SBRI HEALTHCARE ANNUAL REVIEW 2020 | 2022

ACCELERATING INNOVATION IN HEALTH AND SOCIAL CARE FOR PATIENT BENEFIT

SBRI HEALTHCARE

NHS

TheAHSNNetwork

Accelerated Access Collaborative

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SBRI Healthcare Programme

The Small Business Research Initiative(SBRI) Healthcare is a national award-winning programme which offers development funding to innovators and entrepreneurs to devise disruptive solutions in the NHS and the wider health and social care system, tackling unmet health and care needs.

The Programme is funded by the Accelerated Access Collaborative (AAC) which brings together industry, government, regulators, patients and the NHS. It is hosted by LGC Group and supported by The AHSN Network.

The NHS Long Term Plan goals focus on areas including funding, staffing, reducing inequalities, and alleviating the pressures from a growing and ageing population.

The SBRI Healthcare Programme signals the challenges that the NHS and the wider system face in achieving these goals and invites outstanding entrepreneurs to put forward breakthrough innovations that can deliver improved outcomes of care. Individual competition themes are scoped by working in close collaboration with frontline NHS and social care staff.

Through the available funding and support from its networks, the Programme:

Improves patient care

Increases NHS efficiencies

Enables the NHS to access new innovations that solve identified health and care challenges and unmet needs

Brings economic value and wealth creation opportunities to the UK economy.

To be awarded a contract, applicants need to show the impact that the proposed solution can deliver to the health and care system, ensuring the innovation will be acceptable to patients and affordable to the NHS with the potential to shape the future of healthcare, and deploying new models of care, helping tackle health inequalities and reducing carbon emissions.

Competitions are open to any type of organisation, as long as a strong commercialisation plan is presented, including academia, NHS providers, charities and corporates, but are particularly suited to small and medium-sized enterprises.

"

The SBRI Healthcare awards are vital in enabling the NHS to foster and introduce high impact innovations to address key NHS priorities. The pioneering technologies awarded are great examples of the NHS spearheading the most forward-thinking solutions in the healthcare landscape.

Matt Whitty, CEO, Accelerated Access Collaborative

Accelerating innovations into the NHS

The UK is internationally recognised for our leadership in innovation, the excellence of our scientific institutions, and the vibrant entrepreneurial community that supports our economy.

In light of the COVID-19 pandemic, the importance of being able to find transformative, practical and timely solutions to our most challenging problems has become even more pressing.

The goal of the SBRI Healthcare Programme is to further strengthen opportunities to unlock and spread innovations in the NHS and beyond in order to tackle the major challenges we face, and to translate products and services for patient benefit by leveraging NHS England policy levers.

We aspire, by working closely with NHS England's AAC team, to increase the volume of proven innovations into the hands of clinicians and patients, and to contribute to making the NHS a great place to innovate, with patient benefit at the heart of SBRI Healthcare's mission.

SBRI Healthcare has gone from strength to strength and in the last two financial years, the Programme has:

56 Supported **ventures**

Provided enhanced support to entrepreneurs

Secured co-funding opportunities

Launched its first competition tailored to Net Zero innovations

Piloted a bespoke competition to generate evidence in real-world settings

Joined forces with the NHS Cancer Programme at NHS England and launched a competition to support implementation of innovations tackling the early diagnosis of cancer.

In the Financial Year April 2020 - April 2021

During FY 20/21, the Programme launched a new competition to tackle unmet needs in **Urgent and Emergency Care** and awarded **over £1.1 million** to twelve innovations that reduce demand and length of stay in emergency departments which have been under increased pressure due to COVID-19.

The Programme also awarded **£2.8 million** to four Phase 2 projects pioneering innovations in the fields of **Cardiovascular Diseases** and **Integrated Care and Social Care** to fast-track technologies through the next stages of commercialisation.

2 **Competitions** supported

3 **Challenges** (Cardiovascular Diseases, Integrated Care and Social Care, Urgent and Emergency Care)

10 **Phase 2** proposals assessed

4 **Phase 2** companies awarded

89 **Phase 1** applications submitted

12 **Phase 1** companies awarded

£3.9m **total investment**

URGENT AND EMERGENCY CARE (PHASE 1)

eConsult Health Ltd
Clinically-led, innovative healthcare software platforms, including eTriage (digital urgent and emergency care triaging) and eConsult (online primary care consultations)

Health Navigator Ltd
An AI-guided clinical coaching system using a nurse-led proactive care model, which remotely supports patients identified by machine-learning-based case finding

Kinseed Ltd
SwiftCare is a product to support the Unified Paediatric Advice and Guidance Service

Invitron Ltd
An ultra-sensitive diagnostic test to rapidly detect heart attack (myocardial infarction) in individuals, typically in A&E, primary care, or ambulance

Medtechtomarket Consulting
Novel, highly sensitive, simple and low cost test for both paracetamol overdose and liver damage with just a finger stick blood sample

NeuroResponse CIC
A triage, streaming and infection treatment pathways service, which offers a portal to host a care plan that clinicians see when patients call NHS 111

52 North Health Ltd
(previously NeutroCheck Ltd)
Development of a novel point-of-care blood finger-prick device, Neutrocheck, that identifies adult chemotherapy patients requiring emergency admission for suspected neutropenic sepsis

Primum Digital Ltd
Health economic evaluation of OrthoPathway, a progressive web application that provides a patient care pathway editing suite with a governance structure
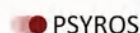
Psyros Diagnostics Ltd
A rapid, affordable, ultra-sensitive point-of-care (POC) system, to fulfil the unmet need for bedside high sensitivity troponin measurement

RAIQC Ltd
Cutting-edge clinical simulation platform that allows users to be taught and assessed for different imaging modalities ranging from X-rays to CT and MRI scans

Recourse AI Ltd
Development and evaluation of a scalable simulation-based training platform that supports independent skills-based learning for healthcare professionals in order to improve education in the community and EDs, reducing pressure on acute services and length of stay

Stream Bio Ltd
Point-of-care diagnostic test to detect heart attack biomarkers

CARDIOVASCULAR DISEASES **(PHASE 2)**

AIMES

AI-enhanced MRI measurement of heart function for speed, accuracy and prognostication

Invitron Ltd

Development of a portable device that will perform rapid, accurate diagnostic tests using just a small finger prick of bloodbiomarkers

INTEGRATED CARE AND SOCIAL CARE **(PHASE 2)**

Brain in Hand Ltd

Transforming the model of care for autistic individuals, helping them to live more independently by providing a digital solution for delivery of personalised care

Upstream Health

Helping elderly people keep well and independent both within and outside their homes

In the Financial Year April 2021 - April 2022

During FY 21/22 the programme launched a call seeking breakthrough technology solutions to support **Stroke patients** and awarded **£700,000** to nine innovations. The Programme also awarded **£800,000** Phase 1 funding to ten innovations to support the NHS to reach its **Net Zero targets**. The Programme is grateful to the Stroke Association and the Greener NHS team for their financial contribution to the competitions.

£7 million was awarded to nine innovations to progress to Phase 2 in support of **Urgent and Emergency Care**.

£1 million was awarded to three innovators tackling **Mental Health Inequalities** in **Children and Young People**, and **£3.4 million** to nine innovations working towards **NHS Reset and Recovery & New Ways of Working** to generate evidence in real-world settings (Phase 3).

It's great to see the SBRI Healthcare Stroke and Technology competition supporting innovation across three crucial areas including helping to increase pre-hospital diagnosis, enhance rehabilitation and supporting stroke survivors to rebuild their lives. These 9 projects offer an exciting glimpse at how technology can benefit patients and support stroke teams to deliver personalised care throughout every patient journey. I'm looking forward to seeing them develop across our Integrated Stroke Delivery Networks.

