

INTERACTIVE HEALTHCARE FUND PORTFOLIO 2016/2017



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The partnership between the AHSNs and Creative England has facilitated the unlocking of innovation throughout the regions and supported the development of creative solutions to some of the many challenges facing the healthcare sector in the 21st Century. As we move towards a more digital world, innovation is vital in bringing about real social change, with transformative healthcare solutions brought to the fore.

Innovation in the Creative Industries

The UK's creative industries are an £87bn world-leading sector, providing more in GVA and jobs than automotive and aerospace combined. They employ 2 million people across the country - rising to 2.9m in the wider creative economy - and generate over £21 billion in exports, equal to 9% of the UK's total service exports.

As this portfolio shows, innovation is one of the creative industries' greatest assets and has a 'spill-over' effect into other sectors. Dexterous creative and digital firms are able to find smart solutions to specific industry challenges through the creation of inventive content - from smart phone apps and computer software through to content for emerging technologies such as VR and AR.

Creative England

Creative England works to support creative businesses to innovate and grow. They do this through targeted investment and business support packages developed and delivered with partners from across the public and private sectors - from LEPs and local authorities to trade organisations and global companies.

Academic Health Science Networks

There are 15 Academic Health Science Networks (AHSNs) located across England. AHSNs were established by the NHS as a means to enable innovation that improves healthcare provision in local communities and generates economic growth.

The Interactive Healthcare Fund

Since 2014, Creative England has developed a highly effective partnership with regional AHSNs - combining Creative England's expertise in managing and facilitating creative sector-focused investment funds with the AHSNs' mission to improve healthcare through localised public and private sector collaboration and innovation.

From this partnership came the establishment of the Interactive Healthcare Fund. To date the fund has invested £1.7 million into 18 creative and digital companies, leveraging significant private investment to support the development of an array of highly innovative healthcare products and services. Fundamental to each investment is the potential of the product to significantly improve the quality of life for the patient or user and increase efficiency in health services.

2016/17

This document gives case studies of the fund's activity during the 2016/17 period. During that time the fund has invested almost £1.2 million into 12 creative and digital businesses, securing over £1.8 million in additional private match funding.

Partners involved during 2016/17:

- Creative England
- South West AHSN
- West of England AHSN
- West Midlands AHSN
- Greater Manchester AHSN
- Yorkshire & Humber AHSN
- SETsquared Partnership (enterprise-focused university partnership)

As the following case studies show, a broad range of creative businesses have been supported during this time, with products varying from wearable assistants that support the management of respiratory diseases to platforms that encourage better medication adherence.



"The Interactive Healthcare Fund has shown how creative and digital disruption can be powerful catalysts for cross-industry collaboration. Whilst the intricacies and pressures faced by our healthcare system are vast, these projects demonstrate how innovation and technology can lessen those burdens and help revolutionise patient care provision. It is vital that creative enterprises continue to have the right platforms and support to engage with other sectors; to develop highly innovative products and services and solve some of our nation's most pressing challenges."

Caroline Norbury, CEO Creative England

"This cross sector collaboration between Creative England, the AHSNs and digital SMEs will enable innovative solutions that meet current healthcare challenges to be brought to market"

Stuart Monk - Director of Innovation, South West Academic Health Science Network



HIVEWIRE

HiveWire's aim is to make healthcare simple by improving the current model of hospital communication. It will be the digital glue which keeps healthcare professionals connected, enabling rapid discussion of patients. The intention is that HiveWire will be the go-to communication tool for healthcare professionals across the UK.

The Problem: As it stands, hospital communication is ineffective; with the increasing pace of healthcare, communication needs to be fast, simple and provided in a way that supports multidisciplinary care. Medical professionals currently rely on pagers and fax machines to communicate, which are inefficient and prone to errors. It is often hard to identify and get hold of the right professional in another specialty and there is no network that links the staff in a hospital together. Last year there were 25,697 serious incidents caused by communication error and continuity of care. Speed and clarity play a vital role in decision making, so it is vital that a communication system that can replicate this, is put in place.

The Solution: HiveWire is an innovative, secure, closed messaging app that offers a sector specific and security considered solution to current communication challenges. It is made for healthcare by healthcare professionals.

The network connects all hospital staff, allowing them to spend more time bedside than on external means of communication hardware. This can have a significant impact on recovery, survival rates and the number of serious incidents associated with poor communication in hospitals and healthcare practices.

With investment from Creative England and support from the South West and West of England AHSN and First Bourne accelerator partners Silicon South, HiveWire have secured contracts and trials with Dorset Clinical Commissioning Group's (CCG) 30,000 staff and Portsmouth Hospital's respiratory department.



