

2015/16

SBRI HEALTHCARE
ANNUAL
REVIEW

ACCELERATING
THE DEVELOPMENT
OF INNOVATIONS
FOR NHS NEED



The **AHSN** Network



The AHSN Network

SBRI Healthcare is run by England's 15
Academic Health Science Networks (AHSNs)

Oxford
Academic Health
Science Network

IMPERIAL COLLEGE
HEALTH PARTNERS

Kent Surrey Sussex
Academic Health Science
Network

Wessex
Academic Health
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Science Network
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eahsn
Eastern Academic
Health Science Network

west midlands
Academic Health Science Network

UCLPartners
Academic Health Science Partnership

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NORTH EAST AND NORTH CUMBRIA

INNOVATION AGENCY
Academic Health Science Network
for the North West Coast

GREATER
MANCHESTER
ACADEMIC
HEALTH
SCIENCE
NETWORK




South West
Academic Health
Science Network

Cover photo: Isansys

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SBRI Healthcare

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CHAIR'S MESSAGE

It's been another year of growth and success for SBRI Healthcare – funding innovations that are improving health and supporting British business.

“

Improving lives for patients is enough of a goal in itself, but the additional benefit of our innovations is that they save money for the NHS, and create income for the UK economy.

”

I joined SBRI Healthcare as Chair in July 2016 so I am pleased to be reporting on the great progress achieved by my predecessor Adrian Bull.

SBRI Healthcare are now supporting over 100 companies to develop great new ideas. Companies like Biosensors, a collaboration between the company Med ePad, Alder Hey Hospital and Liverpool John Moores University, who are trying to create a sensor that performs blood tests without puncturing the skin – quicker for clinicians, and much more comfortable for the patient. The Innovation Agency, the AHSN for the north-west coast, brought them together and they are now developing their product with SBRI Healthcare funding and support.

In this review you will see the impact SBRI is having for patients, for businesses and for clinicians. SBRI Healthcare is funded by NHS England, and that money is working very hard to support efficiency, improved health and business growth. It takes time for innovations to mature, but we can already see huge gains in real time and for the future. There are now 20 SBRI-backed companies whose products have reached maturity and are available in the NHS market place with many more due to come to market in the next few years. These companies are directly improving lives for patients in the UK and across the world.

As always, we strive to stay relevant to the needs of the NHS. AHSNs help us to work closely with clinicians and researchers to develop specific and detailed descriptions of the challenges the NHS faces. This year's new competition themes were older people with multiple morbidities, and pressures on emergency services. These are key areas of stress for the NHS and we worked with industry to make sure that they are addressing clear, unmet needs with their ideas. We also continued to work with companies who are addressing previous years' competition themes

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Independent health economic assessments suggest that the savings to the NHS from the innovations we are supporting to be conservatively in the region of £1bn.

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including learning disability, brain injury and child and adolescent mental health.

Top of the list of beneficiaries are patients themselves. People like the young teen dealing with stress by using ProReal's game-style software: "I didn't recognise why I was losing my temper. Then I used the software and then it just helped me put my finger on it and just recognise what it was."

Or the mother whose baby is using the Isansys Patient Status Engine: "The PSE has allowed me to cuddle her, lift her and care for her in the way I want to. It's given me peace of mind and a sense of normality."

Many of the innovations we support are increasing independence for patients – helping them to be on top of their own health and able to understand and manage their conditions better. Some are improving the safety and quality of care – potentially saving lives and reducing harm. Some are making it easier for clinicians to give a higher quality of care – giving them support to make decisions.

Improving lives for patients is enough of a goal in itself, but the additional benefit of our innovations is that they save money for the NHS, and create income for the UK economy. And because the NHS is so big, the numbers are big, too. Independent health economic assessments suggest that the savings to the NHS from the innovations we are supporting could be as much as £1bn.

Our work is having exciting results. But we know we can do more. This year we are running competitions on managing patients in hospital settings – helping to improve the flow through the service and supporting self-care and independence for children with long-term conditions. In the autumn we will be focusing on community-based health services, under

the theme 'GP of the future', addressing issues such as workload, diagnostics and self-care. We will also be working hard with AHSNs to accelerate the adoption of innovations, including working closely with test-bed sites as our funded companies Ixico and uMotif are doing. To borrow a phrase from NHS England's strategy, our goal is to, our goal is to 'solve today's issues by accelerating tomorrow's solutions.'

I would like to finish with some thank yous. Firstly, to Adrian Bull for his year as Chair and his energy and commitment to driving the SBRI Healthcare programme with the AHSNs. Secondly, I would also like to thank the SBRI National Director, Karen Livingstone, and the team at Health Enterprise East. Karen and her colleagues lead our work, ensuring we help the NHS to outline their needs, select the very best ideas and then support the companies to bring their products to fruition – helping patients and securing the programme successes we are now enjoying.

Finally, I want to say thank you to those whose hard work turns innovation into impact. NHS staff across the spectrum have worked productively with SBRI Healthcare-backed companies and researchers to develop ideas that target real need and are now making a genuine difference. Please carry on working with the drive and commitment that you have shown this year – the benefits for patients and the UK economy are invaluable.

Richard Phillips, Chair



ABOUT SBRI HEALTHCARE

What we do

SBRI Healthcare is an NHS England-backed programme that provides funding to companies to solve healthcare problems.