Dr Deb Lowe, National Clinical Director for Stroke, NHS England

3 **Competitions**
supported

5 **Challenges**
(Urgent and Emergency Care, Stroke and Technology, Delivering a Net Zero NHS, Mental Health Inequalities in Children and Young People, NHS Reset and Recovery & New Ways of Working)

89 **Phase 1**
applications submitted

19 **Phase 1**
companies awarded

12 **Phase 2**
proposals assessed

9 **Phase 2**
companies awarded

58 **Phase 3**
proposals submitted

12 **Phase 3**
companies awarded

£13m
total investment

STROKE AND TECHNOLOGY (PHASE 1)

Cognitant Group Ltd
Providing a coordinated, connected world for stroke survivors and their families through a personalised, digital support package: The 'My Stroke Companion' hub

Evolv Rehabilitation Technologies
Home-based virtual therapy platform to increase therapeutic activity and improve quality of movement for stroke patients

IbisVision Ltd
Stroke Rehab Vision testing

Imperial College London
OnTrack Rehab: Translation to practice of a novel digital rehabilitation system after stroke

Medical Data Solutions and Services Ltd
MARS – Monitoring Arm Recovery after Stroke

M-Trust Imaging Ltd
Pre-hospital stroke diagnosis and triage using full-waveform inversion of transmitted-ultrasound

NeuroVirt Ltd
Immersive Virtual Reality Games for post-stroke home rehabilitation and clinician monitoring

Odstock Medical Ltd
Two-channel neuromuscular stimulator to help improve walking and arm function for people with partial paralysis

POCKiT Diagnostics Ltd
A point-of-care blood test for the pre-hospital identification of stroke patients suitable for emergency thrombectomy treatment

"

This funding partnership with SBRI Healthcare addresses the real needs of people affected by stroke and clinicians by being informed by our Stroke Priority Setting Partnership. These ambitious projects aim to get new innovations tested and embedded in health and care systems as swiftly as possible, improving the care of stroke survivors. Improved pre-hospital diagnosis will help ensure people get the right care as quickly as possible, critical for effective stroke treatment as every minute stroke goes untreated, 1.9 million brain cells die. We know people do not get enough quality rehabilitation and long-term care after their stroke, so new innovations are needed to help people make the most of their recovery and rebuild their lives.

Dr Richard Francis, Head of Research, Stroke Association

DELIVERING A NET ZERO NHS (PHASE 1)

Apian Ltd
Medical drones to provide a safe, reliable, low-carbon alternative to current couriers

Concentric Health Ltd
Digital consent application supporting patients and clinicians to make informed, shared decisions about care and explore the feasibility of introducing carbon impact into the shared decision-making process

Elegant Design & Solutions Ltd
Envirolieve, a novel delivery system to reduce Entonox consumption enabling the same safe and effective pain relief but with dramatically less environmental harm

Green Rewards Limited
Jump, a world-first healthcare specific carbon engagement tool to motivate low-carbon decision making

Open Medical Ltd
A Cloud based workflow solution helping clinicians to prepare patients for surgery, facilitate sustainable decision making, and support recovery at home

Primum Digital Ltd
OrthoPathway is the first in a range of web applications designed to assist clinicians in making the best low-carbon decisions for every patient encounter

Rutherford Research Limited (now Revolution-ZERO Limited) - specialist surgical textiles designed for reuse with zero waste, zero carbon targeted manufacturing and reprocessing services

TCC-CASEMIX Ltd
Carbon registry to help clinicians and patients reduce carbon emissions in surgical pathways

Ufonia Ltd
Autonomous telemedicine triage to increase the sustainability of hospital referrals where clinically appropriate

YewMaker Medicine Ltd
A user-friendly, evidence-based tool to support low-carbon decision-making in medicines procurement and prescription

URGENT AND EMERGENCY CARE (PHASE 2)

52 North Health Ltd (previously Neutrocheck Ltd)
Helps rapidly identify chemotherapy patients at risk of a life-threatening complication called neutropenic sepsis

eConsult Health Ltd
eTriage is a digital triage solution for EDs and UTCs designed to automatically check-in and prioritise (triage) patients upon arrival

Health Navigator Ltd
Deploys artificial intelligence on NHS data to identify patients at risk of consuming avoidable non-elective bed days

Invitron Ltd
Portable diagnostic device to enable extremely sensitive and accurate medical diagnostic tests to be performed quickly and easily at the point-of-care

NeuroResponse CIC
NeUro is an application enabling people living with long-term neurological conditions to access expert advice 24/7 in the diagnosis and management of urinary tract infections

Primum Digital Ltd
Web applications designed to enable experts to collaborate at scale

Psyros Diagnostics Ltd
Ground-breaking single molecule counting technology that is compatible with point-of-care settings

RAIQC Ltd
Clinical simulation platform for medical image interpretation

Recourse AI Ltd
Increasing NHS workforce capacity by cutting the time required to train, assess, and upskill clinicians, pioneering a "flight simulator for healthcare"

Continued...

"

The demand for emergency care is seeing unprecedented growth. New innovations offer the opportunity to manage emergency care in a very different way, one which is sustainable and which delivers appropriate high quality care in the right setting and at the right time. The funding from SBRI Healthcare's Urgent and Emergency Care competition enables exciting innovations to help predict and avoid unplanned admissions and guide healthcare professionals through complex decisions, enabling advanced and novel ways of training staff and supporting earlier detection and management of health deterioration.

Professor Wendy Tindale, Chair of the SBRI Healthcare Panel and Director of Innovation at Sheffield Teaching Hospitals NHS Foundation Trust and Clinical Director at the NIHR Devices for Dignity MIC

MENTAL HEALTH INEQUALITIES IN CHILDREN AND YOUNG PEOPLE (PHASE 3)

BfB Labs
Therapeutic digital intervention supporting 7-12 year olds facing difficulties and anxiety

Brain in Hand Ltd
Addressing mental health inequalities by overcoming implementation barriers in mental health support: demonstrating the effectiveness of combining digital tools and human support for neurodivergent people

Tellmi
(previously MeeToo Education Ltd)
Improving equality of access to mental health support via digital peer-support

NHS RESET AND RECOVERY & NEW WAYS OF WORKING (PHASE 3)

Cyted Ltd
Cytosponge, a non-endoscopic test for the earlier detection of oesophageal conditions, in Primary and Community Care

Concentric Health Ltd
Transforming the way healthcare professionals share treatment decisions and consent of their patients. It uses industry leading technology to enable digital and remote consent, informed by patient outcomes

Definition Health Ltd
The first digital tool that covers the entire patient journey for all patients undergoing surgery

Dr Julian Medical Group Ltd
Improving Access to Psychological Therapies (IAPT) services to provide structure, organisation and enhanced patient care

MediShout Ltd
Digital Platform to improve operational efficiencies and elective recovery in NHS hospitals

Rumi Medtech Ltd
REMCARE allows healthcare organisations to collect real-time health status information from patients, enabling accurate prioritisation of waiting lists and outpatient transformation

Sapien Health Ltd
Complete, at-home digital clinic supporting people before, during and after surgery to make sustainable lifestyle changes

Ufonia Ltd
Roll out of Dora, the automated clinical assistant, to the cataract pathway

Mastercall Healthcare Ltd
Integrated Technology Enhanced Care Homes
24/7 Remote Monitoring Service

> " SBRI funding was critical in de-risking our technology, with Phase 1 enabling us to develop our first prototype in early 2021. Phase 2 funding which took us through key high-risk device development stages, and enabled us to generate the MVP of our app, helped to open the door to private investment in late 2021. The Programme has also provided additional brilliant benefits such as the opportunity to exhibit at MedTech Expo in June 2022, enabling us to generate brand awareness, build relationships with suppliers, and even to meet a new hire!

Umaima Ahmad, CEO & Co-Founder, 52North

> " All the projects we assessed were of high quality and will improve the lives of our service users and/or our staff as they are rolled out. They will make a positive difference to improving young people's mental health and/or to supporting the reset and recovery of health and care services.

Dr Liz Mear, Chair of the SBRI Healthcare Phase 3 Panel

Enhanced support for Innovators

In 2020 and 2021, two years of unprecedented challenges, the SBRI Healthcare Programme, in partnership with AAC's Artificial Intelligence (AI) in Health and Care Awards and NIHR Invention for Innovation (i4i), has enhanced its support for innovators to help maximise the potential for successful project outcome delivery at each stage of the venture journey.

Unlocking barriers: Workshops, webinar series and Investment Readiness Programme

Some activities and workshops are exclusive to applicants at early stage, such as the NICE META Tool. The NICE META Tool provides a rapid, high-level, payer-perspective assessment of medical technology products in development and helps innovators understand what evidence is needed to make a convincing case to payers and commissioners for their technology. It also provides insights into patient and public involvement and engagement (PPIE) and commercialisation.