Accomplishments to date:

- Creative England investment and networks have connected HiveWire to a further £150k of investment and is supporting the roll out of the product trials in two CCG areas.
- The investment is also supporting the next stage of product development, building value and IP in the product to ensure that it is future proof.

"HiveWire is a great example of how innovation emerges from within the NHS. Founder, Dylan Pathmajothy is an entrepreneurial clinician who has brought together a great local team from the West of England and built a secure rapid communication platform for clinicians that is simple and effective to use. We will be working with the team to make sure our local healthcare systems are aware of this breakthrough."

Lars Sundstrom - Director of Enterprise West of England Academic Health Science Network



THANKSBOX

ThanksBox is a suite of interconnected digital tools aimed at improving employee engagement. It digitises many existing business processes - making them easier to get involved, fun and scalable - with the added bonus of data insights for the Employer. The platform consists of employee recognition tools, analytics, ideas management and is managed through five definable interfaces.

The Problem: Large businesses and hierarchical organisations like the NHS find it difficult to engage staff and track and measure the overall value and benefit of staff engagement and recognition. The lack of any data that can measure progress around engagement levels further compounds these challenges. The demand for an evidence based product that can measure this, as well as facilitate better recognition with the intention of driving business values through higher staff engagement and staff retention is therefore highly sort after.

The Solution: ThanksBox provides real time data insights on how teams are interacting and recognising one another. Using this platform, HR departments can now report to their Board on manager's relationship with their teams and on hitting fairness and diversity targets all in real time; carrying out analysis on their own data sets as well as on Thanksbox's recognition data - all within one dedicated platform. The insights and approach are more robust and flexible than any other competing recognition or reward platform.

With support from the Interactive Healthcare Fund, ThanksBox are beginning to effectively market to HR teams and directors of NHS trusts and private health institutions. Access to the wider healthcare network offered as part of the Interactive Healthcare fund has also helped ThanksBox increase its profile within the sector and generate leads with new NHS Trusts.

ThanksBox

Accomplishments to date:

- Interest has already been expressed by Plymouth Hospitals NHS trust and Yeovil District Hospital NHS Foundation trust.
- Strong monthly recurring revenues of £12k
- 20% month on month growth

"We have worked with ThanksBox across the West of England and feedback from our care staff is they love it. Really pleased they now have the resources to grow this product and spread its use wider afield."

Lars Sundstrom - Director of Enterprise West of England Academic Health Science Network



ADI

ADI is one of the UK's leading innovators in the field of digital health with an outstanding track record.

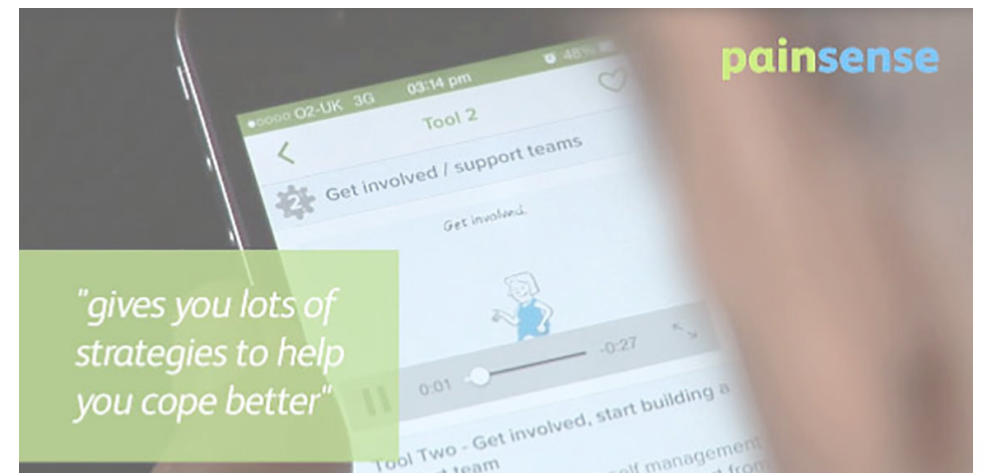
Their product PainSense gives patients and clinicians the education and tools to self-manage chronic pain conditions using a bio-psycho-social approach.

PainSense provides digital multimedia resources to support self-management of chronic pain. Initial assessments are faster and easier, reports are visible to the clinician prior to their first appointment and patient compliance is increased as they are more involved in their treatment.

PainSense has been rolled out to Leeds CCG and has just gone live in Essex, with additional trials under way across the country.

The product also won an award at the Medilink Healthcare Business Awards 2017 in the category of 'Advances in Digital Healthcare'. This would not have been possible without investment and support through the Creative England and the Yorkshire & Humber AHSN.

painsense[®]
makes sense



QUVIUM

Quvium UK, Ltd is a medical device company that provides peace of mind for families, improved health for patients and cost effective disease management for those that deal with poorly controlled chronic respiratory diseases including asthma, chronic obstructive pulmonary disease (COPD) and cystic fibrosis.

