

# NHS MARKET ACCESS 2021 ACCELERATOR

May to December 2021



#thehillMAA www.thehilloxford.org





## For your diary

#### Daily times - except where indicated

 09:15 to
 Registration and 09:30
 10:30 Break 11:00
 12:00 Lunch 14:00 Break 13:00
 14:00 Break 14:15

| 16 Jun  | Understanding the NHS  | 09:30 - 15:30 | Early stage        |
|---------|--|---------------|--------------------|
| 17 Jun  | Understanding the NHS route to adoption  | 09:15 - 16:00 | Growth stage       |
| 24 Jun  | Drop in session #1   | 09:30 - 15:00 | Both stages        |
| 29 Jun  | Programme partner presenations   | 10:00 - 13:00 | Both stages        |
| 14 Jul  | Market validation  | 09:15 - 14:00 | Early stage        |
| 15 Jul  | Market validation to entry   | 09:15 - 14:00 | Growth stage       |
| 19 Jul  | Special - Financial modeling   | 09:30 - 11:00 | Both stages        |
| 22 Jul  | Drop in session #2   | 09:30 - 15:00 | Both stages        |
| 11 Aug  | Quality management systems and regulatory compliance for the medical device industry | 09:45 - 16:30 | Both stages        |
| 18 Aug  | Drop in session #3   | 09:30 - 15:00 | Both               |
| 23 Aug  | Investor drop in session   | 10:00 - 15:00 | Both               |
| 25 Aug  | Early stage - Investment pitch support   | 09:30 - 15:00 | Early stage        |
| 26 Aug  | Growth stage - Investment pitch support  | 09:30 - 15:00 | Growth stage       |
| 8 Sept  | Business modelling   | 09:15 - 16:00 | Early stage        |
| 9 Sept  | Scaling your innovation or product   | 09:15 - 15:15 | Growth stage       |
| 20 Sept | Drop in session #4   | 09:30 - 15:00 | Both               |
| 29 Sept | INVESTOR SHOWCASE  | 10:00 - 14:00 | Selected companies |
| 6 Oct   | A healthcare perspective with the Oxford AHSN  | 09:15 - 14:00 | Both               |
| 21 Oct  | Drop in session #5   | 09:30 - 15:00 | Both               |
| 3 Nov   | Understanding the structures of Oxford University<br>Hospitals NHS Foundation Trust  | 09:15 - 15:15 | Both               |
| 2 Dec   | Graduation and successes   | 18:00 - 21:00 | Both               |
|         |  |               |                    |

<sup>\*</sup> Detailed session breakdown to follow. Please note that some times and sessions could change, with as much notice as possible to minimise inconvenience. Updated versions of the schedule will be available on the MAA Companies page on our website.

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## Velcome

# NHS MARKET ACCESS 2021 ACCELERATOR

#### Megan Morys-Carter

Director

A warm welcome to all our accelerator participants. We're excited to welcome 28 companies and individuals across the two cohorts this year, after a particularly competitive application process.

We believe you and the other digital health companies we support can bring genuine value, efficiency and improved patient outcomes to the NHS. As such we're looking forward to providing you with the knowledge and connections you need to successfully develop and implement vour solutions in our National Health Service. Over the next seven months, you'll be hearing from experts in regulation, reimbursement, data management, procurement and evidence generation, as well as business support and accountability through your dedicated mentors.

One of the most valuable parts of any accelerator programme is the networking, and I urge you to take full advantage of our digital health ecosystem, our partners, sponsors, connections and TheHill team itself, as well as of course the rest of your cohort. Of particular note is our recent transition to being fully embedded within Oxford University Hospitals NHS Foundation Trust\*, which we hope will become the beacon site or pilot location for a number of your innovations.

I'd like to take this opportunity to thank the team at TheHill for once again bringing together a comprehensive programme of support and finding you, a promising group of digital health innovators. to benefit from it. We are delighted to be with you in taking this next step on your journey.

#### Abdul Gufar

Accelerator & Digital Innovation Programme Manager

I am excited to be working with you for the duration of our accelerator programme. Working closely with the team at TheHill we have designed a six month programme of workshops, specialist speakers, introductions and access to a broad range of expertise to give each one of the you the platform and the opportunity to scale your business towards commercial readiness and having a positive impact on the health and care sector.

TheHill Market Access Accelerator is a great opportunity for you to learn about the different structures within the NHS and how decisions are made for the adoption of new technology within the different trusts especially OUH. Our pool of highly qualified and experienced mentors will work alongside you to offer one-to-one support and help you achieve your expectations

I. and the whole team at TheHill are here to support you every step of the way.

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of the programme through a

If you have any questions or need help with any aspect hesitate to be in contact.

of the programme, don't

<sup>\* &#</sup>x27;Oxford University Hospitals NHS Foundation Trust' is referred to as 'OUH' through the rest of this publication.



