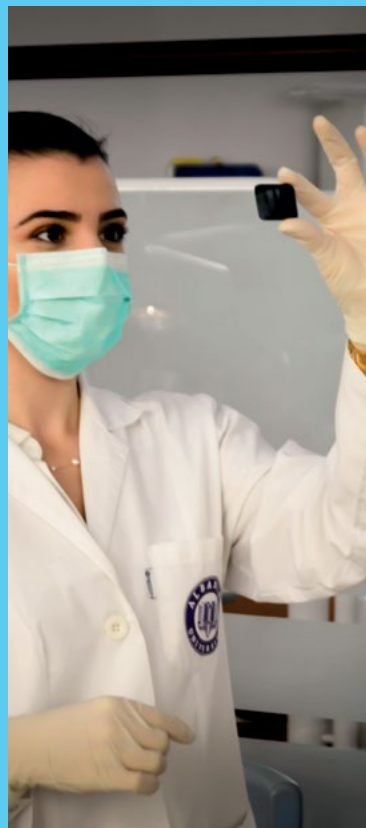


The UK's International Digital Health Playbook



Section 1

Overview of the global challenge



The global healthcare challenge and how digital health plays a critical role

Undoubtedly, global challenges faced by the pandemic have been at the core of innovation, at a rate previously unimaginable. It has also posed important questions to health systems globally.

The coronavirus pandemic has stretched health systems, raising important questions such as tracking suspected infection, diagnosing and treating patients remotely, and relieving pressure and freeing capacity on healthcare settings.

The world is facing these incredible challenges around safe, affordable access to both health and care as well as protecting our valuable workforce. Digital Health offers us the opportunity to re-imagine health and care with new capabilities. How can we do things differently to involve citizens in their own care and empower them, reduce burden on our workforce and become more precise and predictive in our interventions to achieve the quintuple aim?

Digital Health is rightly unlocking these challenges facing global healthcare and UK companies are at the heart of technologies that offer accessible, affordable and sustainable care.

UK digital healthcare solutions can play a crucial role in improving the reach, impact and efficiency of modern healthcare.

In response, Healthcare UK, part of DIT, has created an insightful and nuanced collection of not only leading UK innovators but companies who are dedicated to exporting, ready to work in partnership with healthcare providers and organisations overseas, via UK Embassy's.

This latest #Beyond100 UK Digital Health campaign aims to showcase British innovators in Digital Health, promoting their pioneering technologies.

The UK is a global leader in digital health innovation with world class research and vibrant tech capability. Many of the healthcare technology businesses included in the publication have proven themselves in the world's oldest and largest single-payer universal healthcare system, the NHS.

The role of digital technology in realising the goal of accessible, affordable and sustainable care has grown across the entire range of health economies globally.

Section 2

The pandemic and the effects on digital transformation



The NHS reset campaign

Covid 19 has enabled the NHS to achieve a level of digital transformation that might have otherwise taken several years. This has brought to the forefront the necessity of building digital healthcare systems that are personalised and truly patient-centric.

The NHS reset campaign, launched in May 2020, identifies and adapts the best of COVID-19 related innovations into everyday practice, preserving the brilliant momentum the sector has seen these past few years, to inspire what the future of healthcare should look like.

This year NHS England announced the launch of the 'What Good Looks Like' programme (WGLL) to drive the digitally enabled healthcare transformation agenda forward. The pandemic

has accelerated digital transformation significantly and it is vastly important that we build on this exceptional progress.

The NHS WGLL programme builds on established good practice to provide clear guidance for health and care leaders to digitise, connect and transform services, safely and securely. This will improve the outcomes, experience and safety of our citizens.

Seven success measures

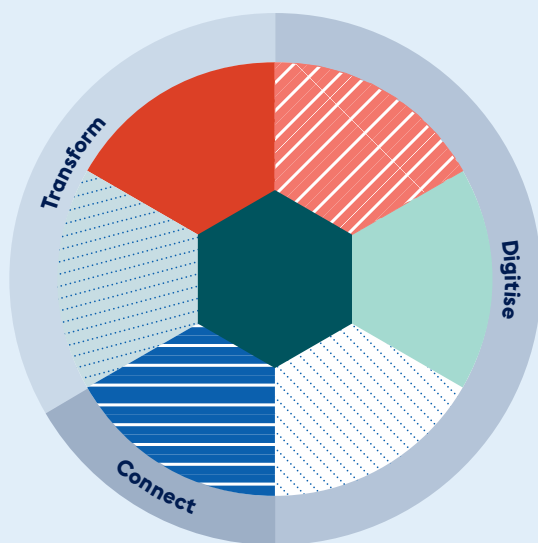
The WGLL framework highlights seven success measures which aim to provide a strong foundation for digital practice, providing the tools and support healthcare organisations need with their digital transformation journey. Three of the seven areas within the WGLL framework are particularly impressive from an international perspective and need a closer look.