The Problem: Poorly managed respiratory conditions incur healthcare costs upwards of £50 billion per year worldwide. Currently in the UK, a child with asthma is admitted to hospital every twenty minutes. Warnings of attacks and early interventions could reduce the risk of being admitted to hospital and help reduce healthcare costs.

The Solution: Quvium developed a cough monitor that detects an increase in cough frequency and episodes. Their **challenge** was to develop a small wearable monitor, discreet enough to be easy to wear, highly accurate and always on, that could detect and interpret a cough, resulting in alerts being sent to the care community. The **innovation** was a monitor that delivered on all these aspects. Furthermore, Quvium also discovered that different respiratory conditions have unique cough signatures, which is incredibly exciting as it offers a new way to accurately support diagnosis. Further trials are needed, but advancements in the technology could be made in future years.

Following on from Fund investment, Quvium have been able to complete and test different algorithms that screen out background noise and detect and interpret coughs. The investment has also allowed them to complete their design and move towards manufacturing.

Further clinical validation will follow, and the product will be on sale in the UK and USA soon, with expansion into Asia in 2018.



Accomplishments to date:

- First manufacturing run of 1,000 units committed
- UK patent issued with no challenges
- £1.085m in revenue from clinical trials
- £280k of unit sales to Baylor University



CURAMICUS

Curamicus is a technology company whose mission is to assist elders and vulnerable people to live independently in their homes for longer, allowing them to live safer, more fulfilling lives.

The Problem: It's 9pm. Doris, 75, alone in her house slips in her kitchen, hits her head on the kitchen table and falls to the ground unconscious. When she comes to she finds she's unable to get up and remains undiscovered until her daughter finds her the next morning.

Doris is representative of the one in three people aged 65+ who fall down each year (World Health Organization.) 50% of all UK A&E admissions are due to Elder falls, costing the NHS £2.3 billion per year.

Current Medical Alert Systems (MAS) for fall detection are low technology pendants, telephone lines and expensive call centres alerting emergency services. These solutions rely on the patient being conscious and able to push the alert button. They are expensive and offer limited scalability.

The Solution: CuraPal® is a patent pending wearable system for personalised fall detection and prevention in elders and vulnerable people. With this technology, Curamicus will reduce the fall detection response time from hours to minutes.

The Innovation: Using rich sensors, machine learning, AI and cloud technology Curamicus have developed a product that detects falls using multiple motion and environmental sensors and notifies family carers by messaging their mobile phone, without the use of a call centre. Replies can be routed directly to the wearers CuraPal® sensor that can be displayed or spoken to inform them that help is on the way. CuraPal® also provides the family carer with information on the elder's movement over time, which could lead to measures to prevent further falls.



The partnership with Creative England and the South West and West of England AHSN has been important for Curamicus to bring their product vision to reality. Their plan is to expand the team to help bring the product to market and to ensure CuraPal® is a scalable offering. With a funding round coming to a close in the near future, their overall objective of reducing the amount of falls in the elderly population moves a step closer.

Accomplishments to date:

- Curamicus were one of Creative England's eight participating companies on the First Bourne Accelerator in Bournemouth which took them from early stage MVP to prototype ready stage. The programme supported them with refining their business model and plan, and increased their investment readiness.

"We're very pleased to see Curamicus supported by the Healthcare Innovation Fund. We are looking forward to spreading the news about this across the West of England as the product becomes available. Their concept was very well received by health and care professionals at our recent event on 'healthcare from our living room'"

Lars Sundstrom - Director of Enterprise West of England Academic Health Science Network



MARSOFTWARE

5% of all readmissions to A&E are due to a combination of drug reactions and medication non-compliance. Ineffective medication adherence is costing the NHS £15BN annually with only 50% of patients taking medication as prescribed. MARsoftware are dedicated to ensuring that medication compliance be made easy and effective, with the goal of disrupting and improving prescription adherence.

MARsoftware's product YOURmeds is a labelling and charting solution that produces labels that are easy for patients to read and understand, strengthening relationships between patients, pharmacies and healthcare providers. YOURmeds is an intelligent version using high speed conductive inks, mobile connectivity and cloud technology to deliver a more effective medpack solution. It incorporates an alarm clock which prompts people, visually and audibly, when to take their medication and which blister of their medpack to open. The YOURmeds medpack is completely portable and self-contained.

YOURMEDS™



HIP IMPACT PROTECTION LTD

Hip Impact Protection Ltd (HIP) are dedicated to reducing the number of people who suffer hip fractures each year. Hip fractures are more common in the elderly and long term effects can be extremely debilitating, with greater consequences.

