

# THE UK DIGITAL HEALTH JOURNEY

HealthcareUK



# A Short Timeline in UK Digital Health

2012



2014



2016



2019



2019



New national organisation  
NHS Digital

New models of care supported  
by digital infrastructure

Wachter Review  
Digital Leadership

Topol Review  
Digital Workforce

10 year plan for digital  
everywhere

# ELEMENTS of the UK DIGITAL HEALTH LANDSCAPE

NHS LONG TERM PLAN  
NHS DIGITAL  
NHSX  
NHS DIGITAL ACADEMY  
HDRUK  
THE ALAN TURING INSTITUTE  
ACCELERATED ACCESS COLLABORATIVE (ACC)  
NICE  
NHS INNOVATION ACCELERATOR

HealthcareUK



## NHS Long Term Plan



The 10 year strategy  
Focusing on integration,  
prevention, empowering  
citizens and supporting our  
workforce to take  
advantage of technology

<https://www.longtermplan.nhs.uk>

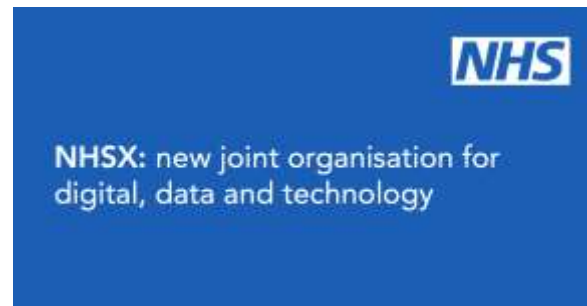
## NHS Digital



The partner to the health  
and social care system in  
England. It manages large-  
scale, complex live IT  
systems and infrastructure,  
delivers on informatics and  
cyber, data collection and  
dissemination.

<https://digital.nhs.uk>

## NHSx



Leads the largest digital health and  
social care transformation programme  
in the world. Annual investment of  
over £1bn. Coordinates strategy,  
policy and action, sets standards,  
drives implementation and innovation  
and runs the NHS AI Laboratory

<https://www.nhsx.nhs.uk>

## NHS Digital Academy



Set up to train and develop a new generation of digital leaders who can drive tech transformation of the NHS. World-class partnership between Imperial, Edinburgh and Harvard

<https://www.england.nhs.uk/digitaltechnology/nhs-digital-academy/>

## HDRUK



Health Data Research UK (HDRUK) – the national institute for health data science - are uniting health data assets across the UK to make health data research and innovation happen at scale.

<https://www.hdruk.ac.uk>

## Alan Turing Institute



The national institute for data science and artificial intelligence, training the next generation of leaders, shaping the public conversation, and pushing the boundaries of these sciences for the public good.

<https://www.turing.ac.uk>

## The AAC

**ACCELERATED  
ACCESS  
COLLABORATIVE**

Ambition to make the NHS one of the most pro-innovation health systems in the world, collaborating to accelerate take-up of impactful and cost-effective products

<https://www.england.nhs.uk/aac/>

## NICE

**NICE** National Institute for  
Health and Care Excellence

The National Institute for Health and Care Excellence (NICE) works with partners to develop standards that ensure new technologies are clinically effective and offer economic value.

<https://www.nice.org.uk/about/what-we-do/our-programmes/evidence-standards-framework-for-digital-health-technologies>

## NHS Innovation Accelerator

  
The **AHSN** Network **England**  
NHS Innovation Accelerator

High impact, evidence-based innovations which address significant challenges facing the health and care system in England. All must have demonstrated in practice significantly greater quality outcomes for significantly lower cost