This year we have awarded contracts with a total value of £17.5m to 44 companies. We have worked with all 15 Academic Health Science Networks (AHSNs) and NHS England leads to give detailed specifications to industry for some of our most pressing health needs.

Our goal is to create solutions that will improve patient care, improve efficiency for the NHS and enhance economic growth for British companies.

How it works

- SBRI Healthcare supports a programme of competitions inviting companies to come forward with their ideas and new technologies for known NHS challenges.
- These ideas are rigorously assessed and a fully-funded development contract is agreed between the company and the NHS. SBRI Healthcare monitors the contract, the NHS is the lead customer.
- The SBRI Healthcare programme starts with an initial identification of an unmet need, undertaken by clinicians and front line staff. Challenges are offered to industry to test the feasibility of their ideas. If these projects are successful in testing this can result in a contract to develop the product.
- We design our processes to be especially suitable for small to medium-sized enterprises and early-stage businesses to give funding for a critical stage of product development. We are also particularly keen to help businesses test cross-over innovations from other sectors.
- While the public sector has the right to license the subsequent technology, the intellectual property (IP) remains with the company and enhances economic growth for the UK economy.
- AHSNs ensure that clinicians specify the challenges while making sure the products meet front line needs.

How we are run

SBRI Healthcare is part of the Government's wider SBRI programme, but is directly funded by NHS England.

The programme is run by Karen Livingstone, National Director, and a Director at the Eastern AHSN on behalf of England's 15 AHSNs (listed on the inside front cover).

We are governed by a programme management board with representation from AHSNs, industry, NHS England and Department of Health. The Chair of the Board is Richard Phillips, Director of Healthcare Policy at the Association of British Healthcare Industries (ABHI).



Karen Livingstone, Director of Strategic Partnerships and Industry Engagement at Eastern AHSN, is the National Director of SBRI Healthcare, operating as the CEO with day-to-day management support delivered by Health Enterprise East.

PROGRAMME MANAGEMENT BOARD MEMBERS (DURING 2015/16)

ROB BERRY	Head of Innovation and Research, Kent, Surrey and Sussex AHSN and representing Wessex AHSN
ANNE BLACKWOOD	Chief Executive Officer, Health Enterprise East, management support (in attendance)
STEPHEN BROWNING	Head of SBRI at Innovate UK
CYNTHIA BULLOCK	SBRI Account Manager – Health and Life Sciences, Innovate UK
ADRIAN BULL	Managing Director, Imperial College Health Partners representing UCLPartners (Chair from Sept 2015-Apr 2016)
ANDY BURROUGHS	Director of Wealth and Enterprise, Wessex AHSN
ANDREW CHEESMAN	Finance Manager, Financial Strategy, NHS England
DAVID CONNELL	SBRI expert, Fellow of the Judge Business School and industry representative
STEVE FEAST	Managing Director, Eastern AHSN (from Jan 2016)
PROF JOANNE HACKETT	Director of Commercial Development, UCLPartners
CHRIS HART	Commercial Director, East Midlands AHSN
JOHN HOLDEN	Director of Policy, Partnerships and Innovation, NHS England (from Jan 2015)
KEVIN KIELY	Managing Director, Medilink
ANNA KING	Commercial Director, Health Innovation Network, South London AHSN, and Chair of the SBRI Finance Audit and Risk Committee
KAREN LIVINGSTONE	National Director of SBRI Healthcare and Director of Strategic Partnerships and Industry Engagement, Eastern AHSN
LINDA MAGEE	Executive Director of Industry and Wealth, Greater Manchester AHSN
RICHARD PHILLIPS	Director, Healthcare Policy, Association of British Healthcare Industries (ABHI) (Chair June 2016-present)
JON SIDDALL	Director of Investment Partnerships, South West AHSN
SUE SMALLEY	Commercial Directorate representative, Department of Health
ANDY TAYLOR	Advisor on Public Policy, Association of British Healthcare Industries (ABHI)
NICOLA WESLEY	Director of Innovation and Wealth Creation, North East and North Cumbria AHSN

COMPETITIONS 2015/16

June 2015

Older people with multiple morbidities

- falls and care planning
- decline in functional ability
- urinary and faecal incontinence

Sept 2015

Reduce pressures on urgent and emergency care

- preventing admissions
- co-ordinating admissions
- flow and discharge (resource planning)

SBRI HEALTHCARE IMPACT IN FOUR YEARS

420 Over **420** jobs created or safeguarded – their value to the UK economy is estimated at **£33.6m**

£1bn Estimated cost saving value of pipeline to the NHS: **£1bn**

£45m **£45m** additional funding leveraged through grants and venture capital

168 **168** contracts awarded to businesses across Phases 1, 2, 3

OUR YEAR IN NUMBERS

6 **6** new clinically-led competitions where NHS needs have been articulated for business to respond to

£17.5m

26 **26** Phase 1 contracts awarded with a total value of **£2.3m**

18 **18** Phase 2 contracts awarded with a total value of **£15.2m**

FOUR YEARS OF DELIVERY

£57m

£57m total funds awarded

[**114** Phase 1 **46** Phase 2 **8** Phase 3]

160 **160** finalised agreements with UK and foreign companies

258

258 applications from industry assessed and supported or feedback given

20 **20** products already on the market with many more ready to come to market in the next 12 months

40 **40** patents, copyrights, trademarks and scientific publications applied for or awarded

9 **9** companies exporting their products to international markets

OUR IMPACT AT A GLANCE

We are supporting the development of products that:



HOW WE WORK



DIAGNOSIS • INDEPENDENCE • PAIN RELIEF •

IMPACT FOR PATIENTS

11 Health

Michael Seres is an ostomy (stoma) patient and wanted to find a better way of knowing if the ostomy bag is full. He developed the Ostom-I Alert sensor and is now CEO of 11 Health to further develop and market the product.