Supporting innovators **Enabling innovation in healthcare** 

## Programme

## Partners

This year our MAA is supported by a range of sponsors, and we will be adding to these over the course of the programme.









To discuss sponsorship and partnership opportunities for 2021 or 2022, please contact our Partnerships Manager, Melanie Blanksby.

melanie.blanksby@ouh.nhs.uk

# Mentors

# NHS MARKET ACCESS 2021 ACCELERATOR







Samir Ali Khan











Zeeshan Akhtar









Joyeeta Das









Flavia Popescue

Phil Wakefield







Nick de Pennington



















# The Team

# NHS MARKET ACCESS 2021 ACCELERATOR

## **Key contacts**



Abdul Gufar Market Accelerator Manager



Adele Carvalho
Digital Innovations Officer



**Key contacts** 

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Partnership enquiries

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**Tech issues** 

Speak to Marc Marc.Huglin@ouh.nhs.uk



Megan Morys-Carter



Dave Nurse
Digital Innovation Manager



Jim Gabriel Innovation Advisor



Marc Huglin
Operations Manager



Melanie Blanksby Partnerships Manager



Stefania Schino
Grant Development Officer



Mirella Lingwood



Sara Cocomazzi Clinical Engagement Manager



Bonny Jennings Communication Designer

## **Meet TheHill MAA 2021 companies**

## **01** BeneTalk



#### Introduction

There is no 'gold standard' for speech therapy for stuttering. Speech therapy is expensive and not always available and it has to be highly customised and therefore not everyone benefits from speech therapy.

Traditionally speech therapy is delivered in amounts of time which are too short for individuals to learn and practice effectively.

Because most speech disorders are chronic, it isn't easy to maintain progress without ongoing support throughout a person's lifetime.

#### Attending from our team

- Jordi Fernandez, CEO
- Koen Vos, CTO
- Hugo Abreu: Lead Software Engineer
- Yasmin Baba:, Product Manager
- Dr. Ronan Miller, Researcher
- Willemijn Bolks, UX/UI designer and illustrator

#### Our solution

BeneTalk enables the user to learn and practice speaking techniques at any speaking opportunity. It combines:

Personalised Digital Therapy:

- Inexpensive pocket speech therapy, so users can learn speech techniques without the long waiting lists and inequality associated with the existing "postcode lottery".
- Customised treatment based on personal goal-setting user profiles.

Speech Tracking Technology:

- Listens to the user's speech during any conversation and gives immediate audio or visual feedback on the speech techniques being learned.
- Enables objective monitoring of user progress over time just like a fitness tracker, but for speech.









## **02** Demexo

#### Introduction

Digitisation of audits, focused on Infection Prevention Control, enabling them to be undertaken more regularly with action based outcomes to drive improvements, resulting in the reduction of infections within hospitals and saving time for the clinical team.

#### Our solution

Demexo is an app based software solution. It brings together the ability to undertake audits (with templates loaded), supported with infection prevention and control training information, and an historical view of all IPC audits against an individual creating an IPC passport that clinical people can transfer to new organisations, reducing training burden and costs and releasing time to care.





## **03** Dorothy App

#### Introduction

As dementia progresses, a person's understanding of their world and ability to express their needs decreases. At the same time the number of care locations and interaction with those they don't know increases. Not only is this distressing, it reduces agency for people living with dementia as their needs often cannot be fully met. Families are often far away with access to low quality information on their loved one's wellbeing.

As one third of dementia carers suffer from depression this is also has a significant personal and economic impact.

Telemetry data and augmented reality reduce dementia carer burden by increasing levels of independence in places of care, while increasing the core network, without the need for changes in care infrastructure.



#### Our solution

Dorothy.app will initially target the 10% of dementia sufferers who use a walker (1 million in the USA and Europe) transforming it into an augmented reality based assistant that sends real time activity information directly to a patient using a tablet computer. It allows family to both communicate with, and remotely check on the wellbeing of their loved one.

Dorothy uses computer vision and augmented reality to rapidly map new environments, helping orientate a person with dementia in new environments. Dorothy uses the tablet as a biosensor, to provide meaningful real-time location and activity data. With these data, the right information can be given at the right time to the carer who can schedule the care, thus reducing both the information and time burden.

Dorothy is not only accepted by those with dementia it also encourages autonomy, particularly important in a condition where over half of the users also have language impairment. In time, with enough data showing accurate levels of activity we hope to be able to predict problems before they happen, so reducing the acute care burden.

- Ilya Rybin, Co-founder
- Dr Samir Shah, Co-founder







## **04** Exigence

#### Introduction

Employee engagement, wellbeing and productivity.

#### Attending from our team

• Glenn Wallis

#### Our solution

We have the world's first voice-based Al coaching platform, which allows the user to build bespoke voice-to-action conversations that improve engagement, productivity and wellbeing.

Al coaching is aimed at organisations seeking positive behavioural changes, that increase engagement, productivity and wellbeing.

The customisable software platform can be adapted for the specific needs of an organisation team at an individual level.