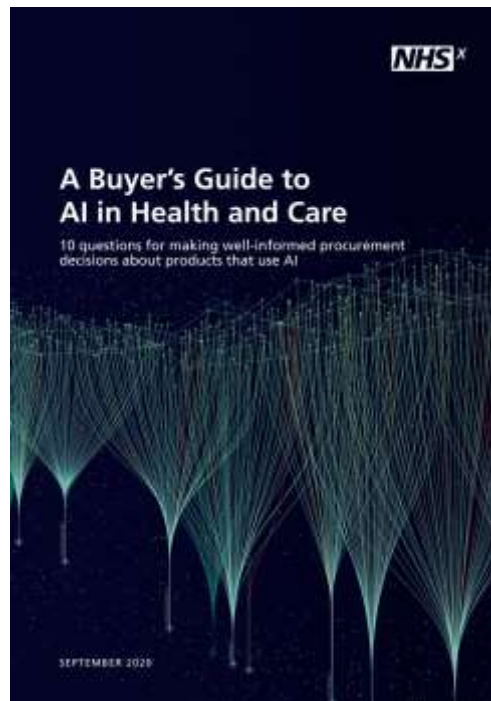
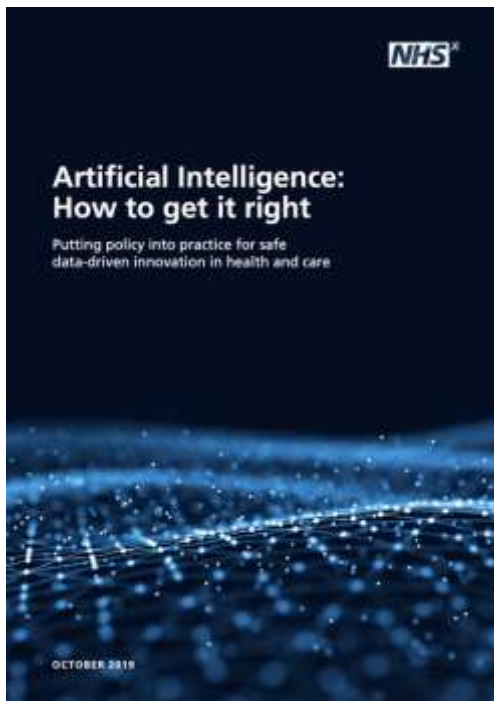
<https://nhsaccelerator.com/>

Could also mention

tech<sup>UK</sup>



# NHSx Reports





# NICE Evidence Standards Framework for Digital Health Technologies



**NICE** National Institute for  
Health and Care Excellence





## Guidance

# Code of conduct for data-driven health and care technology

Updated 18 July 2019

## Contents

### Introduction

### The principles

Principle 1: Understand users, their needs and the context

Principle 2: Define the outcome and how the technology will contribute to it

Principle 3: Use data that is in line with appropriate guidelines for the purpose for which it is being used

Principle 4: Be fair, transparent and accountable about what data is being used

Principle 5: Make use of open standards

## Introduction

Today we have some truly remarkable data-driven innovations, apps, clinical decision support tools supported by intelligent algorithms, and the widespread adoption of electronic health records. In parallel, we are seeing advancements in technology and, in particular, [artificial intelligence \(AI\) techniques](#).

Combining these developments with data-sharing across the NHS has the potential to improve diagnosis, treatment, experience of care, efficiency of the system and overall outcomes for the people at the heart of the NHS, public health and the wider health and care system.

Innovators in this field come from sectors that are not necessarily familiar with medical ethics and research regulation, and who may utilise data sets and processing methods that sit outside existing NHS safeguards.



## Guidance

# A guide to good practice for digital and data-driven health technologies

Updated 19 January 2021

## Contents

### Introduction

1. [How to operate ethically](#)
2. [Have a clear value proposition](#)
3. [Usability and accessibility](#)
4. [Technical assurance](#)
5. [Clinical safety](#)
6. [Data protection](#)

## Introduction

Across the country and around the globe, digital innovators are helping us deliver our commitment to the digital transformation of health and social care, to bring benefits to patients, the workforce and the system as a whole. NHS England's Long Term Plan sets the direction towards widespread digitally-enabled care. The Secretary of State's Technology Vision goes on to articulate a clear ambition for the generation of more digital services designed around user need and adhering to key principles of privacy, security, interoperability and inclusion.

## Digital Technology Assessment Criteria (DTAC)

For health and social care

The Digital Technology Assessment Criteria for health and social care (DTAC) gives staff, patients and citizens confidence that the digital health tools they use meet our clinical safety, data protection, technical security, interoperability and usability and accessibility standards.

It is the new national baseline criteria for digital health technologies into the NHS and social care. It is designed to be used by suppliers to build technology and healthcare organisations to build and to buy technologies that meet our minimum baseline standards.

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# Artificial Intelligence in Health and Care Award 2020 - Guidance for Phase 4

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ACCELERATED  
ACCESS  
COLLABORATIVE

NIHR | National Institute  
for Health Research

NHS<sup>X</sup>

## About the Accelerated Access Collaborative (AAC)

The Accelerated Access Collaborative (AAC) was formed in response to the independently-chaired [Accelerated Access Review](#). The remit of the AAC is to bring industry, government and the NHS together to remove barriers to uptake of innovations, so that NHS patients have faster access to innovations that can transform care. The AAC supports innovation at all stages across the development pipeline; from research and horizon scanning for innovations that address the population's needs, to support for adoption and spread of proven innovations.

The AAC aims to establish a globally leading testing infrastructure that provides the necessary opportunities for innovators to develop and improve their products, collaborate with the NHS, and establish the high-quality evidence that clinicians need for adoption and spread. The AAC Delivery Team at NHS England and NHS Improvement delivers practical innovation support funding in line with Her Majesty's Government's health innovation funding strategy.