“

I believe passionately that patients, on a daily basis, are solving problems and finding solutions to everyday problems. Thanks to SBRI I have the opportunity to take my patient-led innovation and help improve the lives of other patients and also make it easier for healthcare professionals to manage us remotely. SBRI has been the catalyst to drive forward and get our device embedded within the NHS system and I am incredibly grateful for the opportunity. The hard work starts now.

Michael Seres, CEO and patient

I had my first stoma aged ten. Everyday life as a teenager is difficult enough let alone having to tell your friends that you have got this added extra attachment...I was forever worried about if people could see the bag and worried about leaks. I never slept because I was so worried about it overflowing and messing the bed. The sensor would improve my life because it would stop leaks, it would stop the anxiety of going out.

Amy Louise Grime, Crohn's patient



Advanced Digital Institute

ADI have developed an app that helps people to manage persistent pain in their lives.



“

Using the PainSense app is very easy, you can get into it within a couple of days from starting using it and you find every time you go back onto it it's very simple. It puts me in control, if like me you have been told, 'there's not much more we can do in the way of treatment, now we want you to learn how to manage your pain yourself,' then this is an excellent way of doing it. I can see by filling in all the assessment tools, by filling in the diary, that I do have an odd few bad patches but in general the things that it suggests I do when I have had an assessment are gradually helping me to get that little bit more in control and manage it myself. It's very personal to you. I do like talking to a person, but this is a really good stand-in; this comes a very close second. And it's monitoring me when there is no person around.

Maggie, Leeds

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HEALING • SIMPLICITY •



My mHealth

myCOPD is a web application that empowers COPD patients, allowing them to monitor and manage their symptoms. It corrects 98% of inhaler errors and encourages more patient-centred care.



“

Since starting the online management for COPD, I have noticed a tremendous difference in my symptoms. I have learned how to take my inhalers correctly and have started exercising regularly using the videos on the website.

Kathleen, Portsmouth

This is the first time I have been given a self-management plan and medicines at home for my COPD. I have had one episode where I needed to take antibiotics and steroids for an infection and followed my self-management plan. At first it was a bit daunting, but I noticed that I recovered quicker and didn't need to go into hospital or bother my GP.

Celia, Southampton

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Docobo

“

I used to joke about taking a bed to the GP surgery as I was there so often. I now have access to more information, a reassurance to stay at home.

Telehealth user with COPD, Southampton



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Docobo provide self-management support tools for those with long-term conditions such as cardiovascular disease, diabetes or COPD. They have been established since 2001 and their products support thousands of patients, their carers and clinicians. Their SBRI Healthcare-backed screening and support tools enable patients to feel reassured that they are being monitored and are more in control of their condition. Both patients and their carers are less anxious and more confident to get on with living their lives, with the assurance that Docobo telehealth will alert their clinician when there is a need.

SELF-CARE • FREEDOM • PEACE OF MIND • CONVENIENCE • DIAGNOSIS • INDEPENDENCE •

Polyphotonix

The Noctura 400 is a sleep mask that uses light therapy to treat diabetic retinopathy. The alternative treatments are much more invasive and unpleasant for patients.

“

When I was first diagnosed with retinopathy, it was very much doom and gloom. No one could tell me that I would definitely still be able to see my children in 10 years' time. Now, I finally feel hopeful again. I just wish I'd known about the mask earlier before the damage to my eyes happened.

Neil, London

POLYPHOTONIX

”



“

I have had diabetes for 30 years and it does present some complications. Four years ago I found out that I have retinopathy, which meant that the tiny capillaries at the back of my eye were getting blocked up, which lead to new weaker capillaries growing around the blocks to deliver oxygen to the retina.

My retinas started to bleed regularly, even though my diabetes control was tightened up lots, mainly due to the history of damage from the build up over the past 30 years.

I had to have lots of laser sessions at my local hospital in both my eyes and ended up having them almost monthly to control new small bleeds that kept on happening.

My major concern with all this was that I need to drive to get to my job, which is about 50 miles away. The DVLA was informed of my retinopathy and they now check my eyes annually to ensure I am safe to drive every year. So every year I am very scared about them taking my licence away and the consequences of that.

Then I found out about the Noctura 400 sleep mask through my work in the NHS, and started to use it immediately.

The sleep mask basically shines a green light through my eyelids at night, to keep the retina cells activated during sleep. This reduces the demand of oxygen, so stops the new weak vessels growing, and thus reducing the bleeds and further need for lasers.

So every single night since October 2014 I have been sleeping with the mask, and it is just like sleeping with one of those masks you have on an aeroplane. It doesn't disturb my sleep at all, and in fact now I cannot sleep without it!

Since using the sleep mask, I went from having monthly lasers to only having one laser treatment in the past 18 months, so it has made a huge difference to me.