These are:

- Ensure Smart Foundations
- Improve Care
- Healthy Populations

The 7 success measures of the NHS 'What Good Looks Like' Programme

- Healthy populations
- Well led
- Ensure smart foundations
- Safe practice
- Support people
- Improve care
- Empower citizens





Ensure Smart Foundations

Firstly, true digital transformation can only be enabled by ensuring the right infrastructure for data flows, creating an ecosystem that puts responsible innovation front and centre. This means establishing digital data and infrastructure operating environments that are reliable, modern, secure, sustainable and resilient. The goal is to ensure that projects, programmes and services are:

- delivered through a multidisciplinary approach
- build towards net zero goals
- meet the Technology Code of Practice
- are cyber secure by design

Our UK innovative digital health companies are delivering on this vision, when they introduce their technologies into the UK's NHS and private hospital environments.

BJSS, is one of the largest technology providers to the NHS. The company built the national system, Spine 2, which sits at the heart of all the patient identification, centralised health records and the secondary uses of data in the NHS in England.

With 50.2 million electronic patient records (EPRs), **TPP's** technology enables shared care across 7000+ hospital and outpatient services and 230,000+ users. Centralised, cloud-based and hosted on a single platform infrastructure, it's a fantastic example of an integrated EPR solution and personalised health records system.

Meanwhile, digital service delivery specialists **Difrent** are working to design, build and run user-centric digital services across healthcare and Government, ensuring public services truly meet the needs of the people they are intended to serve.

Lastly, in a move to accelerate digital transformation in healthcare in the UK, the two bodies responsible for NHS IT strategy and delivery, NHS Digital and NHSX, have been merged into NHS England & NHS Improvement. The aim here is to double down on efforts to create a more unified approach to achieving the goals of the WGLL programme.

Improve Care

Pathway transformation can help bring significant reductions in outpatient appointments, helping organisations to plug the demand-supply gap. It can also provide tools to eliminate variation across the care pathway and implement virtual services that are fit-for-purpose.

It is important to note, with hospitals striving to catch up with a backlog, digital solutions can accelerate elective recovery and support new care pathways for patients, helping to improve the provision of care.

One important contribution is AI and machine learning. **DemDX** is a pioneering diagnostics company working to provide a transparent, step-by-step machine-learning triage and diagnostic support tool aimed at improving the diagnostic accuracy and confidence of healthcare staff.

Babylon Health, one of the UK's best known digital health companies, runs the country's largest GP practice (by patient population) and having recently been publicly listed on the NYSE is set to grow its global footprint through the addition of integrated care-based solutions.

To help address the current radiology workforce crisis and give women better outcomes in their cancer treatments, **Kheiron Medical Technologies** has developed an AI breast screening solution. Their award-winning AI breast screening solution 'Mia' supports radiologists to read breast mammograms. This leading applied science company is committed to transforming cancer diagnostics through the power of deep learning.

Methods Analytics' vision, meanwhile, is to measurably improve society by helping people make better decisions with data. The company provides an end-to-end data service, putting collaboration and user centricity at the heart of their unique offering.

Healthy Populations

Empowering population-based, digitally-driven models of care is another important success measure. This requires leveraging data to design and deliver improvements to population health and wellbeing, making the best use of collective resources. It also means deriving insights from data intelligence platforms including primary, secondary, mental health and community care to improve and address health inequalities.

One of the companies at the forefront of this crucial work is **MyWay Digital Health**, who are dedicated to delivering transformative care through affordable, evidence based, data-driven, scalable award-winning solutions. With a key focus on diabetes and long term conditions, their aim is to provide knowledge, advice and data predictions to patients and health care professionals.

In terms of other health areas, **Cera Care** is a technology-enabled home care provider using digital and AI to improve elderly care services. The company has built unprecedented machine learning algorithms, allowing it to predict health deteriorations before they occur with 83% accuracy. They are creating 15 digital healthcare hubs across the UK to deliver telehealth and medication services – matching the capacity of 1,000 care homes every day.

From **Patients Know Best** and **Healthbit**, which offer patient-controlled health records, to **Elemental** with its social prescribing platform and **Congenica**, innovators of end-to-end genomics capabilities, these world-class organisations represent key areas where the UK's best innovations have something to offer globally, to address universal challenges. Representing this body of innovation in a form that can be readily accessed by an international healthcare audience poses a different problem altogether.

It has also caused populations to revisit our global norms in search of modern solutions to tackle a problem that has been indiscriminate in its trajectory across the globe.

