment, whatever you put in there, if they're involved, the outcomes will be better. If people feel that those things are being done to them, you can guarantee the outcomes will be less than the value of the kit or whatever else you put in that you try, with the best will in the world, to improve their existence."

There is an underlying question here about consumerism and ownership which is worth covering. Insofar as health care is 'consumed', both through digital services and products, would take-up of potentially life-enhancing products increase faster if individual purchase became the primary delivery model? For those who have the financial means, a greater sense of autonomy could certainly arise from having a greater feeling of choice. Notably, it is important to ensure those without the means are also given access to the equipment. This poses a challenge. If 'consumerism' could empower some people to engage with their health, surely it offers some opportunities worth exploring further. That lies beyond this report.

Similarly, this report only touches on the complex issue of data ownership in this context of empowering users. There are arguments made for data, including an individual's care record, to be owned by the patient or service user themselves. This is recognised as difficult territory. Health and care professionals need to be able to access and update an individual's care record outlining aspects such as the care and treatment they have given. Without the ability to do this, they would potentially be putting both themselves professionally at risk and their patients, if care records were not kept up to date. If a patient fully 'owns' their own care record then they could potentially delete the information it contains or refuse to allow access to it by the professionals caring for them, creating patient safety concerns. It may also stymie the ability to collect data for important public functions such as managing public health emergencies and undertaking medical research.

Nationally there is a move to the NHS using data more broadly than ever before, with NHS Digital looking to amalgamate all patient data to use for research and forecasting to better plan national spending and care. This approach is being introduced automatically, with patients having to opt out of their data usage[90] if they don't want to see it being included. However, with the merger of NHS Digital and NHS X into NHS England and improvement, this approach may change or slow down or change shape.[91]

What if the rush to innovation meant a 'wild west' for data, or worse, private companies owning data from the health service that the NHS could no longer access? How do we ensure data remains usable by all necessary actors, ensuring, to use the technical jargon, interoperability? One interviewee, the head of an informatics programme in Wales, reported *"trying to develop a top-down approach to technical standards"* within Wales, collaborating on a report with Farrpoint and reporting these to the Welsh Technical Standards Board. The aim is to get to a point where new entrants (for example selling internet-enabled healthcare devices) would *"have to conform to XY and Z in order to come and play in Wales."* This top-down approach is perceived to address a long-term imbalance of power: "*For too long the suppliers have held all the cards in the market in terms of the knowledge."*

These issues need further research and discussion in public and no doubt this will happen.

5.
Questions for Boards

This report has brought out the pivotal role of boards in health, housing and care in resetting the digital premium. The need for development of understanding and insight, of strategy and mindset, or grip on information and delivery, is a joint challenge between all boards, not just those charged with system-wide responsibilities.

The pandemic has moved the world forward significantly since out last report in 2020. We recognise the many different pressures placed on all boards but especially the systems boards faced with complex and conflicting priorities to address.

Here we identify eight questions which all boards should now address. They can be used in as part of development programmes or in stand-alone sessions designed to build the maturity of governance.

Diagram 14 - **Resetting the digital premium – Nine questions for boards in health, housing and care**

1. Does your board have the right level of understanding and skill representation to play the required leadership role in delivering digital transformation?

2. Are you developing a culture that supports and promotes the use of digital solutions across all roles and grades? Do you understand what barriers your staff may be facing in using digital technology effectively and do you have plans in place to address these?

3. Learn from the shift change in digital transformation and uptake created by the Covid pandemic. What were the enablers that led to that shift change? How can you use these during more stable times to continue an upward trajectory in unleashing the digital premium?

4. As a board, do you have assurance that your digital transformation strategies and programmes are delivering technology services that are fair and equitable?

5. How is your board leading a culture of true system and partnership working? Viewing and understanding the benefits of digital at a system, rather than organisational level will help unstick unhelpful silo working and make the best use of your talent and resources.