Other activities and workshops are relevant to all the funded portfolio. Supported by excellent guest speakers and partnership organisations, the PMO arranged a series of workshops to help unblock barriers (such as regulatory, how to enter the NHS, and exporting) that hamper innovation, peer to peer sessions to facilitate knowledge sharing, and an annual investment readiness training programme culminating in pitch events to angels and early venture capital investors.

> **Setting the strategic direction was fantastic and was a side of leadership that I had not considered before!**
>
> **Julie-Ann Moreland, Participant**

> **I loved the networking section. The panel speakers were really inspiring. Really appreciated the questions to ask ourselves when making a change.**
>
> **Alice Davis, Participant**

> **SBRI Healthcare is experienced in supporting SMEs to avoid pitfalls and build a compelling value proposition for their innovation. They provided excellent key webinars to support the entrepreneurial journey.**
>
> **Nathan Moore, Founder and Director, Primum Digital Health Ltd**

Launch webinars, drop-in sessions and clinics

NICE META Tool
Webinar support on: What a good application looks like, Patient and Public involvement, commercialisation, IP, finance, impact, tailored sessions, etc.

Investment Readiness Programme, showcase event, webinar series on regulatory landscape, roadmap to the NHS, health economics, DTAC, peer to peer, Women in HealthTech Innovation Leadership programme

Case studies, annual survey and annual report

Support
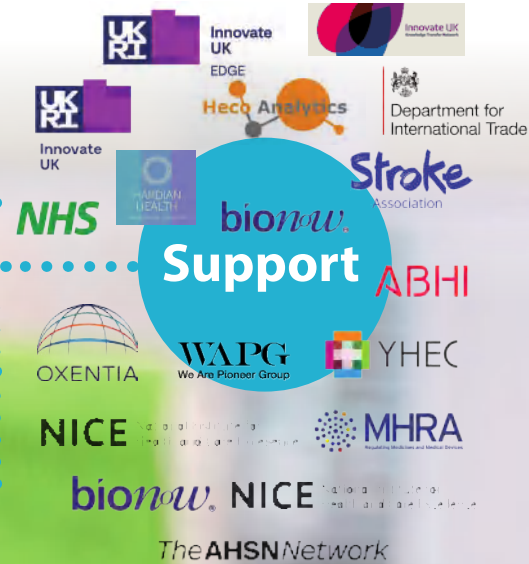
> "
>
> **The [Investment Readiness Programme] initiative was delivered by experts and entrepreneurs with real-life experience in raising investment and introduced us to several VC firms. The benefits of the training programme extend way beyond guidance on best practices for preparation and delivery of an investment pitch. Through real examples, the programme helped us understand the 'investors' view' of technology businesses and provided a fresh way of thinking about our commercial plans and objectives.**
>
> **Participant**

Empowering Women in HealthTech Innovation Leadership Programme

The Empowering Women in HealthTech Innovation Leadership Programme had two clear learning objectives, to enhance women's entrepreneurial capabilities as leaders, and to develop future leaders who will empower and drive female inclusion and representation within the workplace. Over three online sessions, 37 participants gathered to interact with expert guest speakers and each other to help develop their leadership style and skills, whilst forming a powerful network of women leaders.

SBRI Healthcare Independent Strategy Advisory Board (ISAB)

We have assembled a pool of multidisciplinary experts to advise NHS England on the strategic direction and development of SBRI Healthcare, taking into consideration the remit of the programme and the wider health and social care innovation landscape.

Mike Lewis
Professor of Life Science Innovation

University of Birmingham and Joint Director of SBRI Healthcare and NIHR i4i Programmes
LinkedIn: /michael-lewis-b22938b

Mike Batley
Deputy Director of Research Programmes

Department of Health and Social Care
LinkedIn: /mike-batley-06174b66

Ian Brotherston
Head of Public Sector Innovation Strategy

Innovate UK
LinkedIn: /ianbrotherston

Richard Deed
Associate Director of Industry

Health Innovation Manchester AHSN
LinkedIn: /richard-deed-4b945914

Stephen Edgar
Patient and Public Involvement and Engagement representative

Laura Fenner
Patient and Public Involvement and Engagement representative

Nigel Harris
Director of Innovation and Growth, West of England AHSN (now retired - to be replaced by Nuala Foley, Portfolio Lead: Commercial and Partnerships, Kent Surrey and Sussex AHSN)

LinkedIn: /nigel-harris-22033b15
LinkedIn: /nuala-foley-58b1822b

Kath Mackay
Director of Life Sciences

Bruntwood SciTech
LinkedIn: /drkathmackay

Louise Morpeth
Chief Executive Officer

Brain in Hand
LinkedIn:/louise-morpeth

Steve Morris
Royal Academy of Engineering Visiting Professorship

Bangor University

Arjun Sikand
Innovation Director

Surrey Heartlands ICS
LinkedIn: /arjun-sikand-25910013

Mark Wyatt
Investment Director

Mercia Asset Management
LinkedIn: /mark-wyatt-2533b5

Tony Young
Director of Medical Innovation

Anglia Ruskin University and National Clinical Director for Innovation at NHS England
LinkedIn: /drtonyyoung/

In Focus: Generating real-world evidence

Led by the need expressed by innovators to access funding to support the implementation of their products, in 2021 SBRI Healthcare piloted a Phase 3 funding call which was the first of its kind. Phase 3 invites innovations at an advanced stage of development to accelerate their uptake into relevant health or social care settings. Its aim is to facilitate the collection of evidence in real-world settings and build on the value proposition required by commissioners and regulators to make purchases.

There is no shortage of innovation in the NHS and the health sector more widely. The NHS has natural advantages over many other health systems including universal coverage of a diverse population, national standards, and relatively rich healthcare data. The challenge is how to diffuse innovation as quickly as possible, and have the impact seen in other industries, particularly in reshaping how clinical services are delivered.

Real-world validation of an innovation can accelerate its uptake and bring benefits to both industry and health and social care by facilitating its adoption and spread. This may be achieved by providing potential adopting organisations with an understanding of the implementation pathway and assurance of benefit delivery. Alongside this, real-world validation can support industry to generate investment and enhance a product's sales story to enable growth and job creation.

Last year SBRI Healthcare focused funding on helping address two key challenges that are at the core of the NHS;

- To help the NHS reset and recover from the COVID-19 pandemic, and establish new ways of working to alleviate the backlog of people waiting for NHS treatment and the pressure on the NHS workforce

- To improve mental health services, for children and young people, enabling access and support for disadvantaged, marginalised or ethnic minority communities.

> "
> The SBRI Healthcare programme has given us the resources to develop and deploy Dora to solve some of the major operational challenges currently facing providers across the NHS. The credibility and impetus of the programme allows an SME like Ufonia to accelerate our impact for the benefit of professionals and patients. Excitingly it has also catalysed external investment as well as interest in adoption at hospitals in Europe, Asia and North America.
>
> Dr Nick de Pennington, CEO, Ufonia

In Focus: Improving care for patients whilst working towards a Net zero NHS

Climate change has been declared a global emergency and new strategies have been implemented to tackle the crisis and reduce emissions across all sectors. In healthcare, the UK has established a pioneering position, with the NHS making a bold and ambitious statement as the first healthcare system in the world to commit to the targets of:

- Reaching Net zero by 2040 for the NHS Carbon Footprint (for direct emissions), with an ambition for an 80% reduction (compared with a 1990 baseline) by 2028 to 2032.

- Reaching Net zero by 2045 for the NHS Carbon Footprint Plus (including those the NHS influences), with an ambition for an 80% reduction (compared with a 1990 baseline) by 2036 to 2039.

Innovation plays a critical role to support the Net zero ambition, particularly with 62% of NHS emissions coming from suppliers. Working with enterprises developing breakthrough technologies, solutions, or approaches to reduce carbon emissions is pivotal to the delivery of sustainable healthcare.