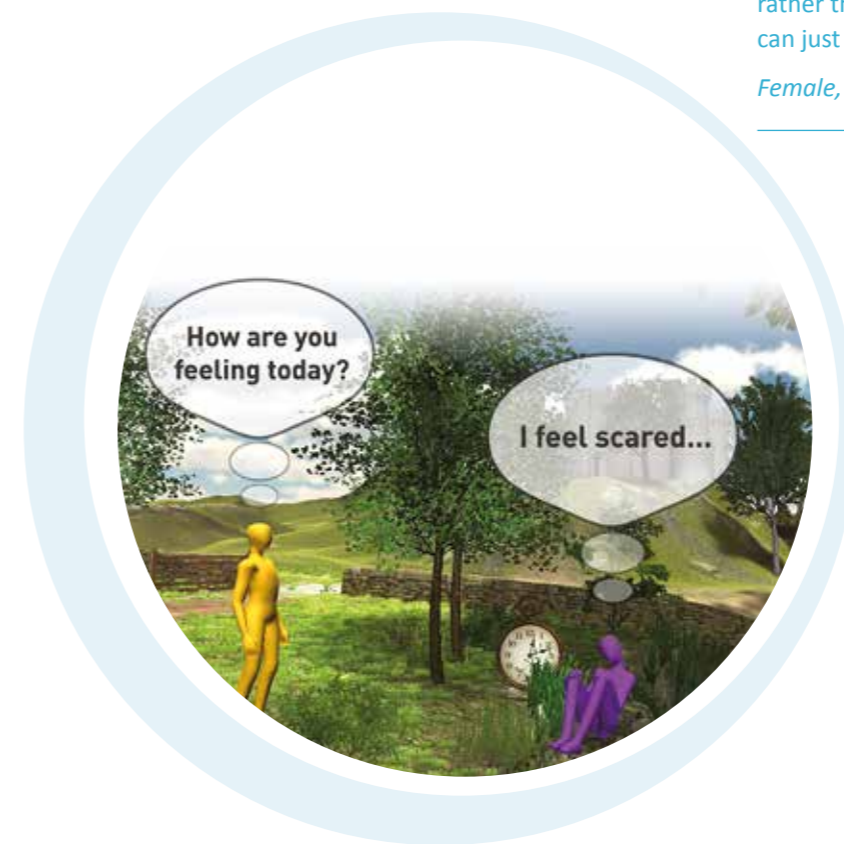
The fear of losing my licence and sight has reduced massively. In fact I felt confident enough to have a flying lesson.

Sue, Farnham

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ProReal

ProReal has developed an avatar-based 'virtual world' software platform to help people explore their thoughts and feelings. SBRI Healthcare funding has allowed the company to develop the use of its software with offenders and young people.



“

...I didn't recognise why I was losing my temper. Then I used the software and then it just helped me put my finger on it and just recognise what it was...

Male, age 14

I think the fact that it didn't have facial characteristics – it didn't have any sort of thing that identified it as an actual human except its shape - I think that was really helpful for me because I'm very self-conscious about how I look and how people see me. And looking at the characters having no actual features really helped me realise that honestly I'm just human.

Male, age 12

...you can just have these things that you can click, and it's so much more easier for you to get what you want to get across, rather than me trying to talk about the one particular thing. You can just go, well this is how...this is how it is right now.

Female, age 14

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INDEPENDENTLY AUDITED BY HEALTH ECONOMISTS

2012-13 **£510m** potential saving and potential to impact **23m** patients

2013-14 **£424m** potential saving and potential to impact **4m** patients

2014-15 **£299m** potential saving and potential to impact **1.9m** patients

INVESTMENT • JOBS • ECONOMIC GROWTH

IMPACT FOR BUSINESS AND THE ECONOMY



Inotec AMD Limited

Natrox continuous diffusion of oxygen therapy is a discreet, ambulatory system for healing difficult wounds. The product is still in trials but signs are very encouraging for the UK and international markets, for example, another trial in Canada is showing positive results. The company have doubled the number of employees in the last year and now have 19 people working either as employees or contractors.

Total award: **£1,089,574**

“One of the vital factors that determines the healing of wounds is the availability of oxygen at the site of repair. The SBRI initiative has enabled Inotec AMD methodically to study the effects of delivering continuous ambulatory oxygen therapy to patients’ wounds in the NHS using Natrox. Early indications are that the Natrox technology is promoting faster healing as well as being easy to use by clinicians and patients. Natrox could rapidly take a significant share of treating the estimated 210 million patients with hard-to-heal chronic wounds, who globally present a major economic burden to their health economies.”