### **05** FluoretiQ

#### Introduction

There has been no innovation in urinary tract infection (UTI) testing for 50 years and GPs are currently reliant on empirical antibiotic use supported by lab results 72 hours after the consultation.

With continued empirical antibiotic use, resistance rates will continue to rise and front-line agents are at increased risk of losing their efficacy. PHE studies have shown that 50% of antibiotics are unnecessarily prescribed as a risk mitigation strategy for the elderly with complex comorbidities in UTI.

Combined with the expectation that the elderly population will double in size by 2050, there is foreseeable demand for a fast, inexpensive and easy-to use diagnostic to reduce this significant cost to UK healthcare systems.

#### Attending from our team

• James Preece, Product Manager

#### Our solution

We have developed *NANOPLEX* technology, an advanced 15-minute test to diagnose urine bacterial infections.

Our solution packages *NANOPLEX* into a compact hardware and single-use cartridge system that can be used at the point of care to promote evidence-based prescriptions within the course of a GP consultation.

We will target improvements in the diagnosis of UTIs in elderly patients by promoting evidence-based prescribing. This will help the NHS meet antibiotic stewardship targets and significantly reduce preventative hospitalisation of this 'at-risk' age group.

This is a game-changing technology that will significantly benefit the NHS and patients when translated into a functional product.

fQ









### **06** Glissanda Ltd

#### Introduction

Point-of-care ultrasound (POCUS) is a rapidly developing field in which clinicians perform basic, structured ultrasound scans of patients at the bedside as part of their clinical assessment. This has the potential for significant benefits for patients, both by aiding in the rapid diagnosis of certain serious or lifethreatening conditions, and enabling advanced diagnostics outside the hospital environment. Traditional departmental ultrasound scans have an established ecosystem of supporting software and systems to generate and store reports of scans. This does not exist for the emerging field of POCUS.

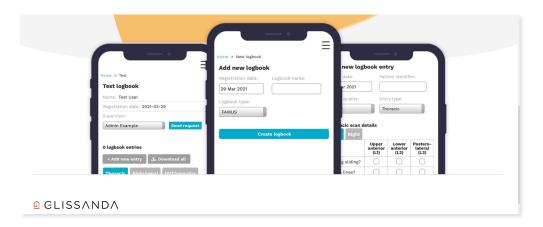
Scans are currently reported on an *ad hoc* basis, and are rarely or inconsistently recorded in the patient's health record. POCUS practitioners keep a separate logbook of scans on paper which is difficult for a mentor to review as it requires a physical meeting.

#### Our solution

This solution provides an intuitive interface for generating and storing structured reports for POCUS scans via an always available website/app that can be accessed both in and out of hospital. Reports are automatically uploaded to the electronic patient record, satisfying the regulatory requirements for clinical governance, and facilitating improved patient care. Scans are maintained as a logbook for the POCUS practitioner which allows for mentor review of the clinician's scans so improving training, and ultimately benefiting patients by improving utility of POCUS scans.

#### Attending from our team

• Dr Oliver Madge, Founder









## **07** Matthew Gardiner

#### Introduction

The equipment and consumables needed for a particular operation are usually requested too close to the time surgery takes place. This leads to delays and cancellations, disorganisation, inefficiency, incomplete requests for kit, and wastage. It also places additional stress on theatre and WHO check staff.

#### Attending from our team

• Matthew Gardiner, designation.

#### Our solution

A 'theatre equipment prescription' enables the surgeon to select equipment when booking a patient for an operation, and subsequently amending this prescription as needed.

Our innovation is an app/EHR plugin which uses machine learning around the equipment required for a particular case and surgeon over time. It links to the theatre inventory and is able to make suggestions and highlight clashes. It uses the GP1 barcode standard.

The benefits of this solution include improvements to patient safety, waste levels, working environments and efficiency in ordering, stock management and the management of theatre equipment.







## **08** Occuity

#### Introduction

In many areas of healthcare it is necessary to draw blood or contact the patient in order to make a screening, diagnosis or monitoring test.

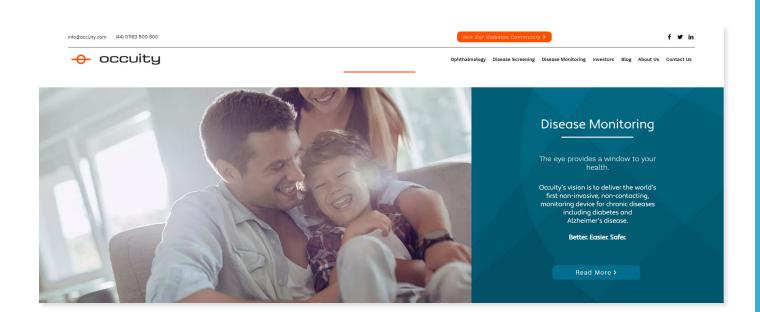
#### Attending from our team

• Dan Daley, CEO

#### Our solution

Occuity's mission is to create a range of non-contacting handheld devices which can be used for either non-clinical screening and measuring, or personal monitoring for diseases such as diabetes and Alzheimer's Disease.