SBRI Healthcare acted as a lever to support the NHS ambitions outlined in the Delivering a Net Zero NHS report and worked closely with the Greener NHS Programme and the AHSNs to launch its first Delivering a Net zero NHS funding competition, calling for innovations that improve care for patients while addressing the following challenges; (i) reducing emissions from care miles, (ii) reducing emissions from surgical pathways, (iii) reducing nitrous oxide emissions and (iv) tools to support low-carbon decision making. Awarded entrepreneurs (see page 11) were supported by the SBRI Healthcare Programme Management Office and the NHS Greener Team through a range of workshops, including Sustainable Procurement and Data & Analytics, to help generate a carbon impact assessment and develop a sustainable value proposition.

> **"**
>
> **It was fantastic to see the wide range of organisations engaged with the first Net Zero focused SBRI Healthcare competition. Innovation is key to developing new tools and technologies to deliver a Net Zero NHS and investment will encourage action, reduce the costs of decarbonisation across the sector, and improve health and care now and for generations to come.**
>
> **Dr Nick Watts, Chief Sustainability Officer, NHS England**

"

Delivering a Net Zero NHS is a key ambition to tackle within the Healthcare system and it was great to see so many diverse innovations applying to the SBRI Healthcare programme to make an impact on carbon emissions and align themselves to the NHS ambitions and more generally, commit to sustainable changes. We've seen some innovative digital tools that will ultimately drive reduction in care miles or that can be used as educational materials to enable greener decision making.

Dr Glenn Wells, former Director of Strategy and Planning at UKRI Medical Research Council, now Chief Partnerships Officer at the MHRA and Chair of the SBRI Healthcare Panel

In Focus: NHS Cancer Programme pilot

Endoscope-i
Telescopic referrals to streamline and increase efficiency for managing the Head and Neck 2WW cancer pathway

Open Medical
Pathpoint Cancer Initiative – Scaling and evaluating interoperable cloud clinical pathway management solutions to optimise referral, triage and diagnostic workflows

Orion Medtech Ltd C.I.C
Applying a cancer care toolkit for improving time from diagnosis to treatment by adapting existing digital technology and processes

Pinpoint Data Science
Optimising NHS urgent cancer referral pathways with an AI-driven, affordable blood test for triage and prioritisation of symptomatic patients

The Newcastle upon Tyne Hospitals NHS Foundation Trust and Newcastle University
Dissemination of the Newcastle MSI-PLUS assay for Lynch syndrome screening and therapeutic targeting

The Royal Marsden NHS Foundation Trust
Liquid Biopsies for faster diagnosis of Pancreatic and Biliary Tract Cancers

The Royal Marsden NHS Foundation Trust
Whole body MRI for Inherited Cancer Early Diagnosis (ICED)

Qure.ai Technologies Limited
AI assisted Chest X-ray triage for improving diagnostic efficiency and early detection of lung cancer
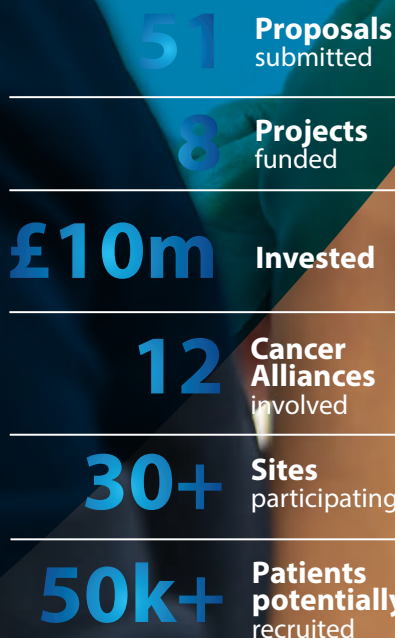
The NHS Long Term Plan (LTP) set the ambitions for cancer; that by 2028, an extra 55,000 people will survive cancer for five years or more, and 75% of people will be diagnosed earlier, at stage one or two. SBRI Healthcare supports the NHS LTP and progress towards its goals on the level of referrals, diagnosis and treatment across cancer pathways. These goals have been impacted by the Covid-19 pandemic, requiring even more urgent and timely action.

In 2021, the NHS Cancer Programme at NHS England joined forces with SBRI Healthcare to identify and fast-track mature innovations into the NHS to see how they can benefit patients by detecting cancer early and improving the efficiency of diagnostic services, in a real-world setting.

The NHS Cancer Programme Innovation Open Call marks the beginning of a series of multi-million pound funding opportunities, in support of the LTP cancer ambitions. The support of Cancer Alliances and The AHSN Network will play a key role in enabling spread and adoption.

The competition attracted 51 applications from the open market and in early 2022, eight winners were announced.

51 Proposals submitted

8 Projects funded

£10m Invested

12 Cancer Alliances involved

30+ Sites participating

50k+ Patients potentially recruited

"

There has never been a more exciting and inspiring time to work in cancer research and treatment. The NHS is an incredible organisation, providing joined-up healthcare to an entire nation through a single system. This affords us with a unique opportunity to partner with experts in academia and industry, and bring the latest innovations in early cancer diagnosis and intervention to patients quicker.

Professor Richard Gilbertson, Chair of the NHS Innovation External Advisory Board

"

The companies and hospitals pioneering these innovative ideas are leading the way, and will help us to diagnose cancer earlier when it is easier to treat – potentially saving thousands of lives. The development funding, which is part of our open call initiative, is just one of many opportunities to attract and fast-track high quality innovations into the NHS, supporting the ambitions of the NHS Long Term Plan and vitally, improving care for our patients.

Professor Peter Johnson, Clinical Director of the NHS Cancer Programme

Academic Health Science Networks' (AHSNs) support

The 15 regional Academic Health Science Networks (AHSNs) that make up the national AHSN Network have supported SBRI Healthcare since the programme's inception in 2009.

AHSNs work with health and care businesses and individual innovators to help realise the potential of their ideas. Their unique role is to bring the NHS, care, research and industry together, so that more people can benefit from the very best innovative solutions, and to create economic growth. The AHSN Network exists to transform the way the NHS identifies, adopts, and spreads innovation. They operate simultaneously as a single national network, and as 15 locally embedded and integrated organisations with strong partnerships at Place and Integrated Care System (ICS) level. AHSNs support the rapid 'importing and exporting' of innovations, and have created a national pipeline of more than 1,200 proven technologies that can be matched to local health and care needs.

The AHSNs collaborate with the SBRI Healthcare Programme Management Office to design competitions to attract innovations that respond to specific health and social care needs. Their health innovation teams engage industry to apply; contribute to the selection process; and they continue their relationship with successful companies to ensure maximum level of traction within the NHS and social care system.

The AHSNs have provided comprehensive support to SBRI Healthcare competitions as well as assisting with webinars for innovators and participating in the SBRI Healthcare Independent Strategy Advisory Board.

"

The Oxford AHSN has been a key driver of our patient and public involvement and engagement work led by Dr Sian Rees who is the Director of Community Involvement & Workforce Innovation at the Oxford AHSN. Through this we have been able to work with a diverse group of individuals including seldom heard groups and underrepresented communities, ensuring that patients' concerns and ideas are built into our product so we can be as inclusive as possible.

Dr Nick de Pennington, CEO, Ufonia

"

We have worked closely with the Eastern AHSN since 2019 who have championed Neutrocheck® and opened opportunities including to present to over 30 medical directors in the region. Our more recent collaboration with Eastern AHSN under our SBRI Healthcare Urgent Care award, enabled us to hold a workshop with NHS procurement and ICS leads, and subsequently to build a template NHS Trust-perspective business case for Neutrocheck® to facilitate commercial adoption.

Umaima Ahmad, CEO & Co-Founder, 52North

> **Our partnership with AHSNs has enabled us to conduct real-world evaluation studies by bringing together experts, sharing local data around population health and inequities, establishing partnerships with local services and enabling the study processes.**
>
> Manjul Rathee, CEO and Co-founder, BfB Labs

IMPACT TO DATE

INPUT

OUTPUT

OUTCOME

IMPACT

£**600m+**
Private investment leveraged

1 IPO
(£15m+ raised)

3 acquisitions

Improved patient care

Increased efficiency in the NHS

£109m+
Total invested

265
Products supported

162
IP granted

936
New collaborations established

18,810
Sites accessed through trials or sales

1,776
Jobs created /retained

81
Companies with commercial revenues

47
Products exported

67
Companies with sales in the NHS

>7.2m
Patients involved through sales and trials

Enabled the NHS to access innovation

UK economic growth

Forward look

Going forward our commitment is to further leverage the SBRI Healthcare Programme's reputation for developing and scaling innovations at pace into the NHS, the social care system and the wider market. We aspire to unblock the barriers that hamper entrepreneurs' ability to accelerate innovations into clinical practice, ensure the Programme becomes instrumental to achieving NHS England goals as well as Governmental objectives (such as the **Life Sciences Vision**), and continue to create synergies across funders and the wider innovation ecosystem to facilitate innovators' journeys.