Digital technologies have been harnessed to support businesses as they transition to the untested territories of working from home. They have also been at the heart of the public health response to COVID-19 worldwide, facilitating contact tracing, the roll-out of virtual consultations and telemedicine, while AI models have proven their weight in accelerating COVID-drug repurposing and the quest for a vaccine.

There is no denying the value that digital technology has had in enabling us to curb the effects of COVID-19, as well as the desire for global collaboration. The challenge is opening a gateway to this – and The Department for International Trade's new global campaign is offering a solution.





The UK's Refreshed and Expanded Playbook

In response, Healthcare UK, part of DIT, has created an insightful and nuanced collection of leading UK innovators and companies dedicated to exporting, ready to work in partnership with healthcare providers and organisations overseas.

In February 2021, DIT launched the #First100 Digital Health companies for international projects, and now, 9 months later, there are successful projects that have been delivered as part of this. We are now going #Beyond and expanding this to 160 UK Digital Health companies.

“The world faces incredible challenges around safe, affordable access to both health and care as well as protecting our valuable workforce. Digital Health offers us the opportunity to re-imagine health and care with new capabilities. How can we do things differently to involve citizens in their own care and empower them, reduce burden on our workforce and become more precise and predictive in our interventions to achieve the quintuple aim?”

The 160 start-ups and scale-ups featured in #Beyond100 offer a depth and rigour that health systems and citizens in other regions will undoubtedly benefit from. Innovation from the UK must meet robust standards and evidence requirements in a sophisticated market. To succeed here and especially with the NHS is a badge of honour. The expansion of the Playbook means we can offer an even greater showcase of trusted, commercially-validated technology with firms committed to safe, high-quality care for all. This means we are more likely to overcome global challenges together.”

**Dr Mike Short CBE FREng,
Chief Scientific Adviser, DIT**



Looking to create partnerships with world leading service providers and implement industry changing healthcare services today?

To access the Beyond 100 Digital Health playbook visit:

<https://eu.eventscloud.com/ehome/200208923/first-100-digital/>

The screenshot shows a webpage with a dark blue header containing the GREAT logo and navigation links: Home, Latest Articles, Beyond 100 Expanded Playbook, Covid-19 Hub, Digital Solutions, and Who we are DIT. The main content area features a large image of a digital head profile. Below this, the text reads: "Solve your healthcare challenges: Find UK Innovators with digital health solutions". A paragraph follows: "The picture of talent and innovation in the UK is a fast evolving one with new pioneers emerging daily. We hope through 'The Beyond 100 Playbook', we will reach out to those who are not just leaders in their field but are willing to find new frontiers to make an impact." This is followed by the heading "DIT launches Digital Health Playbook 'Beyond 100'" and a "Download Playbook" button. A sidebar on the right contains the text: "To be connected to UK companies and enquires: Please contact healthcare.uk@trade.gov.uk" and "If you are a UK company and would like to be considered for the playbook in the future you can register your interest here:" with a "future playbook entry request" button. At the bottom, there is a section titled "UK Digital Health – Beyond 100 Expanded Playbook" with the subtitle "UK Innovations for International Projects" and another "Download Playbook" button. The page concludes with the hashtag "#Beyond 100 Digital Health UK companies:".

Part two

Launch of the Beyond 100 Playbook

In January 2022, we have launched the #Beyond100 companies, to showcase the talents of the UK's leading digital health innovators.

Each of the 160 companies have a proven track record of benefiting the lives of healthcare professionals and patients in the NHS and private health sector. They include innovators who have driven the country's response to COVID-19, and others whose pioneering technology can address the issues facing healthcare systems across the globe. Through the #Beyond 100 Digital Health Playbook, we will reach out to those willing to explore new frontiers in building the basis for the healthcare of the future: personalised, digital by default and truly patient centric.

Organisations listed include **Foundry4**, the company that remotely delivered the UK's COVID-19 home testing service in just eight days, **DrDoctor**, a patient engagement platform provider used by over 30 NHS trusts and **IMMJ Systems**, which has provided digitised records via the cloud, to enable numerous NHS trusts to deliver virtual clinics during the pandemic.

Successful exporters like **behold.ai** who use AI for lung cancer screening to address a global shortage of radiologists and **My mhealth** apps which help patients and healthcare professionals better manage long term conditions. More recently, they developed the COVID 19 Virtual Ward App to help remotely monitor patients at risk or recovering from COVID19.