Trevor Stanley, CEO

Isansys

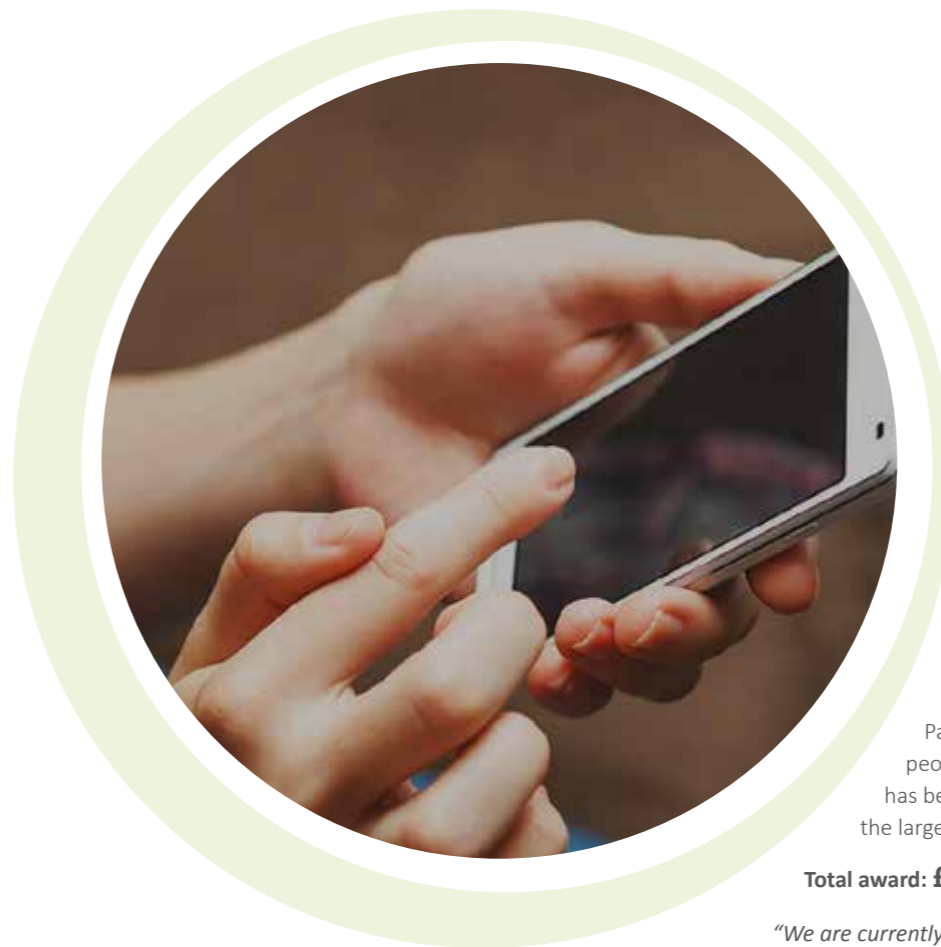
The Patient Status Engine (PSE) collects and analyses patients’ vital signs and will alert doctors and nurses if a person’s health is deteriorating. The PSE is delivered as a managed service to hospitals and other healthcare providers. The second generation PSE is now available on the market.

Total award: **£1.2m**

“The SBRI funding has enabled us to rapidly re-engineer the PSE for scalability, lower cost manufacture and expanded functionality. It has also provided support for early-stage clinical deployments, so that we now have a proven, world-leading medical product that is now being used in hospitals in Norway, India and Germany as well as the NHS, placing Isansys in a leading position in a rapidly developing multi-billion dollar global market.”

Testing was through the RAPID project at Birmingham Children’s Hospital

TRADE AWARDS •



Advanced Digital Institute

PainSense is a tablet device-based programme that assists people to manage persistent pain in their lives. PainSense has been commissioned for the population of Leeds, making it the largest digital health service to be commissioned in the UK.

Total award: **£786,550**

“We are currently having 300 new patients per month referred onto PainSense and 1,700 patient records/assessments have been completed using the app. We have eight new sites going live in summer 2016 across the country.”

“In Leeds there has been a 30% increase in patients accessing the appropriate Pain Pathway as well as a reduction in secondary care referrals. This reduces the waiting list in secondary care and releases the consultants to see the more complex patients. The earlier access to self-management tools and information will improve patient self-management in the long term and reduce GP consultation and medication.”

Simon Ball, Product Manager

Fuel 3D

Fuel3D is a 3D capture and imaging innovator. They started developing 3D technology for use in healthcare, and then developed into other sectors such as academia, security and 3D manufacturing to grow the business. With SBRI support they are continuing to grow their contribution to healthcare. One of their products is a scanner for surgical use that assists with wound management.

Total award: **£1.2m**

- £8m of investment in the business since SBRI initial investment
- Growth in headcount from 21 to 45 employees in the last 18 months and a doubling of headcount year on year
- New office in San Francisco to expand the US operation



For a business person with a good idea, breaking into the health market can be daunting and frustrating. The SBRI funding is vital, but alongside this funding the support of the AHSNs makes the key difference. **AHSNs provide: bespoke business advice, often linking them up with the right clinicians or frontline staff; help with trials – securing ethics and patient participation; help with intellectual property; guidance through the procurement process and help linking the business to health commissioners. We don’t want promising ideas to get lost before they ever get the chance to help a patient and working with the AHSNs is critical to this succeeding.**

Karen Livingstone, National Director, SBRI Healthcare



EXPORTS • EXTERNAL FUNDING • PATENTS

• INVESTMENT • JOBS • ECONOMIC GROWTH •



Lightpoint Medical

Enlight is a hand-held molecular imaging fiberscope that allows real-time detection of cancer. The Company's LightPath imaging system is commercially available in Europe; Enlight is still in development. The Lightpoint team has grown rapidly from just three people in 2014 to a team of 16 in January 2016.

Total award: £1,043,720

The Lightpoint team has grown rapidly from just three people in 2014 to a team of 16 in January 2016.

"We were able to secure commercial investment in our fiberscope on the strength of the SBRI contract – the NHS interest and investment helped investors see that we had customers ready to engage."