WE WILL SUPPORT REAL-WORLD EVIDENCE GENERATION

Evidence-based and cost-effective interventions can sometimes fail to be implemented into routine health and social care practices and generation of evidence to support innovation uptake, adoption and spread is challenging. Gathering high-quality evidence in 'real-world' settings to demonstrate the feasibility and practicalities of implementation is vital to enable rapid and confident adoption and scaling up of high-value technologies that accelerate delivery of patient benefits and healthcare efficiencies. The Programme will continue to further consolidate its support in this space through SBRI Healthcare Phase 3 funding and the NHS Cancer Programme Innovation Open Call.

WE ARE COMMITTED TO DRIVING THE NHS AMBITION TO NET ZERO

In 2020, the NHS became the first health system in the world to commit to reaching Net Zero targets. Since 2010, the NHS has reduced its emissions by 30%, thanks to steps taken across the workforce – but more transformation that continues to improve quality of patient care while also reducing carbon emissions is required in every setting. The Programme will continue to invest in developing breakthrough innovations to accelerate action and ensure the best outcomes for patients whilst reducing carbon emissions. By working in close partnership with Greener NHS and The AHSN Network we will launch our second Net Zero competition and we will explore how to best assist innovators to measure the environmental impact of their solutions and the data and tools they have available towards their assessment.

WE WILL HELP IMPROVE DIVERSITY AND INCLUSIVENESS, AND DECREASE HEALTH INEQUALITIES

Whilst life expectancy is growing for some, it has stalled or is falling for others. People in the most deprived areas develop long-term conditions 10 to 15 years earlier than the general population and those with a learning disability or severe mental illness die a decade or more earlier (Dr Neil Churchill, NHS England, 2019). In 2021 NHS England launched the **Core20PLUS5** initiative to reduce health inequalities at both the national and system level. The Programme is committed to unleashing innovations that can help deliver equitable healthcare and benefit the most vulnerable groups of society and deprived communities.

Meet the Business Entrepreneurs

A spotlight on the SMEs, their innovations, and the impact they're having on patients.

MyWay digital health

Debbie Wake
CEO, MyWay Digital Health

 @MyWayDigital
 debbie.wake@mwdh.co.uk
Product name:
MyWay Diabetes/ MyWay Clinical
Available to buy at:
www.mwdh.co.uk (contact debbie.wake@mwdh.co.uk). Also on the following frameworks: g-cloud, HSSF, LPP DPS

www.mywaydigitalhealth.co.uk

BfB LABS

Manjul Rathee
CEO and Co-founder, BfB Labs

 @BfB_Labs
 manjul.rathee@bfb-labs.com
Product name:
Lumi Nova: Tales of Courage (includes the Hub)
Available to buy at:
BfB Labs (hello@bfb-labs.com)

www.bfb-labs.com

Ufonia

Nick de Pennington
CEO, Ufonia

 @ufoniahealth
 ndep@ufonia.com
Product name:
Dora

Available to buy at:
ndep@ufonia.co; ls@ufonia.co

www.ufonia.co

tellmi

Kerstyn Comley
Co-CEO, Tellmi (Formerly MeeToo)

 https://twitter.com/tellmi_helps
 tom@tellmi.help
Product name:
The Tellmi App (formerly MeeToo)

www.tellmi.help
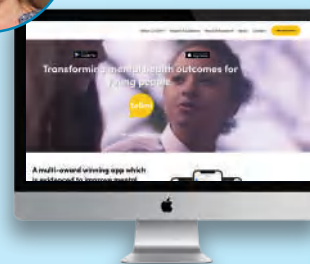
Nathan Moore
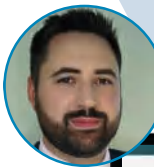Founder and Director,
Primum Digital Ltd

✉ contact@primumdigital.com
Product name:
CrossCover
Available to buy at:
G-Cloud 13, LPP Health and
Social Care Apps DPS

www.crosscover.co.uk

Umaima Ahmad
CEO and Co-founder, 52North

🐦 @52NorthHealth
✉ info@52north.health
Product name:
Neutrocheck®

www.52north.health

Tim Barker
CEO, Kooth Plc

🐦 @kooth_plc
✉ ceo@kooth.com
Product name:
Kooth (for 10-25 years),
Qwell (for 18+), Kooth Work
(for corporates)

Available to buy at:
koothplc.com

www.koothplc.com

Ash Kalraiya
Founder and CEO, MediShout

🐦 @MediShout
✉ ashish.kalraiya@nhs.net

www.medishout.co.uk
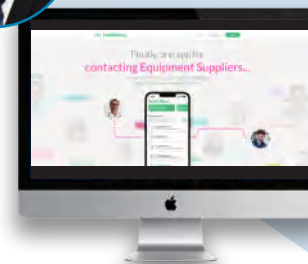
Unleashing innovations into the NHS for enhanced patient care

MyWay digital health

Competition: GP of the Future - Self-care

An end-to-end, cost-saving, data-driven, digital solution for people with diabetes and healthcare teams.

10% of the world population has diabetes which can lead to blindness, heart attacks, strokes and amputations. These complications are entirely preventable through good self-management and early medical intervention but cost £2.5 trillion pa globally. Better management of non-communicable diseases, person-centred care focusing on preventative strategies, and digital/ data driven solutions, strongly align with the NHS Long Term Plan.

MyWay Digital Health (MWDH)'s flagship digital product, MyWay Diabetes (MWD) (previously

MyDiabetesMyWay (MDMW)) integrates healthcare data - driving record access, personalised, automated advice, home monitoring support and education for people with diabetes. MWD was scaled nationally in Scotland and is now deployed globally. MWD demonstrates significant improvements in metabolic outcomes (HbA1C, cholesterol, blood pressure), reductions in emergency admissions/ long term complications, and significant cost savings (ROI of 5:1 with 10 year estimated savings of >£300m if scaled across the UK).

MyWay Clinical (MWC) is a complementary clinician facing disease management system for individual and population management with tailored advice and risk prediction.

MWDH supports equity of access through accessibility best practice, delivery of content tailored to different cultures and languages, and easy-to-read materials. The team work with local organisations to support low digital/ health literacy needs, and data-driven risk tools help prioritisation of care for vulnerable populations. MDMW and MWD collectively run across the entirety of Scotland and in more than 25% of NHS England regions (Greater Manchester, North East/ North West London, Somerset, North West Coast (L&SC/ C&M)). MWDH also delivers NHS England Type 1 diabetes education nationally through mytype1diabetes.nhs.uk, and operates internationally with active projects across the Middle East and Malaysia.

It's a substitute for seeing a diabetic nurse

Patient using MyWay Digital Health

IMPACT

» CE marked

» Received additional public funding, including IUK Digital Health Catalyst Award (complete April 2022) (~£1m), Artificial Intelligence in Health and Care Award and NHS England Test Bed (deployment in Greater Manchester)

» Generation of >£ 1m annual revenues from sales to the NHS

» Secured new contracts (NHS England national mytype1diabetes.nhs.uk site, and 6 x large regional NHSE contracts; covering around 28% NHSE coverage)

» Reached a large volume of patients through real-world testing and sales (over 1 million education site users, ~100,000 patient data access registrants in UK)

» Reached regional adoption

» Exporting in the rest of the world (office in UAE and contracts in the Middle East and Malaysia)

» Demonstrated return on investment (the health service will get back about £5 for every £1 spent)

» NHS Innovation Accelerator and Clinical Entrepreneur Alumni

» Winner in the HealthTech category of the 2021 Digital Leaders Impact Awards

» Listed in the Department for International Trade top 100 healthcare companies for export

Competition: Children and Young People's Mental Health and Mental Health Inequalities in Children and Young People

Evidence-based, accessible, and data driven Digital Therapeutic intervention (game-based)

Half of all mental disorders start by the age of 14, yet up to 70% of children and young people don't get access to timely, appropriate support. The demand for support has been increasing with an 81% surge in referrals since the pandemic - highlighting the challenges to current models of support, and leaving services under tremendous pressure. Exposure therapy is the most effective element of CBT (recommended by NICE) but

provision is sporadic as children and young people often don't meet treatment thresholds or they face long waiting times.