## About NHSX and the Artificial Intelligence Lab

NHSX is the digital, data and technology organisation for the NHS, bringing together teams from the Department of Health and Social Care and NHS England and NHS Improvement. As noted in the [Artificial Intelligence: How to get it right](#) report by NHSX, as the use of Artificial Intelligence (AI) technology for health and social care is at an early stage of development, there is considerable uncertainty around the likely benefits and the best way of integrating AI into existing pathways into care.

In August 2019 the Health Secretary announced [funding of £250m over three years](#) for the formation of an NHS Artificial Intelligence (AI) Lab to develop and adopt the technologies that are most promising for health and social care.

AI, including models based on statistical analysis, expert systems that rely on if-then statements and 'locked' or 'adaptive' machine learning, has the potential to make a significant difference to health and care. The AI Lab has been established to ensure the NHS is harnessing these benefits in a safe and ethical fashion that is supported by patients, the public and clinicians. As stated in the AI report, securing clinical understanding that AI will be used to supplement, and not replace human clinical decision-making is essential, as is realistic expectations of what AI technologies have to offer.

Given the ethical and safety concerns associated with the use of AI in health and care, the AI Lab will align to the principles of the NHS Constitution, addressing transparency, safety and privacy by building on the foundations already laid out, for example in the [NHS Code of Conduct for Data-Driven Health and Care Technologies](#). The AI Lab will address barriers to adoption and development of AI, including an AI SWAT team, Skunkworks, Regulation Incubator, the Accelerating of Diseases programme, the Disease Clusters AI programme and an AI in Health and Care Award (AI Award). The AAC Delivery Team will lead delivery of the AI Award, working with NHSX and relevant AAC partners.

## The AI in Health and Care Award

The AI Award will deploy £140m over three years to accelerate the testing and evaluation of the most promising AI technologies that meet the strategic aims set out in the [NHS Long Term Plan](#). The Award will support technologies across the spectrum of development: from initial feasibility to evaluation within clinical pathways in the NHS.



A secure, online database of devices, diagnostics and digital health technologies that are intended for use in the NHS or wider UK health and care system.

It is funded by NHS England and operated by the National Institute for Health and Care Excellence (NICE). Its purpose is to act as a means of connecting innovators and their technologies to the right people, from the right organisations, at the right time to help get technologies developed, assessed, and used as quickly and efficiently as possible.

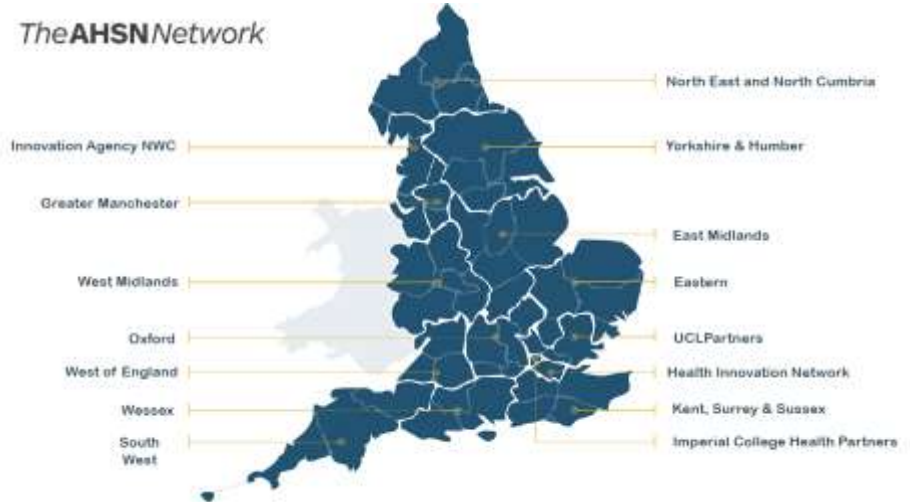
<https://www.healthtechconnect.org.uk/>

# Academic Health Science Networks (AHSNs)

AHSNs mobilise expertise and knowledge across health and care, academia and industry to identify and pull transformative innovation into the NHS quickly.



*The AHSN Network*





## The NHS 'Reset'

Supporting  
the Health  
and Care  
Reset

#NHSReset

[ahsnetwork.com/reset](https://ahsnetwork.com/reset)

*The***AHSN***Network*  
*Supporting the Health and Care* **Reset**





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HealthcareUK



# GREAT

BRITAIN & NORTHERN IRELAND



[www.gov.uk/healthcareuk](http://www.gov.uk/healthcareuk)



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