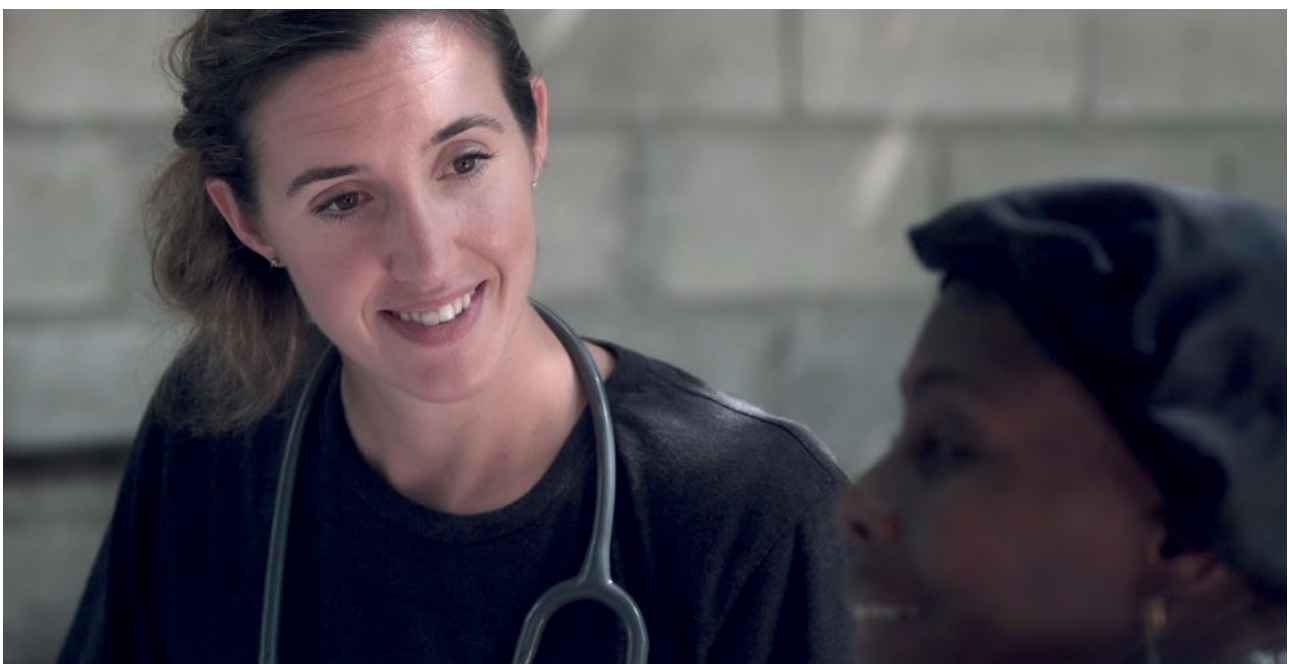
These organisations will not only help global healthcare providers recover from the impact of the pandemic, they can also build the foundation for the future of healthcare, where remote

monitoring, patient apps, AI and augmented reality become the norm. "Digital patient engagement is the key to sustainable healthcare. We have seen through COVID-19 how shifting to digital first care can help healthcare systems across the world with their toughest ever test; now there is the opportunity to not just survive, but thrive," says Tim Whicher, CEO of **DrDoctor**.

New entrants include **Cyted** which enables the earlier detection of oesophageal cancer and **Axial3D** which converts 2D images to 3D to improve clinical care.

Previous Ones to Watch firms have also advanced into the playbook like **CardMedic**, which produces digital flashcards to support communication between healthcare professionals and patients, and **Leva Clinic**, the world's first digital clinic for pain, available direct to consumers.

The campaign is backed by organisations including NHS Digital, Innovate UK, The AHSN Network, ECHAlliance (European Connected Health Alliance), techUK, Association of British HealthTech Industries (ABHI), Samsung Healthcare, Softcat plc, Wayra UK, Boehringer Ingelheim, Octopus Ventures, Public Policy Projects, Tech Nation, Scottish Development International, Health Innovation Research Alliance Northern Ireland (HIRANI), Development Bank of Wales, National Association of Primary Care (NAPC), Institution of Engineering and Technology (IET), HIMSS and Silver Buck.







#Beyond100 Playbook articulates the exportable strengths that the UK has in health tech, and showcases those that stand out for being tried and tested and most importantly, making a difference across one of the most complex health systems in the world, during its most challenging time. These companies have supported health and care professionals and patients in dealing with everyday issues and can undoubtedly benefit other countries looking to solve problems to everyday health and care challenges.

Hassan Chaudhury, Digital Health Specialist, Healthcare UK



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Department for International Trade

The UK's Department for International Trade (DIT) has overall responsibility for promoting UK trade across the world and attracting foreign investment to our economy. We are a specialised government department with responsibility for negotiating international trade policy, supporting business, as well as delivering an outward looking trade diplomacy strategy.

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