Lumi Nova: Tales of Courage is the only CE marked Digital Therapeutic intervention (game-based) providing instant access to therapeutic best practice in the form of psychoeeducation and exposure therapy, empowering children and young people - as young as 7 - to self-manage their anxiety, preventing escalation & long term disorders.

Lumi Nova has been designed to be accessible. It can significantly improve

access to therapy for children and young people from the poorest and rural households by providing instant, safe, remote and flexible access without constant clinical supervision. It doesn't need constant internet connection and is available for free for end users.

Lumi Nova is non-stigmatising and has representation of different gender identities, faiths and disabilities in the user's environment.

It delivers value at every point in the care pathway and provides a return on investment of up to 8.5x, leading to potential overall savings to the NHS of £55m per annum.

IMPACT

- » Launched in Sep 2020
- » Currently used by NHS and social care organisations and voluntary sector frontline providers (rolled-out across 18 regions in the UK) at multiple points across care pathways
- » CE marked, regulated by the UK's MHRA as a safe-to-use Class 1a medical device and registered with Therapeutic Goods Australia (TGA) clearance received, exclusion applied

- » NHS DTAC compliant, DSP Toolkit published
- » Partnerships with the University of Reading, MindTech, Greater Manchester Mental Health NHS Trust, Norfolk and Suffolk NHS Foundation Trust, University of Manchester, BAFTA, Eastern AHSN
- » Currently running two implementation studies focused on tackling health inequalities experienced by children and families from poor socio-economic backgrounds and

those living in rural areas

- » Awards:
  - National Children & Young People's Awards 2022 and 2021 - Finalist
  - Health Tech Digital Awards - 2020
  - UK App of the Year - 2020
  - Children's App of the Year - 2020
  - LaingBuisson Primary Care & Diagnostics Awards - 2020

LUMI NOVA
TALES OF COURAGE

> **"**
> With SBRI's support we were able to present ourselves as a credible provider, creating over 40 employment opportunities and building partnerships with AHSNs, NHS Trusts and academic bodies too. Without this support, we would not have been able to achieve our success in such a short span of time.

Manjul Rathee, CEO and Co-founder, BfB Labs

Maisie's anxiety left her crying in bed before school.

> **"**
> I didn't think I would be able to overcome my fear, but I think I have! It's helped me feel like if I do have another fear then I can easily overcome it by setting myself challenges. It's a really good game. I don't think I would have been able to have done it without it.

Ruby, BfB user

Stimulating new models of care to help the most vulnerable population categories

Ufonia

Competition: NHS Reset and Recovery & New Ways of Working

Increasing clinical capacity through AI-driven voice automation of routine clinical appointments.

Ufonia's technology, Dora, is the first UKCA marked Artificial Intelligence-driven automated clinical assistant that can conduct routine clinical conversations via telephone.

Dora is an automated telephone voice assistant that can conduct a natural language conversation with patients. Dora is delivered to patients by a regular telephone call and no high technology is needed for the patient to use the system.

An ageing population and increased expectation are putting increasing demand on healthcare services. Staff can face burnout and need to deliver high-volume workloads, driving

increasing costs for providers.

The COVID-19 pandemic has exacerbated the demand and capacity mismatch due to the widespread cancellation of elective care creating a backlog of clinical work.

Preliminary work suggests Dora is able to reduce the clinical burden on staff by reducing the number of patients who require follow up with a clinician. It allows clinicians to be redeployed to higher value activities in the care pathway, where their skills, insight and empathy can be best utilised.

In addition, where the service has been implemented, providing follow up over the telephone reduced the risk of COVID-19 transmission from face-to-face reviews, and freed up hospital space which was at a premium due to

social distancing measures and lack of capacity for increasing patient demand.

Dora can also support the NHS's Net Zero ambitions. Preliminary carbon footprint modelling shows that Ufonia's technology may be able to reduce the carbon footprint of Head & Neck cancer consultations by 120x - the reduction in face-to-face consultations could save up to 78 tonnes of CO2 equivalent (CO2e) annually in one region, and up to 10,000 tonnes of CO2e if rolled out across the UK.

IMPACT

» CE marked and UKCA marked

» Best in class FHIR integration

» Rolling out across 13 NHS Trusts in the UK to automate clinical conversations ranging from end to end cataract, to long-Covid calls

» Initial study presented at conferences internationally and won Best Poster award at UKISCRS and ACSRS (Washington DC)

» NIHR AI Trial shortly to be peer review published

» Partnered with the Centre for Sustainable Healthcare and working on maximising Ufonia's impact on the triple bottom line to meet Net Zero targets

» The product is accessible in the UK as well as globally - scaling with inbound demand into North America, and with interest in adoption from hospitals across Europe and Asia

Ufonia

Autonomous clinical conversations

नमस्ते   Hello

Transforming healthcare
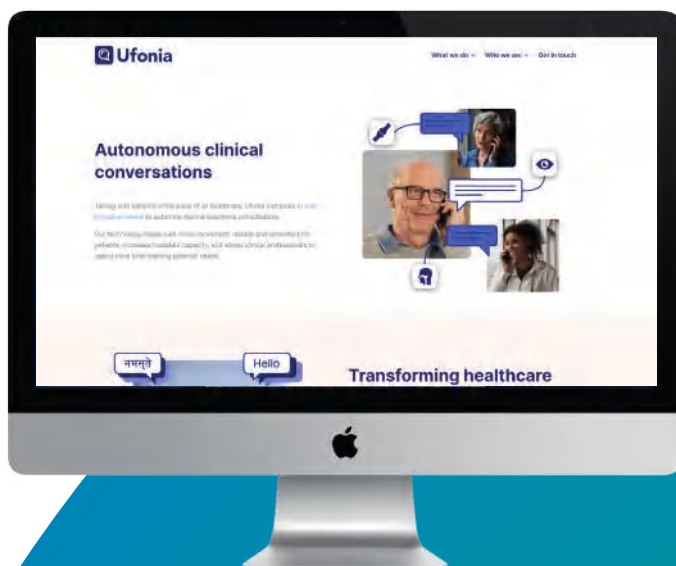
> " Every time I choose Dora because it seemed not to be a waste of time. [It is a] wholly unnecessary exercise to get up and get in the car, aim to be at the hospital at a certain time, find a parking space and all that goes with all that… Dora seems an ideal way as I can see it, of eliminating the vast majority of calls which will be from people saying "yes I'm fine, I've got no side effects.

Cataract patient
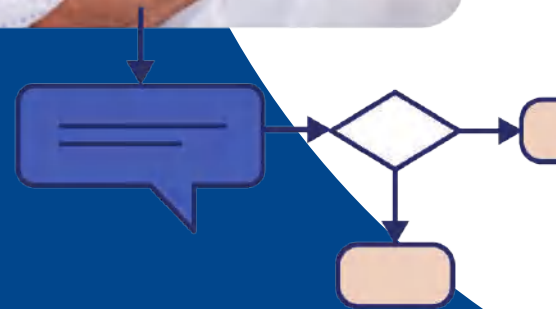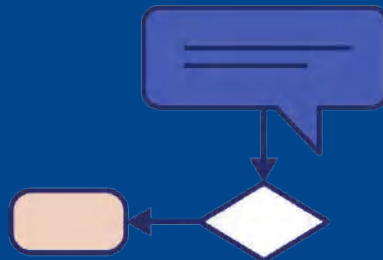
> " Since we have had patient feedback we've realised that Dora is delivering the standard of care that we think is appropriate for our patients. It was fantastic when we came into contact with Ufonia. I cannot see how we will be able to look after these patients without innovations such as this.