6. Is your board delivering a clear message to staff about how and when data can be shared within an organisation and across partnerships and systems? How are you ensuring that new technologies are designed to make it easy for staff to undertake safe and effective data sharing?

7. Are you assured that you have the right ethical frameworks, privacy and data security practices in place that are applied in a consistent way to the procurement, design and deployment of new technologies? Are your data collection assumptions - and plans to use them - valid?

8. How can you use interactions that you or your partners already have with your patients and service users to get a better understanding of their digital needs?

9. How will you ensure digital inclusion across all of your users/ customers/ patients?

6.
Conclusions

This report has sought to bring together a wide range of different issues and perspectives on which the future of digital in health, housing and care depends.

The shared challenges and opportunities are obvious. There are many choices to be made at system and organisational level. Setting the right pace collectively will be crucial in resetting the digital premium.

Resetting the digital premium should be a matter of interest and concern for everyone with a stake in the future of health, housing and care. However, boards of organisations and systems have particular responsibilities and influence which they need to understand and meet now if the future is to be secured.

The value of good governance in a rapidly developing environment is vital. So is sharing learning. The two are connected. We hope this paper helps with both.

We would like to thank everyone who participated in the work that underpins this report and would welcome feedback and further engagement.

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Appendix

Interviewees and attendees at roundtables:

- Sarah Maguire - CEO Choice Support
- Margaret Hanson – CEO Imagine Independence
- Rachel Peacock - CEO Making Space
- David Cryer - Exec Director of Strategy Sussex ICS
- Miriam Hart - Chair Tees Esk and Wear NHS FT
- Maria Nelligan - Chief Nurse Lancashire and South Cumbria NHS FT
- Suba M - NHS NED, Associate Medical Director, Aviva (Insurance)
- Bevleigh Evans - Head of Population Health NHS England
- Philip Gowland - Board Secretary Rotheram, Doncaster and South Humber NHS FT
- Joy Street - Non-exec and senior independent director UH Derby and Burton NHS FT
- Karen Bradshaw - AT Lead, Westminster Council
- Sally Taylor-Ridgeway – Communications, Housing LIN
- Robert Stewart – Senior Lecturer, Kent and Medway Medical School
- Aileen Evans – CEO, Grand Union Housing Group
- Ronald van Tonder - COO, Spectrum Primary Care
- Kate Abendstern – Director, Hesperus Health Consulting LTD
- Rosie Kaur – Deputy Medical Director, Mersey Care NHS Foundation Trust