Occuity's non-contacting optical technology allows many parameters to be measured without the need to draw blood or even touch the patient.









## **09** Quentin Ainsworth

#### Introduction

Managers tend not to have the expertise necessary to perform sophisticated modelling with already-familiaruser interface to answer questions about their services.

Examples of this include:

- the effects (in terms of intensive therapy unit and ward capacity, nurse skill-mix profiles, staff and equipment costs) of taking on new workload, or changing workload.
- how changes in capacities might affect the ability to provide services
- Identifying whether there are aspects of scheduling that optimise bed usage
- predicting staffing needs in the future if particular workloads are undertaken today
- costing the business case for new services, or tendering for commissioned opportunities

#### Attending from our team

• Quentin Ainsworth, designation

#### Our solution

Our digital innovation is software that imports an existing time-series excel model to use as a template for scenario modelling. This is generic in that any time series model can be imported for use, the scenarios then being based on the subject of the imported model.

In an obvious healthcare use for example, the Excel template would be for bed state and capacity modelling, costing.





## 10 RespiTrain

#### Introduction

Forty percent of critically ill patients need to be ventilated, which translates to up to 20 million patients worldwide per year. When patients are ventilated, the respiratory muscles rapidly atrophy, causing Ventilator-induced diaphragmatic dysfunction (VIDD). This leads to a doubling of patients time on the ventilator, increasing the risk of complications and mortality. Prolonged mechanically ventilated patients are estimated to cost the US healthcare system more than \$60bn annually.

As there are no universal standard protocols, the process of weaning varies from clinician to clinician. The lack of data on the actual respiratory muscle strength on weaning has resulted in significant uncertainty and controversy on the best methods for conducting this process.

#### Our device

RespiTrain, is a complete respiratory solution that trains weakened respiratory muscles, providing feedback to both the patient and clinicians on progress

in order to personalise weaning protocols. This in turn will aid decision making regarding suitability of the patient for weaning and eventual extubation from the mechanical ventilator (MV).

RespiTrain is non-invasive and eliminates ventilated time by safely stimulating the respiratory muscles, keeping them active to ensure they are strengthened during ventilation. We are leveraging recent research that shows that artificial intelligence has the potential to improve the management of weaning and reduce uncertainty. This allows for much quicker weaning, less complications and could lead to better quality of life of the patient on discharge.

- Myra Malik, Co-founder
- Mihir Sheth



## 11 Apian

#### Introduction

We're trying to solve a set of problems we ourselves face. Timely and reliable delivery of supplies and pathology tests depend on road congestion. Overstocking of medical devices, pharmacy and healthcare consumables wastes money. Duplication of compound pharmacies and device sterilisation use hospital staff and space. Air pollution by the NHS accounts for 5% of all UK road transport emissions.

#### Our solution

We use drones to make people and the planet feel better. We're gathering evidence to measure how much this automated, ondemand, just-in-time delivery platform impacts care pathways, levels-up care and improves the quality of patient lives. We believe every patient should be able to access healthcare in a smarter, faster and cleaner way.

Apian will improve health with smarter, faster delivery, save money by consolidating clinical services and reduce pollution by using less fossil fuel.

#### Attending from our team

• Harry Howe, BDM







## 12 Better Medicine OÜ

#### Introduction

Cancer is the second leading cause of death in the world and the source of immense economic burden (ref: WHO). Efficient diagnostics is the key to preventing many deaths and subsequent expenses.

Evaluating cancer dynamics is a timeconsuming task for radiologists requiring manual mapping and measuring of malignant lesions across multiple sequential CT studies. More complex abdominal cases can therefore take 20-60 min to report.

As the number of cancer patients increases steadily, the number of CT scans is growing, while the number of trained radiologists has stagnated. This poses a threat to the accessibility of radiology services.

By speeding up radiology workflow, as well as making it more accurate, we aim to reduce both growing demands on the radiology workforce and waiting times for patients, while improving quality of care.

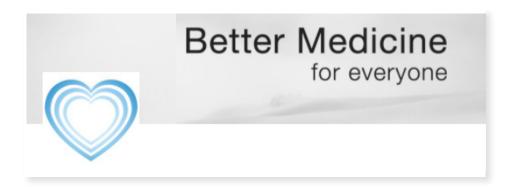
#### Our solution

We use AI combined with the best possible user experience for radiologists to automatically assess the dynamics of tumours.

We plan to target a broad range of cancer types in the full-body CT of a patient. We fit into existing workflow and we'll free up to 50% of the time spent on the evaluation of cancer dynamics.

Our tool *OncoSense*, will find, measure and classify even hard to detect lesions, reduce error rate and ease reporting with autogenerated standardised reports to be validated by the radiologist.