Miss Sarah Maling, Consultant Ophthalmologist, Buckinghamshire Healthcare NHS Trust

Competition: Mental Health Inequalities in Children and Young People

The Tellmi app addresses health inequalities and is transforming mental health outcomes for young people.

In England one in six of 10 million young people aged 11-25 has a serious mental health disorder (MHCYP, 2020). With 1.8 million young people needing support, scalable mental health solutions are urgently needed.

Tellmi is a multi-award winning, anonymous, pre-moderated, peer support app which has been used by 77,700 young people aged 11-25. Its 100% pre-moderated peer support model is safe, scalable and effective. In 2021, an independent evaluation by University College London found statistically significant evidence that using Tellmi improved mental health in young people.

Anonymity makes it easier to seek support and Tellmi is already reaching young people who are under-represented in mental health support; Boys (35%), Asian (11%), Black (3%), Mixed race (7%), In-care (2%), Foster-care (1%), ADHD (19%), autism (16%), learning difficulties (11%), LGBT (59%) (Tellmi survey, 2021).

IMPACT

» 77,700 registered users

» £1.2m from investors raised

» Data shows that young people in Greenwich have already interacted with the app over 1000 times

» Completed a successful pilot with Somerset CCG which enabled 542 young people in the county to access mental health support

» Independent evaluation by the Evidence Based Practice Unit at UCL on 876 young people found statistically significant evidence of improved mental health; young people using the Tellmi app felt better and less alone, and had increased confidence and connectedness which led to better mental health self management

» Winner of 'Digital Mental Health Solution of the Year' at the 2022 Health Tech News Awards

> "
> Working with Tellmi has been a real eye opener in terms of the services available to children and young people across London. Tellmi has shown great initiative in its work towards supporting our young people who face so many challenges and the drive to continue to help, support and guide is very inspiring.
>
> Rachel Burrell, CYP Commissioning Manager for South East London

> **SBRI Healthcare funding has enabled us to offer support to 77,700 young people under 24 in Greenwich; 50% are from Black and minority ethnic backgrounds and 50% live in low income households. Engaging all communities is fundamental to the success of any early intervention solution. SBRI Healthcare funding has enabled us to market through education, healthcare and community venue partners as well as billboard advertising to reach underserved communities.**

Dr Kerstyn Comley, Co-founder and Co-CEO, Tellmi

> **Can I just say how glad I am to have found this awesome community that has made me feel better about myself and reminded me that I'm not the only one experiencing the things that I'm experiencing. Thank you all for this kind and caring community!**

Tellmi user, aged 16, Greenwich
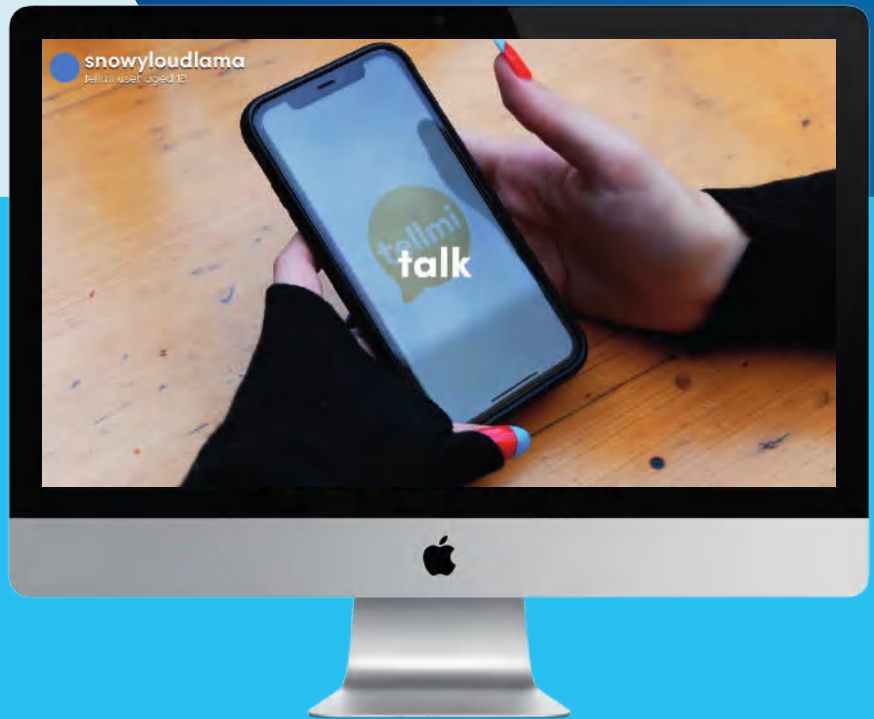
> **I didn't particularly want to die, I just didn't want to live like I was. I was talking to absolutely nobody. I didn't have anybody. Help always felt just out of my reach. I was barely sleeping, barely eating, I was self-harming. I had nobody to turn to. Then Tellmi came along. Those people made it feel like suicide wasn't the only way out. You could be yourself without having anyone else judge who you are and what you look like and what you've done. That's something so rare. A community that is loving and caring towards one another. Tellmi is honestly such a safe haven for people with those kind of mental health issues. Without Tellmi I'm not sure I'd be here.**

Tellmi user, aged 16, Greenwich

Supporting companies' growth and wealth creation in the UK and overseas

PRIMUM DIGITAL **CrossCover**

Competition 17: Urgent and Emergency Care

CrossCover enables experts to deploy best practice pathways into the core workflow of all NHS staff.

It is challenging to translate consistency of best practice into the everyday patient workflow of NHS frontline staff. CrossCover is cloud-based and provides a complete clinical pathway development and operations platform. It supports NHS leaders to design, build, test, deploy and monitor optimal clinical decision support pathways across an integrated primary and secondary care system.

Patients get the right decisions made for them first time with minimal waste of NHS resources. The platform has been deployed across 8 NHS Trusts, supporting the optimal pathways of care for over 80,000 NHS patients. An optimised pathway is evidenced to save the NHS £100 per patient and improve the quality of patient care.

The initial module, OrthoPathway, which covers Musculoskeletal problems has optimised workflows mapped out for 21% of all NHS activities, and optimised workflows for 20 other specialties are being developed. OrthoPathway brings best practice use up from 27% in usual care to 96%, reduces consultation times by 40%, reduces the chance of an unnecessary referral or investigation by 80% and reduces the carbon cost by 3kg CO2 per patient.

IMPACT

» Reached 80,000 patients through real-world testing and sales

» Net Zero friendly - Saved over 600,000 care miles to date

» Potential to save the NHS £2 billion per annum

» Purchased by 8 secondary care sites and 24 minor injury units

» Health economic assessment suggests:

  • a saving of £100 per patient. The average Trust will use the platform on 150 patients per day

  • a reduction of fracture clinics by up to 50% and elective outpatient appointments by up to 70%

» Available for Procurement on the G-Cloud 13 Framework

» Nathan Moore (CEO) is an NHS Clinical Entrepreneur Programme alumnus

"

The support from SBRI Healthcare has helped to grow our team by 300% over one year and accelerated our growth as a company by around 5 years. We have sped up our regulatory compliance enabling us to build and deliver more complex features. We are on track to save the NHS £2 billion a year in the next 3 years.

Nathan Moore, Founder and Director, Primum Digital Ltd

52North

Competition 17: Urgent and Emergency Care

The Neutrocheck® device and digital platform improves safety and quality of life for patients undergoing chemotherapy.

Neutropenic sepsis (NS) is a life-threatening medical emergency occurring in chemotherapy patients whose immune systems are suppressed by treatment. It kills three people in England and Wales every day. Whenever chemotherapy patients feel unwell, NICE guidance requires immediate A&E attendance, where patients receive intravenous antibiotics, undergo full blood testing, and take up a hospital bed, all in case they have NS.

This pathway has two problems: (i)~1 in 2 patients turn out never to have been at risk of NS, and did not necessarily need to go into A&E, and (ii)~ 1 in 2 patients do not receive antibiotics within the acceptable timeline (1-hour), risking lives.

Neutrocheck® is a low-cost, portable medical device and digital platform which enables patients to carry out a finger-prick blood test at home, to provide information on their risk of NS through measurement of neutrophils and CRP (a sepsis marker). Built with the support of Macmillan Cancer Support and the UK Sepsis Trust, the Neutrocheck® result enables doctors to more safely and effectively triage patients.

