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Key Recommendations to Accelerate Cloud Adoption

HealthTech ALLIANCE
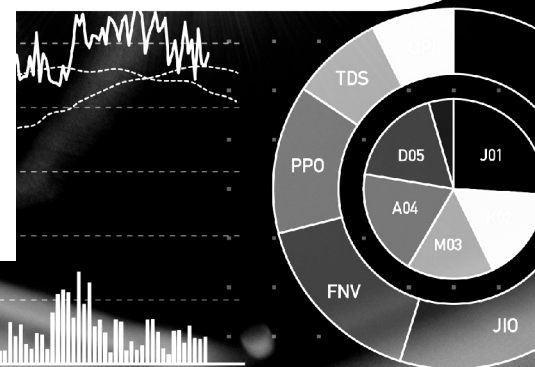
A report by the Health Tech Alliance, sponsored by

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About the Health Tech Alliance

The Health Tech Alliance is a coalition of health technology companies and stakeholders from across the NHS and wider health system. This focus on partnership is integral to the Alliance's overarching objective of industry and the NHS working collaboratively to ensure that vital HealthTech innovation reaches patients.

Find out more about us by visiting healthtechalliance.uk or by contacting secretariat@healthtechalliance.uk. Follow us on LinkedIn and Twitter.

About NetApp

NetApp is a global cloud-led, data-centric software company that empowers organisations to lead with data in the age of accelerated digital transformation. The company provides systems, software, and cloud services that enable customers to run their applications optimally from data centre to cloud, whether they are developing in the cloud, moving to the cloud, or creating their own cloudlike experiences on premises. With solutions that perform across diverse environments, NetApp helps organisations build their own data fabric and securely deliver the right data, services, and applications to the right people – anytime, anywhere.

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Introduction

In Autumn 2021, the Health Tech Alliance's convened a roundtable of experts in cloud technology and healthcare to discuss how cloud technologies can be adopted and used to help support the NHS through the winter ahead and beyond.

The roundtable was chaired by Dame Barbara Hakin (Chair of the Health Tech Alliance) and brought together a range of expert figures including leading cloud players from industry and the health system (including NHS trusts and NHS England) who are actively involved in day-to-day NHS operations.

The session looked at the challenges facing the NHS as it recovers from the COVID-19 pandemic and heads into the winter period. The discussion focused on providing tangible recommendations for industry, the health service and policy makers on how cloud technology can be introduced to the service and make a real difference to the day-to-day running of the NHS.

This report and its recommendations draws on this roundtable discussion and further collaboration and input with wider stakeholders (including the AHSN network).
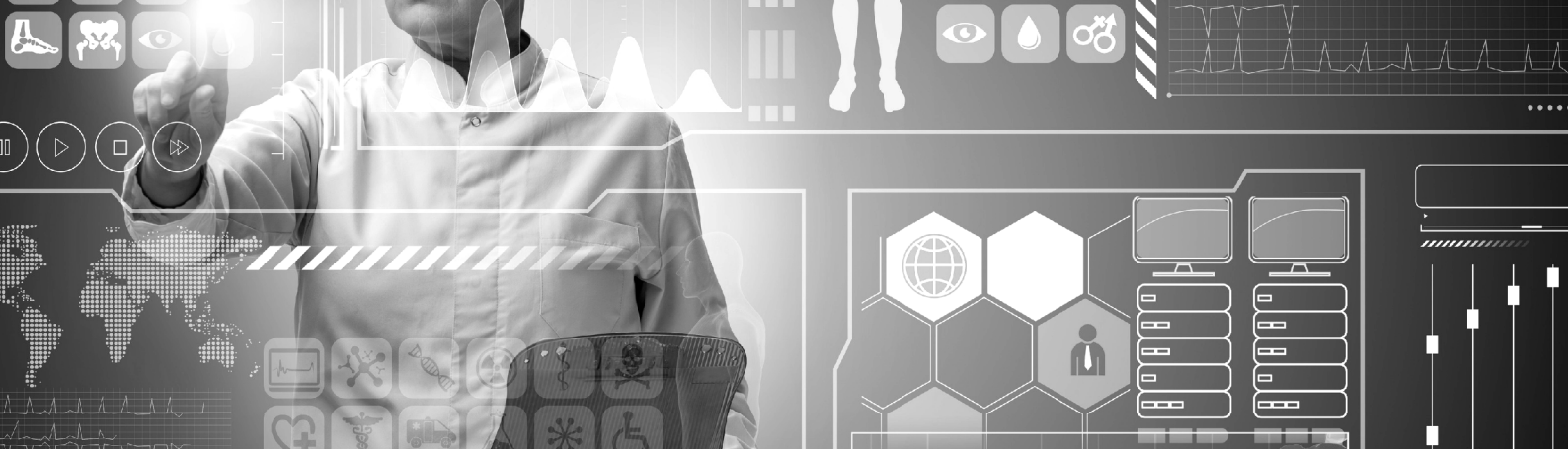
Recommendations

1. Further funding should be made available to Integrated Care Systems to support cloud adoption

Cloud technology offers many potential benefits to health systems. Integrated Care Systems (ICSs) should consider migrating legacy infrastructure to the public cloud and develop new applications in a cloud environment. Cloud technology presents clear benefits to the health service whether through moving patient services online to reduce GP waiting times, supporting diagnostics to connect across systems, or enabling decision-makers to have access to the right information, when they need it. Moving the current systems to the cloud, either in their entirety or incrementally, is a clear first step that still needs to be adopted across much of the NHS. The NHS must empower ICSs to take ownership of the funding available to invest in updating systems at a local level to best support the challenges they face. This includes training their workforce to make the best use of this new technology. Whilst the commitment of NHSX to make 'technology funding available to ICSs directly as they become statutory bodies' is welcome, further investment must be made available to these new bodies to accelerate the adoption of cloud technologies.