- Priit Salumaa, CEO & Founder
- · Martin Reim, Chief Medical Officer
- Bohdan Petryshak, Chief of Al Engineering
- Dmytro Fishman, Chief Science Officer







## 13 Cardiolyse

#### Introduction

Cardiovascular diseases are the number one cause of death in the world. Unfortunately, there are additional challenges in healthcare, which are hindering their prevention.

Heart health analytics is a time-consuming, costly process, subject to potential human error and no risk stratification. This leads to delayed patient diagnosis, which in turn delays treatment and increases the risk of deterioration.

Post-discharge patients lack followup, resulting in a significant lack of risk stratification and missing progress feedback, which can lead to patient readmission.

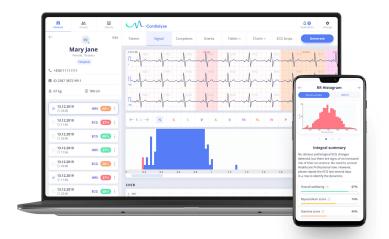
Additionally, during the pandemic isolation chronic patients have missed their muchneeded regular health checkups, causing delayed treatment and possible health risks. WHO etimates that, 69% of chronic care has been disrupted.

#### Our solution

Cardiolyse is a cloud based ECG & HRV analytics platform, that enables real-time remote heart health monitoring and providing simple personalised reports, detection and up to two months' data-based prognosis on dangerous heart events. The mission of the company is to serve greater longevity and prevent heart disorders for elevated heart risk groups through innovative and clinically proven predictive algorithms.

#### Attending from our team

• Normunds Daudiss, CBDO







## 14 Concentric Health

#### Introduction

Consent to treatment is a key element of healthcare, with the consent form a required document for every procedure and major treatment. Medical practice increasingly understands the importance of patients being equal partners in the decision making process.

But, delivering truly informed, shared decision making is a major challenge for the medical profession, and presents an opportunity for the transformation of the experience and outcomes for 300 million patients each year.

#### Attending from our team

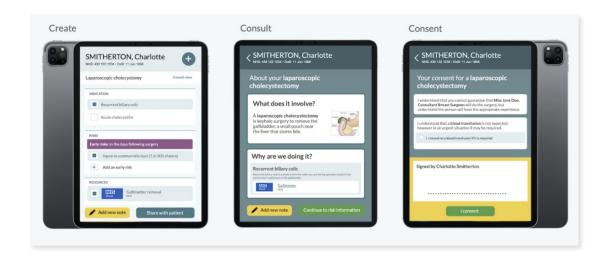
• Dr Dafydd Loughran, CEO

#### Our solution

Concentric is a digital consent and shared decision making web application which transforms the paper based process of giving consent. Our mission is to transform how decisions are made about our health.

Our digital innovation is based on these indicators:

- Decisions are informed by patient outcomes, and shared by patient and clinician.
- Evidence-based information, which is personalised to the individual, is available across the specialties to facilitate a shared conversation, and support understanding both within and outside the consultation room.
- Remote consent functionality supports fully remote pre-treatment pathways.







## 15 Happyr Health

#### Introduction

Chronic pain affects the mental health of young people. It requires continuous and complex self-management which often fails.

Teens with chronic conditions and their families need support which is often lacking.



#### Our solution

We support teens and their families by identifying treatment plans and lifestyle changes, and matching them with psychological exercises.

Through a dragon story and gamification, we turn self-management into an adventure and increase treatment retention. Symptoms, medication and emotion diaries are filled in by parents and patients who are rewarded through the game.

Doctors can improve data-driven diagnosis and treatment. Based on inputs and personality, we match psychological interventions with the highest individual effectiveness. We reduce trial and error and fit into the busy family lives while monitoring the child's mental health.

- Cornelius Palm, CEO & Co-founder
- Nicola Filzmoser, CPO



## 16 Heuristik Health

#### Introduction

Patient identification errors are the problem our solution addresses.

#### Attending from our team

- Antxon Caballero, CEO
- Amaia Bolinaga, CDO
- Nerea Fontecha, CIO)
- Ruben Lopez, Project Manager
- Antonio Esteban, Sr. Ai developer
- Ricardo Rivero, Sr. Ai developer
- Miguel Gutierrez, Head of Al

#### Our solution

Heuristik provides fast and effective solutions for management of health staff and patient portfolios. The company is focused on the implementation of solutions in identified healthcare areas to improve health entities' logistics and patient identification procedures.

This technology seeks to eliminate patient identification errors by combining fingerprint recognition and Al. The solution is ideal for managing Covid- 19 patients by quantifying positive patients coming to the hospital and tracking them through fingerprints. In addition, real-time data are obtained, including vaccine stock monitoring and patient post-vaccine evalutation.









## 17 Hexarad Group Ltd

#### Introduction

The Richardson Report and GIRFT review identified the problems with efficiency of workflow management and limited capability of assessing capacity and demand in radiology. The GIRFT report recommended all NHS Trusts should have a dashboard showing capacity and demand within two years.