Dr David Tuch, CEO



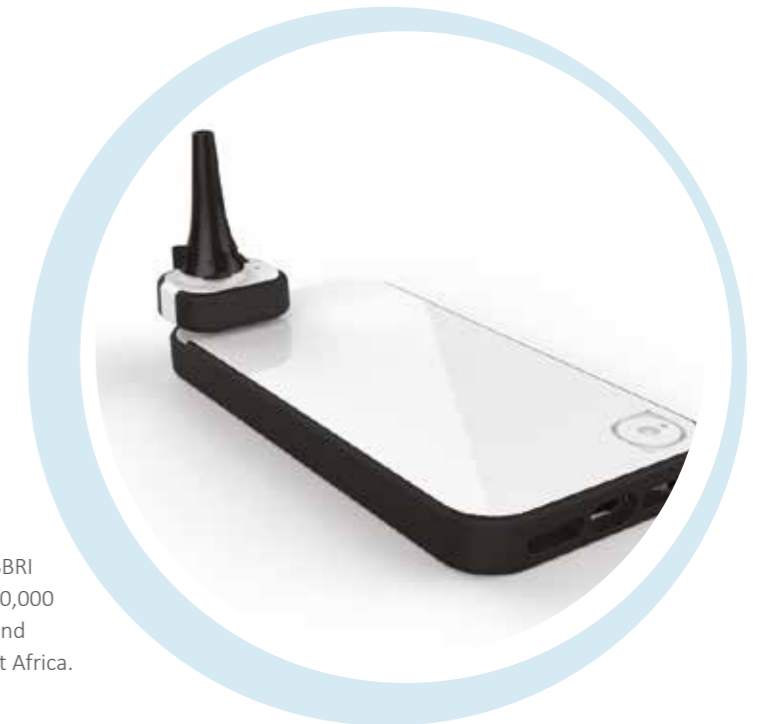
Cupris

Cupris have developed an otoscope (for ear examination) that clips to a smart phone and then supports the diagnoses of ear conditions and hearing loss. They have successfully used their SBRI funding to leverage additional investment, including nearly £500,000 through crowd-funding. They are also running tests in Malawi and Nepal with additional trials planned in India, Cambodia and East Africa.

Total award: £926,990

"The reason I invested in Cupris is I believe in projects that can deliver both a financial and social return. Cupris has a great team, a great mix of skills, a great track record. The product is brilliantly designed; it's very simple, very easy to use, but also very cost-effective. So that will deliver the financial return. On top of that is can be used in remote rural areas, in developing countries by people who have no previous experience, no skills in using it, and that's what will deliver a massive social return."

Stephen Dawson
Impetus and Jacana Venture Partnership



Ixico

MyBrainBook helps people with dementia and their carers. It's a web-based digital healthcare platform consisting of reminiscence and social communication features, plus support and emergency plans. It helps them receive appropriate, personalised care.

Total award: £98,244

- Winners of two industry awards
- Raised £2.5m from shareholders in December 2015, part of the investment case was the success of the SBRI funding for MyBrainBook
- Part of a €4m pan-European consortium researching the impact of digital technology for addressing Alzheimer's Disease



ECONOMIC EFFECTIVENESS

68 SBRI-backed companies responded to researchers quantifying the impact of SBRI Healthcare since 2008. Some results from these 68 respondents:

- 57** had recruited staff
- 17** are already selling – most of the others estimate they will be selling within two years
- 9** are exporting
- £37m** additional investment had been secured
- 47** patent applications pending
- 19** patents awarded

DIAGNOSTICS • PATHWAYS • SURGERY •

IMPACT FOR CLINICIANS AND THE NHS

Owlstone

Survival from lung cancer increases dramatically if patients are diagnosed at an early stage, but only 15% patients are detected at stage one. Owlstone are using a patient's breath for diagnosis, using chemical markers in the breath to detect disease. Large and expensive chemical analysers have been used in the past, but Owlstone has developed Lucid. Using a chemical sensor on a silicon chip that is 100 times cheaper and 1000 times smaller than existing technologies, the new detector can be easily used in a doctor's office too.



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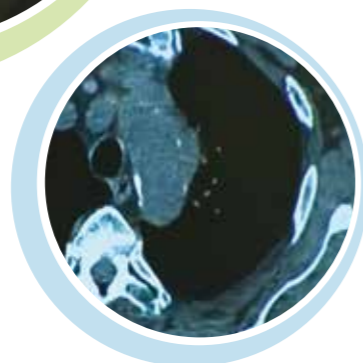
If the [trial] tests come back positive this could be a huge game changer in terms of looking after people potentially with lung cancer.

Dr Jonathan Bennett, Glenfield Hospital, Leicester

This device can collect those samples, those tiny amounts of volatile organic compounds, which we can then analyse in the laboratory. In effect, it's a bit like a finger print. If you have a lung cancer we believe that we can detect these samples and that fingerprint will tell us whether the person has lung cancer or not.

Dr Robert Rintoul, Papworth Hospital, Cambridge

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EMPOWERMENT • REMOTE MONITORING •

Advanced Digital Institute

ADI have developed the PainSense app that patients use to manage their own daily experience of pain.

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The pain toolkit app has recently been introduced in Leeds to encourage supported self-management of persistent pain. I have introduced this app to several patients who have unanimously provided extremely positive feedback and I am very confident we will see improved outcomes for this cohort of individuals.

Dr Jamie O'Shea, clinical lead, Leeds West CCG

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Isansys

The Isansys Patient Safety Engine (PSE) technology platform addresses critical patient safety issues that cost the NHS an estimated £5b annually. By significantly improving the robustness and timeliness of patient monitoring, the PSE enables healthcare providers to reduce the number of in-hospital avoidable deaths and adverse events, and to discharge patients earlier and with greater confidence. By enabling critical care to be extended out of the hospital into the home, the PSE also supports new pathways to keep patients out of hospital in the first place, with subsequent benefits for patients and the NHS and care providers.