References

1. https://nhsprocurement.org.uk/mandatory-social-value-weighting-of-10-for-all-nhs-procurement/
2. https://www.gov.uk/government/news/new-measures-to-deliver-value-to-society-through-public-procurement
3. https://www.kingsfund.org.uk/publications/anchor-institutions-and-peoples-health
4. https://cles.org.uk/tag/the-preston-model/
5. https://nhsprocurement.org.uk/mandatory-social-value-weighting-of-10-for-all-nhs-procurement/
6. https://www.good-governance.org.uk/publications/insights/can-payment-mechanisms-promote-integrated-care
7. https://www.aviva.co.uk/business/business-perspectives/support/age-of-ambiguity/
8. https://www.gov.uk/government/statistics/community-life-survey-202021-wellbeing-and-loneliness/wellbeing-and-loneliness-community-life-survey-202021
9. https://nhsprocurement.org.uk/mandatory-social-value-weighting-of-10-for-all-nhs-procurement/
10. https://www.oecd.org/environment/understanding-countries-net-zero-emissions-targets-8d25a20c-en.htm page 24
11. https://www.oecd.org/environment/understanding-countries-net-zero-emissions-targets-8d25a20c-en.htm page 19
12. https://www.oecd.org/environment/understanding-countries-net-zero-emissions-targets-8d25a20c-en.htm page 20
13. https://www.bmj.com/content/375/bmj-2021-067199
14. The Intergovernmental Panel on Climate Change - https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter10.pdf p757
15. https://www.england.nhs.uk/greenernhs/get-involved/organisations/
16. https://www.pinsentmasons.com/out-law/news/uk-green-industrial-revolution
17. https://www.researchgate.net/publication/324712354_An_empirical_examination_of_critical_barriers_in_transitions_between_technology_push_and_demand_pull_strategies_in_manufacturing_organizations
18. https://www.newstatesman.com/spotlight/2020/11/technological-optimism-will-not-deliver-our-climate-commitments
19. https://www.economist.com/leaders/2021/01/16/why-a-dawn-of-technological-optimism-is-breaking
20. https://www.businessgreen.com/news/4031448/eco-awakening-wwf-study-reveals-huge-rise-consumer-demand-sustainable-products
21. https://www.forbes.com/sites/katehardcastle/2021/07/27/consumer-awakening-one-third-of-uk-consumers-want-to-shop-responsibly/
22. https://www.gov.uk/government/consultations/reforming-the-mental-health-act#history
23. https://www.gov.uk/government/consultations/reforming-the-mental-health-act/reforming-the-mental-health-act-summary
24. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/946264/mha-review-impact-assessment.pdf
25. https://commonslibrary.parliament.uk/research-briefings/cbp-7547/
26. https://www.england.nhs.uk/coronavirus/wp-content/uploads/sites/52/2020/03/Managing-demand-and-capacity-across-MH-LDA-services_25-March-final-1.pdf
27. https://www.england.nhs.uk/coronavirus/publication/second-phase-of-nhs-response-to-covid-19-letter-from-simon-stevens-and-amanda-pritchard/
28. https://lordslibrary.parliament.uk/infocus/coronavirus-the-impact-on-mental-health/ (22 June 2020)
29. https://post.parliament.uk/analysis/mental-health-and-well-being-during-the-covid-19-outbreak/ (7 May 2020)
30. https://www.nhsconfed.org/publications/mental-health-services-and-covid-19 (August 2020)
31. https://www.longtermplan.nhs.uk/
32. Advancing our health: prevention in the 2020s. https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s/advancing-our-health-prevention-in-the-2020s-consultation-document
33. https://www.gov.uk/government/consultations/reforming-the-mental-health-act#history
34. https://www.nhs.uk/every-mind-matters/mental-wellbeing-tips/your-mind-plan-quiz/
35. https://www.nhsx.nhs.uk/blogs/how-the-nhs-is-using-digital-technology-to-support-peoples-mental-health/
36. https://www.nhsx.nhs.uk/key-tools-and-info/digital-playbooks/mental-health-digital-playbook/
37. https://www.nhsconfed.org/publications/mental-health-services-and-covid-19 p3
38. Ibid, p4
39. Ibid, p25.
40. Ibid, p17
41. https://www.nhs.uk/mental-health/nhs-voluntary-charity-services/charity-and-voluntary-services/get-help-from-mental-health-helplines/
42. https://business.bt.com/insights/digital-transformation/uk-pstn-switch-off/
43. https://www.lifeline24.co.uk/digital-telephone-switchover/
44. Ibid
45. https://www.lifeline24.co.uk/digital-telephone-switchover/
46. https://www.openreach.com/content/dam/openreach/openreach-dam-files/images/phone/industry/Telecare%20Industry.pdf
47. https://www.computerweekly.com/news/252500643/Openreach-extends-analogue-phone-programme-switch-off-to-further-700000-homes-and-businesses
48. https://www.openreach.com/content/dam/openreach/openreach-dam-files/images/phone/industry/Telecare%20Industry.pdf
49. https://www.wired.co.uk/article/landline-phone-network-death
50. https://www.wired.co.uk/article/landline-phone-network-death
51. https://www.gov.uk/government/publications/code-of-conduct-for-data-driven-health-and-care-technology/initial-code-of-conduct-for-data-driven-health-and-care-technology
52. https://www.england.nhs.uk/publication/integrated-care-systems-guidance/
53. https://www.good-governance.org.uk/publications/insights/ics-challenges-systems-skills-and-people
54. https://www.good-governance.org.uk/publications/insights/ics-design-good-governance-will-be-key
55. https://www.nhsx.nhs.uk/digitise-connect-transform/what-good-looks-like/what-good-looks-like-publication/
56. https://www.good-governance.org.uk/events
57. https://www.good-governance.org.uk/publications/insights/integrated-data-for-integrated-care