#### Attending from our team

- Dr Amy Davis, CCO
- Dr Farzana Rahman, CEO
- Dr Sam Dumonteil, CFO
- Dr Jaymin Patel, CCO

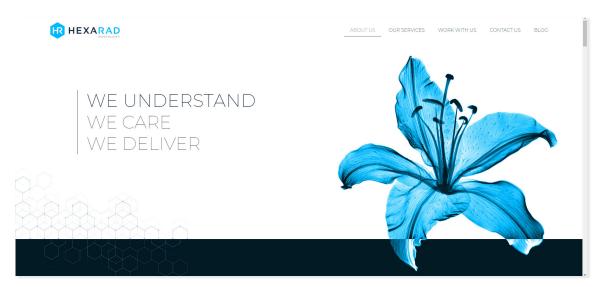
#### Our solution

We have built a proprietary software solution for our Teleradiology business to automate the management of radiology scans from source to the reporting radiologist. This enables the most efficient use of resources, reduces scan to report turn-around-time and improves the accuracy of the radiologist reports by providing them with studies they are most confident in reporting.

Our product provides that dashboard as well as the ability to manage the workflow of scans to ensure the fastest turnaround time possible. It will also allow business planning for workforce shortages and need for radiology support.

We are also able to adapt our product for use by radiology departments to manage radiology workflow across imaging networks.

Currently there is no equivalent product on the market.









## **18** iLof

#### Introduction

Many diseases for which there is no treatment are heterogeneous and complex, with treatment that does not work homogeneously across populations. Tools are needed to stratify the population based on different biological profiles, to facilitate the development of appropriate treatments for each profile.

In addition, many large-scale clinical studies have been suspended or canceled, due to lack of promising results, or budget and risk issues. This has happened for many neurodegenerative diseases, and is the case especially for Alzheimer's disease. Drug discovery cost for Alzheimer's is double the average.

There is a need for tools that make the drug development experience more humane and convenient for the patients, while making the process significantly more efficient and flexible for the industry.

#### Our solution

iLoF uses a patented platform technology, based on AI and photonics, to build a digital library of nano-scale disease biomarkers and biological profiles. We collect "fingerprints" from nano-scale structures in blood and provide personalized, screening and stratification tools in an affordable, fast, portable way. This transforms drug discovery for heterogeneous diseases such as Alzheimer's, making it comfortable for the patient and efficient for the industry.

We save up to 40% of the total costs for screening and 70% of the time spent screening for clinical trials. By providing a blood based tool, we transform the patient experience and make trials convenient and patient-centric. This also ensures at the outset that patients who enroll in the clinical trial have the right biological profile for the study.

#### Attending from our team

• Dr. Mehak Mumtaz, Co-Founder & COO









## 19 inHEART

#### Introduction

The vision for this technology is to replace diagnostic catheters with pre-operative imaging to make these interventions much faster; two hours instead of five, and more effective; 90% success instead of 60%.

#### Attending from our team

- Jean-Marc Peyrat, CEO & co-founder
- Richard Bloch, Clinical & Sales Support Specialist

#### Our solution

We aim to make complex and suboptimal cardiac catheter ablations much simpler, faster and more effective. Our software solution transforms preoperative medical images (CT/MRI) into a detailed digital twin of the patient's heart with information to help identifying targets for cardiac catheter ablations.

The resulting 3D models can be used to plan interventions, and can also be integrated into existing navigation systems to assist ablation.





## • Growth stage

## 20 NEVARO

#### Introduction

Around 275 million people worldwide suffer from anxiety. Covid-19 has increased the number of those dealing with mental health issues and many do not have access to proper care. Geographically mental heathcare varies greatly, with only 15 to 20% of patients accessing traditional treatment methods.

Current treatment methods, including psychotherapy and pharmacology lack objective and accurate data measures, and efficacy of these approaches can be highly variable.

In addition to the cost to the individual's personal life, mental health is of increasing concern to businesses with burn out, anxiety and other mental health issues affecting productivity and staff turnover.

# Personal Residence of the Company of

#### Our solution

NEVARO takes an holistic approach to managing and prioritising mental health. We also prioritise analytical processes, improving our product through measuring indicators related to this issue.

HOLI is a omobile app that acts as a personal trainer for the brain. It allows for the management of employees' mental health and wellbeing through clinically validated and gamified coping methods. The journey is quantified and personalised to the user via physiological biofeedback signals and emotional digital biomarkers, acquired via the smartphone sensors or external wearables using our proprietary algorithms. Our solution also allows the user to assess their state of wellbeing based on an holistic model of life. The company leader or human resources department can have access to a report regarding employees' mental health, wellbeing, and burnout levels.