“

From my personal experience as a physio using the app with patients, they allow me to engage the patients in their own care, increasing compliance by allowing them to take a more active role in their own care and changing the dynamics of patients' care. Using the integration into the clinical records I am able to complete more telephone appointments with the real-time data coming back from the app to allow remote monitoring. An increase in telephone appointments increases my capacity to do more face-to-face appointments.

Simon Ball, physio and PainSense product manager

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We're using wearable wireless technology to identify and predict deterioration in children earlier, so that we can avoid life-threatening events. The ability to track and identify deterioration towards a cardiac arrest will give doctors the chance to save the patient's life.

Dr Heather Duncan, Birmingham Children's Hospital

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EMPOWERED PATIENTS • PATHWAYS •

Cupris

Cupris was co-founded by ear, nose and throat (ENT) consultant surgeon, Julian Hamann, to make ear examinations much easier, including for people without ENT expertise. Their otoscope attaches to a smartphone and is backed up by sophisticated software that has wide ranging communications potential.



“

As a surgeon I realised that a large proportion of patients I saw on a daily basis could be managed remotely.

There are 45million ear, nose and throat-related GP visits each year in the UK alone.

I co-founded Cupris to save these patients unnecessary trips to the hospital, to free up doctors' time to provide better care to those that need it most and to save money.

Mr Julian Hamann, Consultant Ear Nose and Throat Surgeon, Maidstone and Tunbridge Wells NHS Trust and Medical Director of Cupris Health

We really do feel proud to be part of the Cupris solution. The benefits we are starting to see for our own population are ones that we would like to see across the NHS because every time we eliminate waste that gives us more money to reinvest in new technologies and provide better care to patients.

Lesley Dwyer, Chief Executive, Medway NHS Foundation Trust, clinical testing site for the Cupris otoscope

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Fuel 3D

The Eykona Wound Measurement System delivers accurate and repeatable 3D imaging technology to wound care, allowing any wound, scar or tissue blemish to be scanned, measured and mapped over time to inform medical processes. An innovative, lightweight and easy-to-use hand-held unit captures the 3D images which can then be analysed and shared by clinicians through pioneering software.

“

Fuel3D scanner was easier to operate than the Eykona scanner and more lightweight. Stitching* was very useful to capture full face.

Ms Helen Witherow, Plastic Surgeon, St Georges' Hospital, London

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*The scanner takes images from different positions around the head then stitches the images together automatically to show a larger area scan.



TIME SAVING •

Docobo



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Building Partnership working with Docobo has promoted innovation in health and care pathways which is key to transformation at Crawley, Horsham and Mid Sussex Clinical Commissioning groups.

It is about system transformation rather than just service.

Risk profiling has not only allowed to work intelligently around individual patient needs but also helped to target care adding effectiveness and efficiency.

In addition to this, collaborative cross sector conversations are enabled to integrate care, promoting a culture shift which is essential for joined up care.

Dr Laura Hill - Clinical Director, Crawley CCG



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Docobo has developed a range of remote digital solutions to help the NHS and patients to improve healthcare. Their ARTEMUS-ICS™ system is breaking new ground with SBRI Healthcare funding. The new elements of the system will enable more accurate segmentation of the population to target and deliver care more efficiently. It also tracks and reports patient outcomes. Designed specifically for integrated care communities, the new system is adding Social Care, Community, Mental Health and Ambulance data to the present GP and Acute information. This comprehensive population data will provide care planners and co-ordinators with analysis at population, geographic and individual levels and provide management with cross-sector cost analysis (including at patient/client level). The data can be 'sliced and diced' to deliver all manner of information enabling multi-disciplinary teams to analyse their local communities' health needs.

Crawley, Horsham and Mid-Sussex CCGs sought the Docobo solution for their award winning Proactive Care programme – which was designed as a new way of caring for those with complex health and social care needs. They have been working with Docobo to design the software that identifies patients who are at higher risk of their health worsening and being admitted to hospital. Collaborative development of the new system is set to produce the functionality needed by the CCGs to optimise their integrated care programme.

Coming at a time of financial stringency, rising demand and acuity in primary care, the system is set to enable new levels of productivity and efficiency.

CLINICAL ENGAGEMENT

15 AHSNs support the SBRI programme by identifying areas of need that the NHS has prioritised



24 NHS needs clearly articulated and specified for industry



Over **72** expert managers and clinicians were engaged in the assessment of company proposals



Over **30** companies have initiated clinical trials



130

Companies supported by NHS expert managers and clinicians alongside AHSNs to develop their innovations



AHSNs - KEY TO OUR SUCCESS

The AHSN Network

The 15 Academic Health Science Networks (AHSNs) are critical for our success as they lead on innovation between health services, research and business. SBRI Healthcare is led by the AHSNs, funded by NHS England and managed in the East of England.

The SBRI Healthcare team work with AHSNs to devise the themes for our competitions. They work intensively with front line clinicians to understand where the problems are in the NHS that lend themselves to technology interventions, set up the competitions and then manage the interface between business and clinicians. They work with their local SBRI companies to help them through the development pipeline and into successful marketing.

Here are some examples of how AHSNs have worked with SBRI Healthcare this year.