HIP's innovation Fall-Safe® hip protector pads provide absolute hip protection in a fall by absorbing 80% of the force and are extremely comfortable to wear. They are secured gently in position either with pocketed pants, or with a double-sided breathable adhesive film, which has been specifically designed and developed (by 3M) for the purpose. It is unique to the company. To detect all falls and monitor wearer activity, a sensor with accelerometer is embedded in the pads and sends an alarm message or call to an emergency center to prevent dangerous "long-lies". HIP received investment and business support through Creative England's partnership with the Yorkshire & Humber AHSN.

LIQUID BRONZE / MALINKO

Malinko are passionate about software and the impact it can have across sectors, with a particular focus on community healthcare. NHS community services are one of the few industries yet to adopt an automated and intelligent appointment scheduling system to help manage their field based (community healthcare) staff.

Research into 25 NHS community health trusts indicates that they all experience the same problem; there are no systems in place to effectively and efficiently schedule which staff should visit which patients at which times. That led Malinko to develop their platform (Malinko Intelligent Scheduling System - MISS) for NHS Trusts who deliver community services; to make patient appointment scheduling more efficient and thus helping NHS Trusts achieve their efficiency, service quality and safety objectives. Malinko received investment and business support through Creative England's partnership with the Greater Manchester AHSN.

MEANTIME INFORMATION TECHNOLOGIES LTD

Meantime IT is a web development company based in Kendal. Meantime noticed the enormous amount of audit activity NHS Trusts carry out and inefficiencies seen in tracking this audit activity. There is currently no real-time view of audit activity with unclear conclusions, outcomes and actions. Also there is no one system that enables the management of this vast number of audits.

Meantime's Audit Management and Tracking software (AMaT) is their innovation, giving Trust and hospital managers dashboards that show overall activity in the trust and reported on in real time. AMaT streamlines the audit process within Acute Trusts and enables issues and queries to be dealt with sooner, and results accessed more quickly. Meantime received investment and business support through Creative England's partnership with the Greater Manchester AHSN.



RUNACLUB LTD

RunAClub is a cloud-based administration system that helps people run community clubs and groups. The system provides essential support needed to manage a club or even network of clubs, from sports to health and beyond. RunAClub is used by local authorities, national organisations, charities and community spirited individuals.

The online platform is a unique innovation that delivers support, information, monitoring and evaluation via a single platform to the voluntary sector. RunAClub wish to enhance this platform further, by allowing it to be easily accessed on mobile devices so the user can access information and gain feedback anywhere. RunaClub received investment and business support through Creative England's partnership with the Greater Manchester AHSN.



KAIDO GROUP LIMITED

Kaido Wellbeing is the first truly personalised workplace wellness solution. By using health data from connected wearables, apps and smart devices, employers can provide personalised health guidance and support to all of their employees whilst using data intelligently to quantify real-time return on investment.

Kaido wish to have a positive impact on the global epidemic of "unwellness at work". The Global epidemic of 'Unwellness at work' is costing the world's economy 10-15% of economic output. In the UK alone sickness absence costs businesses an estimated £29bn each year.

Kaido Wellbeing combines advanced technology, with the expertise of world leading health professionals and specialists in designing and building online communities. Employees compete as individuals and as part of self-selected teams in a series of themed health challenges.

By making positive improvement in their health and wellness, employees earn wellbeing points, that fuel their progress through the challenge. Over the course of the challenge period, they will receive health 'nudges', hints and tips as well as personalised mini challenges through an integrated chatbot, all designed to enhance their understanding around physical activity, sleep, nutrition and mental wellbeing. Kaido received investment and business support through Creative England's partnership with the West Midlands AHSN.

The logo for Kaido, featuring the word "Kaido" in a light blue, rounded, sans-serif font with a registered trademark symbol (®) to the upper right.

INCLUSIVE MEDIA SOLUTIONS LIMITED

Inclusive Media Solutions Ltd based in the South West offer a product called EasyVideo which is designed to help people with cognitive disabilities live independently. As £730m is spent on providing support to adults with learning disabilities, Inclusive Media Solutions have a desire to help reduce this cost and provide support that is 24 hours a day, 7 days a week.

Their innovation enables the user to scan any item in their home with a smart device and play a video of how to use it, for example; scanning the kettle with an iPad and it plays a 'how to make a cup of coffee' video.

The product aims to reduce the levels of 1:1 support required by patients/ service users and help them with daily living tasks whilst promoting their independence. This represents a significant saving to the care provider.

The logo for EasyVideo, featuring a grey square icon with a white play button symbol inside, followed by the word "EASYVIDEO" in a light blue, bold, sans-serif font.The logo for Creative England, featuring the words "creative" and "england" in a pink, sans-serif font, with a stylized pink and purple circular graphic to the right.