- Rita Maçorano, Co-founder & CEO
- Francisca Canais. COO
- Hugo Ferreira, CMO, Medical and CSO
- André Manso, CTO
- Miguel Lopes, CPO
- David Magboulé, Lead Advisor for Marketing and Strategy





### 21 Patienteer

#### Introduction

The nature of the busy environment of a hospital results in multiple 'siloed' staff groups, working simultaneously. Handoffs between roles and services can become sporadic or disorganised, with direct communication opportunities a challenge. This makes it difficult to assess the status of each task and who needs to do what next.

These factors can put patient safety at risk, negatively impacting and affecting the working environment of staff.

#### Attending from our team

- Craig Burke, CEO
- Ross Sommerville, Director Strategy & Operations
- Troy Haddon, CTO

#### Our solution

Patienteer is a clinical workflow and task management system that is built on industry principles of LEAN manufacturing methodology to optimise patient care and flow through hospitals.

Integrated with existing Electronic Medical Records (eMR) *Patienteer* extracts, cleanses, and turns the data into clinical and operational tasks, that in defined order create workflows.

Our proprietary algorithms translate 'the not' into 'what to do next' for each patient; dynamically adjusting every few minutes to consider patient volume, patient condition, time of day, available resourcing, and many more inputs.

This approach applied to managing and coordinating services ensures patients don't need to stay longer than need be, whilst improving patient turnover, care, and flows.







## 22 Perfexia Health Technologies

#### Introduction

The NHS Long Term Plan stipulates the provision of remote GP consultations to every patient by 2023/24.

A major challenge for remote consultation is how to conduct clinical examinations such as those for vital signs, including heart rate, respiratory rate, heart rate variability, peripheral tissue oxygen saturation and systolic and diastolic blood pressure.

#### Attending from our team

- Pratyay Poddar, Charman & CEO
- Angad Sandhu, SVP

#### Our solution

We have built a mobile app - DocMe®, which uses advanced smartphone sensors to extract vital signs from a selfie, in real-time with medical-grade accuracy anytime, anywhere.

Additionally, *DocMe* consolidates data from third-party health apps already in use, providing an objective source of health information.

DocMe brings essential health information to one place and can facilitate a faster, more comprehensive clinical assessment of a patient.

It has the advantage of protecting healthcare staff from the risk from Covid-19, through face-to-face interaction.









## 23 Perspectum Ltd

#### Introduction

Hepatobiliary diseases affecting the biliary and pancreatic systems often present with similar clinical signs and symptoms.

Diagnosis of damage to these systems currently relies on blood tests and ultrasound which are often unable to detect the disease. Because of this, more advanced diagnostics are required which are more expensive, invasive or subjective. There is therefore a need for more accurate, standardised and quantitative tools to assist in the detection of subtle changes to the flow of bile, development of cysts and other morphological changes that can result in poor clinical outcomes.

#### Our solution

Perspectum has developed *MRCP+*, an Alenabled image processing software that enhances conventional three-dimensional MRCP images to yield digitised visualisation and quantitative modelling of the biliary tree. *MRCP+* improves the current standard of care by providing clinicians with more accurate, objective and comprehensive assessment of the bile ducts, pancreatic duct and gallbladder, enabling better informed decision making in hepatobiliary disease. *MRCP+* leverages existing major MRI systems that are able to acquire standard 3D MRCP images, and is delivered at scale through software as a service that integrates directly into clinical workflow.

Adopting MRCP+ in the care pathway will result in better clinical decision support in the evaluation of hepatobiliary disease and bile duct cancer, which will in turn improve patient care and result in substantial cost savings for the NHS.

#### Perspectum 😂



- Keri Hildick, Commercial Strategy and Market Access Lead
- Marija Mavar, Product/Commercialisation Specialist
- Amanda Chin Senior Business Development Manager







## 24 Radiobotics

#### Introduction

There are not enough radiologists to cope with the ever growing need for medical images. This leads to delays in diagnosis and treatment.

Unavailability of experts also leads to misdiagnosis, with a high cost for both patients and hospitals.

#### Attending from our team

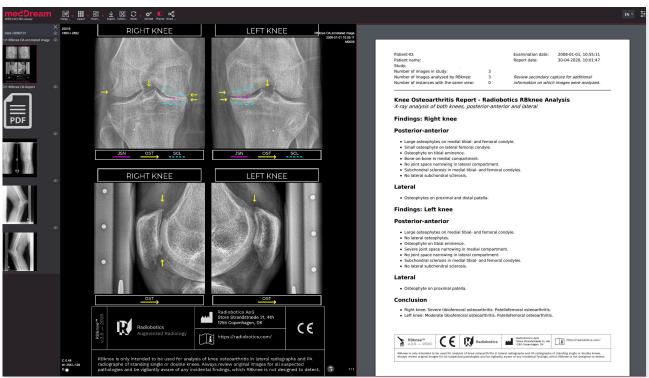
- Mads Jarner Brevadt, CEO & Co-founder
- Stine Mølgaard Sørensen, COO & Cofounder
- Cathal White, Business Development Manager

#### Our solution

We have developed *RBknee™* with the aim of supporting radiologists, reporting radiographers, rheumatologists, and orthopedic surgeons by automatically detecting major findings relevant for radiological knee osteoarthritis.