2. A greater understanding of current NHS infrastructure is required

Across the NHS, there is a vast gap in digital maturity levels with some ICSs already fully embracing the benefits of public cloud technology, but many others are trailing behind often hampered by the immaturity of clinical software. The NHS has a significant amount of legacy infrastructure on their premises that can be up to 20 or 30 years old. In many cases, the legacy technology was developed by individuals who are no longer working in the NHS and those working with the infrastructure now often lack the understanding of how the system works to get the most benefit from the technology. For the healthcare system to truly benefit from the opportunities presented by cloud technologies, they must first understand their current technological assets.

Once this understanding is gathered, industry can work together with the NHS to target which areas are at risk (including from a security and resilience perspective) and develop systems to have the capacity and agility to handle the additional pressures especially during the winter months. A national programme to undertake a detailed assessment of the current data infrastructure used across the health system should be carried out.

3. Responsibility for cloud adoption within the health service should be streamlined

Whilst NHSX is doing much great work to bring together the teams from the Department of Health and Social Care and NHS England to drive forward digital transformation, there is still confusion over exact responsibilities for public cloud adoption across the NHS. This is creating confusion within the health system itself and also at industry level as to who the appropriate stakeholders are, what funding is available and where engagement should take place. The NHS must ensure that there is a coordinated approach for the adoption of Cloud. It must be clear on the responsibilities for introducing and implementing cloud technology is streamlined with the appropriate guidance in place for ICSs to discuss procurement with industry. It would also be beneficial for a cloud adoption support programme which provides a single point of resources, information, guidance for ICSs progressing their cloud adoption journey.

4. Advanced ICSs should work collaboratively to develop a route map to cloud

As previously mentioned, there is a great level of variation in terms of cloud maturity across the NHS. ICSs in particular are at different stages on their journey. Given their importance in supporting transformation within their local areas, further work should be undertaken by those who have either successfully begun the transition to cloud, or fully transitioned, to share learnings and best practice. A clear route map should be developed which would outline the challenges their ICSs faced ahead of transition, how they overcame these challenges, and the benefits they have seen since transitioning to cloud. It could also include the support programmes available from industry to support with cloud migration, which include funding and skills development. This route map must then be shared across the wider health system. This would support areas which are lagging behind to transition smoothly to new systems.

Currently, industry do not have high level insight to what challenges individual ICSs are facing which creates complexities for them when attempting to engage and support the health service. Currently, there is a huge pool of information and resource within industry which is sitting unused, despite being ready and able to support the NHS. Through developing a clear route map, the health service and industry should work together more closely to develop a strategy to tackle each challenge and help create systems to benefit the entire Health Service.

5. Industry should work collaboratively to support the NHS and staff to address the skills and capability gap

Industry must do more to assist the NHS and staff in understanding what cloud technologies do, the role they can play and how using cloud technologies can benefit the day-to-day working of the NHS. One way in which industry can help is by developing a set of use cases which explain in a clear and concise manner how cloud has helped in clinical, operational and administrative settings. Use cases that focus on how cloud has already improved patient care should feature particularly prominently. It is important for industry to use language that NHS staff and management are familiar with and focus more on the positive outcomes of cloud adoption rather than the technical features of different technologies. Where industry has already collaborated to support the NHS it has been shown to improve patient outcomes.

A National forum should be established to help support and address the current skills and capabilities including both Industry and the NHS. This forum would enable Industry to work with the NHS to ensure that staff receive training on how best to utilise cloud technology. This will be essential in getting the most out of the technology and enabling the full benefits of data to be realised.

6. Better education of the benefits of cloud for research and innovation in the health care sector

The adoption of cloud technologies can play a significant role in innovation and research particularly enabling researchers to analyse data and gain insight in a secure and safe manner. For example, cloud can enable clinical trials to be carried out remotely as well as bringing accredited researchers from across the globe to collaborate on research while the data remains in a secure environment.

Cloud technology accelerates the time to scientific insight: it supports research to occur at scale and to occur collaboratively between research groups, thanks to its reliable and scalable computing power. For example, Genomics England, the organisations in England set up to sequence 100,000 genomes to enable genomic research, and their technology partner LifeBit are using AWS's cloud technology to deliver the Genomic England COVID-19 research platform. This platform is a highly secure environment, controlled by Genomics England, and enables them to provide researchers with secure access to genomic data. As a result, they can collaborate and identify new insights together, quickly. This platform will enable researchers to identify genes can that result in patients suffering either mild symptoms or severe disease, further enhancing our understanding of how to combat COVID-19.

However, there is still widespread distrust from the public of data being used in this way. Following government plans to make patient data available to private companies, more than a million people opted out of the scheme causing NHS

Digital to delay the scheme. Policy makers, Industry and the health care system must work together to ensure the systems are understood and the public receive the necessary reassurances that their personal data will remain secure. NHSX should build on the commitment set out in the DHSC Data Saves Lives strategy to create trusted research environments by working with industry to create guidance for NHS organisations on how to do this.

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Health Tech Alliance
69 Wilson Street
London
EC2A 2BB

020 3397 3318

www.healthtechalliance.uk