58. https://www.gov.uk/government/publications/data-saves-lives-reshaping-health-and-social-care-with-data-draft/data-saves-lives-reshaping-health-and-social-care-with-data-draft#annex-b-legislative-changes
59. https://www.tsa-voice.org.uk/news_and_views/blog/the-vigilence-of-cyb/
60. https://www.literacymn.org/sites/default/files/uploads/MDE%20docs/Literacy%20Minnesota%20-%20MDE%20Digital%20Equity%20Community%20Needs%20Assessment%20Report.pdf
61. https://www.good-governance.org.uk/publications/insights/a-place-for-everyone
62. https://www.stmonicatrust.org.uk/re-cov-study
63. https://www.nursingtimes.net/news/hospital/pioneering-art-project-to-help-mental-health-patients-in-ae-13-07-2018/
64. https://www.gov.uk/guidance/digital-skills-partnership
65. From final evaluation report: https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/evaluation-reports/one-digital-final-evaluation-report.pdf pg 9.
66. https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_july16_older_people_and_internet_use_stats.pdf
67. https://digitalhealth.wales/sites/default/files/2021-12/English%20TEC%20Cymru%20Discovery%20Report%20-%20Telecare%20Service%20in%20Wales%20V3.pdf
68. https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/articles/exploringtheuksdigitaldivide/2019-03-04
69. https://nhsproviders.org/news-blogs/blogs/four-key-takeaways-for-advancing-digital-inclusion
70. https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/articles/exploringtheuksdigitaldivide/2019-03-04
71. https://love.lambeth.gov.uk/lambeth-digi-buddies-2016/
72. LeGrand Roundtable event: Anonymous speaker
73. Anonymous speaker, Roundtable 22.06.21
74. Anonymous speaker, Roundtable 22.06.21
75. Anonymous speaker: Roundtable 22.06.21
76. Anonymous speaker, Roundtable 22.06.21
77. https://www.insider.co.uk/news/tower-blocks-internet-things-technology-19910675
78. https://www.switchee.co/wp-content/uploads/2019/03/Peabody-Case-Study.pdf
79. https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/accountability-and-governance/data-protection-by-design-and-default/
80. https://standardsdevelopment.bsigroup.com/projects/2019-01470#/section
81. https://www.housinglin.org.uk/Topics/type/The-TAPPI-Inquiry-Report-Technology-for-our-Ageing-Population-Panel-for-Innovation-Phase-One/
82. Anonymous speaker: Interview 30.09.21
83. Anonymous speaker - Roundtable discussion
84. https://www.ama.gov.pt/documents/24077/219772/The+OECD+Framework+for+Digital+Talent+and+Skills+in+the+Public+Sector.pdf/ffab9e99-7775-4da3-8765-4cfb94c51810
85. https://www.skillsforcare.org.uk/Documents/Misc/Digital-Skills-in-Adult-Social-Care-Rapid-Evidence-Review-Mar21.pdf
86. https://www.onedigitaluk.com/latest-news/2020/04/06/how-one-scottish-council-has-developed-digital-champions-in-the-workplace/
87. https://scvo.scot/support/digital/skills
88. https://www.emerald.com/insight/content/doi/10.1108/RSR-01-2019-0002/full/html
89. Wellbeing as a Process of Accrual: Beyond Subjectivity and Beyond the Moment Jenna K. Gillett-Swan and Jonathon Sargeant Social Indicators Research Vol. 121, No. 1, (March 2015), pp. 135-148
90. https://digital.nhs.uk/services/national-data-opt-out
91. https://www.digitalhealth.net/2021/11/what-does-the-merger-of-nhs-digital-and-nhsx-with-nhs-england-mean/

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