Our solution also provides a text report of findings and impressions, together with a visual overlay highlighting what the algorithm has detected.

 $RBknee^{tM}$  can increase report consistency as well as the efficiency of the workflow.





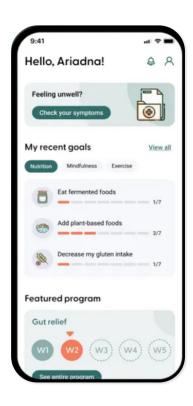


## 25 Sanno

#### Introduction

The prevalence of gut health issues continues to increase, with one in five people in the UK currently diagnosed with a gut disorder but struggling to access experts and find the right care.

The current waiting time to see a gut health specialist through the NHS is more than nine months.



#### Our solution

Sanno is an app based gut health advisor. The app comprises an Al driven symptom checker that identifies, red flags and suggests next steps in the clinical pathway. It allows users to connect with gut health doctors who receive Sanno's datasets to help in their diagnosis. The app helps patients access guidelines during the treatment.

#### Attending from our team

Ariadna Maso, CEO and founder







## 26 SymPhysis Medical

#### Introduction

Malignant pleural effusion (MPE) affects cancer patients, causing fluid build-up in the chest and results in significant breathing difficulty, associated panic, chest pain, and a predicted survival of three to 12 months.

Indwelling pleural catheters (IPC) are the standard of care for treating MPE, allowing patients to drain the fluid at home. However, patients need assistance from a public health nurse or family carer as some aspects of the procedure can be difficult as it requires the use of both hands whilst maintaining a sterile environment.

With the COVID-19 pandemic requiring minimised contact with healthcare staff and crowded outpatient clinics many IPCs remain in place for too long, with patients requiring acute hospital readmission due to complications and in some instances resulting in death.

#### Our solution

RelEase is a drainage technology that aims at a more effective and user-friendly solution for managing MPE. The primary USP of the RelEase device is that it incorporates a unique 'active' capsule technology (patent pending) designed to prevent fluid reaccumulation and accelerate the 'closing up' of the chest cavity, thus allowing the catheter to be removed significantly sooner than the current standard of care IPCs.

RelEase has a unique subcutaneous anchoring system that requires only one incision to place it, and incorporates improved usability of the device through a design allowing a 'one-handed' drainage process.

A digital, Al-enabled version of *RelEase* will allow automated recording of home drainage-related information which can be shared remotely with clinicians, and will be responsive to the patient's chest pressure, to reduce the chest pain that can occur during drainage.



- Dr. Michelle Tierney, CSO & Co-Founder
- Tim Jones, CEO & Co-Founder





## 27 Temporo Ltd

#### Introduction

Temporomandibular joint disorder (TMD) affects between five and 12% of the UK adult population; between five and 10 million people.

Although 75% of patients will improve with simple conservative management, current strategies to manage TMD are poorly implemented and inaccessible for the majority of patients.

Psycho-emotional factors play a significant role in the development of TMD which means that bio-psychosocial strategies have an important role in supporting successful self-management of TMD.

#### Our solution

Temporo is an app which provides a comprehensive and accessible strategy to manage TMD. It combines digital psychological therapy, guided physiotherapy, evidence-based nutritional advice and recipes to manage chronic pain, and educational resources. These resources are sourced from the highest quality scientific studies and experts.

Temporo aims to reduce the individual, medical and societal burden of TMD.

#### Attending from our team

• Dr Julian Woolley, Co-Founder



## • Growth stage

### 28 T-Minus

#### Introduction

More than 10% of people in the UK suffer from tinnitus, and evidence is growing that tinnitus is a symptom of 'long Covid'. Isolation also generates mental health challenges which in turn increase tinnitus numbers and worsen existing symptoms. Tinnitus often reduces quality of life and mental health.

Despite NICE guidelines for tinnitus, there is an inconsistency in care pathways, with over 90% of patients being sent home to self manage the condition. Long waiting times for the appropriate care can have significant effects on the ongoing management of tinnitus, with clear evidence to show that requests for follow up appointments and speed of achieving 'habituation' are both affected.

There is no scientifically validated cure for tinnitus, so management techniques are an important skill for tinnitus sufferers. The likelihood is that patients will need to continue their own self care in order to manage the condition and for most, this will be a lifelong reality.

#### Our solution

The T-Minus application provides a digital solution for tinnitus sufferers. We focus our efforts on three key components:

- Clinical Information
- Psychological approaches
- Management resources

The T-Minus app is a hub for the key resources that are available. It also houses a unique tinnitus sound therapy library, which is a gold standard for sound therapy design and delivery.

We are currently developing a simple test facility in order to deliver telemedicine in the form of online hearing therapy appointments.

- James Rodley, Founder
- Rupert Brown, Co-Founder
- Silas Gregory, Marketing & Communications







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