Each year in the UK, this solution could prevent up to 50,000 A&E visits, saving ~2.4m kgs CO_2eq by halving delays in antibiotic provision, save up to 400 lives, and save the NHS tens of millions of pounds.

It is expected that Neutrocheck® will be available to patients through the NHS from 2024.

IMPACT

» Raised £1 million of private funding
» Created 3 new jobs and expanded 5 existing jobs
» Involved 40 patients in testing and evaluations
» Involved 40 healthcare professionals in the development of a new clinical pathway

> **By enabling us to complete significant R&D, SBRI Healthcare's support has been instrumental and has unlocked opportunities including private investment. We are now much closer to bringing Neutrocheck® into the hands of patients so we can make their healthcare journeys safer and better.**
>
> Umaima Ahmad, CEO & Co-Founder, 52North

Umaima Ahmad and Dr Ama Frimpong, 52North

Umaima, Chief Executive Officer and Co-founder of 52North has been selected as one of Management Today's 35 Under 35, celebrating women in business.

Dr Ama Frimpong, Head of Product Development won the IET Young Woman Engineer of the Year Awards 2022 and was selected as one of the WES Top 50 Women in Engineering 2022 in the Inventors and Innovators category.

> **We're proud to be working closely with 52North and supporting Neutrocheck: a product we believe could make a transformative improvement to patient outcomes and experience of care. As the first NHS-anchored venture fund, we're pleased to be supporting the company alongside SBRI Healthcare.**
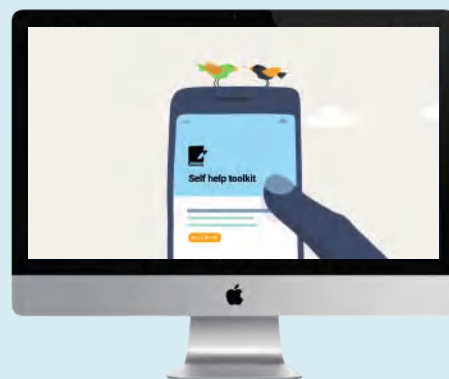>
> Daniel Dickens, KHP Ventures (Investor in 52North)

In conversation with Kooth (previously XenZone)

Competition: Children and Young People's Mental Health

Kooth provides a welcoming space for effective, personalised digital mental health care, accessible to all.

Tim Barker, CEO at Kooth, joined the company in 2020 after a 30 year track record helping build and grow startups and scaleups. "What deeply impressed me when I first came across Kooth (as it still does today!), was that Kooth has been a catalyst and advocate for digital mental health support for over 20 years. The breadth and depth of expertise within the organisation is incredible." His job now is to take this expertise to help Kooth deliver on its vision to make effective, personalised, mental health support accessible to everyone.

Tell us about Kooth Plc. What was the inspiration for the business?
Kooth was founded way back in 2001 with the simple vision that you could use the internet to transform mental health care in three ways. Firstly, to make support accessible to everyone. Secondly, to tackle the stigma in seeking help by making Kooth an anonymous service, and thirdly, to empower people in their wellbeing journey by giving them choice and autonomy over what support they want, on their own terms.

What do you believe gives Kooth Plc an edge over its competitors?
Providing a safe, effective service at scale is not easy. We've established Kooth as a trusted, safe service that operates at nationwide scale. In addition, the volumes of data we've acquired on our journey give our commissioners unique insights into the changing trends and mental health issues within their local population, something which is becoming increasingly valuable given the stresses and strains on the NHS.

What has been the most difficult or challenging part of growing your business?
The hardest part has undoubtedly been establishing digital as a legitimate channel for mental health support. This alone took the first decade of Kooth's existence. Today, there's no debate about it, especially when supporting Gen Z/Millennials who were 'born digital'.

How has SBRI Healthcare supported your business?
We received an SBRI Healthcare grant award in 2019 to develop and evaluate our peer support programme. We were able to scale up our activities section of peer support, and increase the value of what we provide. We also completed our first full scale independent mental health and economic outcomes study with the London School of Economics Care Policy and Evaluation Centre. This has also led to a health economic benefit study of Kooth by York Health Economics Consortium that is able to demonstrate the cost savings Kooth provides the health system. All this work has helped us increase the recognised importance of peer support for mental health in NHS commissioning.

In 2020 Kooth Plc became the first digital health services company to float on the London Stock Exchange. Tell us about your journey and the key lessons you learnt about setting up and scaling a business.

The rationale for floating on the London Stock Exchange was to raise capital to invest in the long term growth of Kooth in the UK and overseas. Scaling a business during the 'time of COVID' has bought its own challenges: building and maintaining the culture in a fast growing, remote organisation is much harder. Ensuring effective communications (both top down, and across departments) is more challenging. One of the first things we did in response is to purposefully define our values, communications approaches, and key company-wide missions to align everyone across the organisation as we grow.

What advice would you give to an entrepreneur just starting out about how to grow their venture?
One of the things that worries me when I look at entrepreneurs is the growing mindset of raising as much capital as you can and growing as fast as you can (at all costs), before you exit/flip the business to someone. Having gone through the VC to exit journey several times myself, my advice is to "go slow to go fast." You have to love the journey, don't focus on the destination. Consider your entrepreneurial journey as a decade-long adventure. You have to enjoy the

IMPACT

» Chosen by 90% of commissioners in England (incl. 32 London boroughs)

» Reach in Wales and Scotland

» 215,000 user access in 2021

» Released new products for adult and corporate support

» London IPO in 2020 (initial market cap £66m), raising £26m

» Expanding to the US market

» Winner of the Tech for Good Award in the 2021 UK Tech Awards

problem you are working on so much that you are willing to wake up every day for a decade to focus on solving it. Raising capital too early brings its own problems. It's for this reason that I was so impressed with Kooth. They spent 15 years bootstrapping the business and building incredible depth of understanding in what they do before raising capital.

How does your technology contribute to tackling health inequalities and ensuring more equitable access to care?

One of the incredible advantages we have at Kooth is we can provide equity of access through digital to a whole population. In comparison, traditional 'place based' services cannot reach everyone economically. In addition, as an anonymous service, we help tackle stigma for individuals that may be less likely to use traditional mental health services.

What does the future hold for Kooth?

For us, the opportunity is to continue to expand Kooth to deliver a personalised, welcoming service to reach the 1-in-5 of the population that need mental health support every year. To get there, we see the huge potential to apply AI to the vast data lake that we've built over the last decade to personalise Kooth to an individual's needs and help them get the most appropriate support, fast. The future for Kooth looks more like Netflix, not a chatbot counsellor!

Driving efficiencies improvement in the NHS

MediShout

Competition: NHS Reset and Recovery & New Ways of Working

Digitising and improving theatre communication and processes. Translating efficiency improvements into fewer cancellations and improved theatre capacity to support elective recovery.

MediShout's innovation transforms hospitals into digitally smart environments, saving time for staff and improving operational efficiency. It uses digital technology to help reduce elective waiting lists and tackle the two main bottlenecks that cause delays and cancellations in theatres; kit availability, and wasted theatre time from poor communication.

Theatre Communication Tool - The MediShout app coordinates workflow and communication between ward and theatre staff enabling faster start times, fewer delays and reduced downtime between cases.

Equipment Availability Platform - The platform ensures hospitals have the right kit at the right time, preventing delays and cancelled operations. It combines data from elective scheduling lists and uses AI and Smart-prioritisation to predict trauma load. This data is passed to the equipment management teams and sterile services.

IMPACT

» Sites: Used in 4 hospitals - Broomfield, Basildon, Southend, Braintree (MSE NHS Trust)

» MediShout was part of Microsoft's AI for Social Impact Programme 2021

» Ash Kalraiya (CEO) is an alumnus of the NHS Innovation Accelerator

» Raised a £1 million seed round, led by Episode 1 Ventures

» Partnered with Mid and South Essex NHS Trust Orthopaedic theatres across four hospital sites to co-design the solution with end-users

> "
> Since we have started using MediShout to log our Estates, Equipment and ICT issues we have had a much more robust oversight of these issues affecting our service delivery and are able to easily identify outstanding tasks and chase with the relevant service teams.
>
> Ian, Paediatric Ed Matron

Notes