“

We were delighted to play a very active role in this SBRI call as it is an area of immense importance in managing and improving the operation of our health ecosystem for the benefit of patients. The calibre of clinicians and system experts who supported this call is testament to the recognition that innovative ideas that could emerge from the programme are likely to have considerable impact across the entire spectrum of provider, primary and social care organisations.

Dr Linda Magee, Director, Industry and Wealth, Greater Manchester AHSN



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Innovative projects to reduce pressure on urgent and emergency care

This competition was launched in September 2015, led by Greater Manchester and South West AHSNs. Their involvement demonstrates a typical pattern for how AHSNs support these calls.

1. Defining the call. The two AHSNs worked with the Knowledge Transfer Network (KTN) and SBRI Healthcare to make the call clear and focussed. This includes engaging with relevant clinicians for advice.

2. Workshops and briefing events. The AHSNs organised briefing meetings in Manchester and Bristol. At these, businesses met clinicians, SBRI and AHSN teams for advice and questions on the competition and the application process.

3. Technical support. The AHSNs commercial and innovation teams were on hand to give support to businesses who wanted to apply. This was through smaller clinics, meetings and one-to-one discussions.

4. Assessment. The AHSNs sourced expert support for the assessment and interview process.

“

South West AHSN is proactively trying to create development partnerships between the NHS and industry. Pressure on urgent emergency care is a key issue for all of our members. The SBRI Healthcare challenge provided us with the opportunity to identify cutting edge technologies to help tackle these critical challenges.

Jon Siddall, Director of Innovation, South West AHSN

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Learning events – bringing clinicians, commissioners and innovators together

The London-based AHSNs and SBRI Healthcare held a very successful learning event about Atrial Fibrillation (AF) in March 2016. The three AHSNs - Health Innovation Network, UCLPartners and Imperial College Health Partners - welcomed 70 attendees from healthcare, commissioning, research and business who then learnt from patients, local and international experts and innovation leaders for AF. The exhibition area featured SBRI-funded businesses alongside other SMEs and patient groups.

Asked what they had found most helpful, delegate comments included:

- “The new standalone technology for screening patients. Monitors in GP surgeries, etc, and the possibility of having these in community pharmacies.”
- “The importance and existence of patient decision aids when starting anticoagulation.”
- “Taking a wider view of the pathway. Sources of, and need for, on going support/education and information for GPs and patients.”

Two further events are in the pipeline for late 2016/early 2017.



AHSNs supporting businesses

A networking event at the offices of the Innovation Agency (the AHSN for the north-west coast) proved a valuable catalyst for local business Med ePad to meet Mr Rafael Guerrero from Alder Hey Children’s Hospital. It led to a collaborative called BioSensors Ltd that also included Liverpool John Moores University to develop a small wireless sensor that analyses blood samples without breaking the skin – much more pleasant for patients, especially children. BioSensors successfully bid for SBRI Healthcare funding. Dr Liz Mear, Chief Executive of the Innovation Agency, said: “We are delighted with the result of this SBRI initiative and the potential it offers to transform care for acutely ill babies and children. We were the conduit to introduce the business, the hospital and the academics and we are continuing to work closely with the collaborative to offer further support.”



Incontinence is a significant unmet clinical need that leads to substantive effects on long-term quality of life, and places a huge burden on NHS resources. Its prevention and effective treatment is especially critical in the elderly as it is second only to dementia as a reason for admission to residential care.

UCLPartners was keen to support this call in finding innovations in this important area as it aligns with much of our work in healthy ageing. We hope that the innovations supported to progress through SBRI Healthcare will help people affected by this condition to maintain independence and dignity.

Prof Joanne Hackett, Commercial Director, UCLPartners



Helping older people with multiple health issues

West of England, UCLPartners and the Innovation Agency (north-west coast) AHSNs led the call on urinary and faecal incontinence, which was part of the 'older people with multiple morbidities' competition in June 2015. Their connections achieved greater involvement of clinicians and experts who are working at the front line with patients and commissioners.

For example, at the 'defining the call' stage, UCLP brought in Enteric HTC – a healthcare technology co-operative based at Barts Health and Queen Mary University of London. And at the briefing and workshop stage, West of England AHSN sourced specialist clinicians from acute and community settings to advise businesses in one-to-one sessions. The AHSNs gave support, advice and encouragement to businesses, advertised it to their networks and sourced experts that took part in the shortlisting, interview and technical assessment stages.



SBRI Healthcare has been a success story for the AHSNs. The programme is led by Eastern AHSN but very much with our 14 AHSN partners. Three years into the programme the results are impressive. We have a pipeline of innovations – valued at £1.5bn - that have been commissioned by the NHS and developed directly to meet these needs. We have also shown how healthcare innovations can support the economy – with over 400 jobs and over £45m invested from the private sector. With the AHSNs leading the SBRI Healthcare programme we see the best of a nationally led innovation offer informed by a rich local engagement and service reality.

Steve Feast, MD Eastern AHSN



Issues such as pressure on emergency care and supporting older people are key challenges for our members. AHSNs coordinate the SBRI programme, bringing industry and the NHS together to accelerate the scale and pace of change when leading innovators bring their ideas into the health space.

Dr Liz Mear, CEO Innovation Agency and Chair of the AHSN Network



The AHSN Network

15 AHSNs

East Midlands
www.emahsn.org.uk

Eastern
www.eahsn.org

Greater Manchester
www.gmahsn.org

Health Innovation Network (South London)
www.hin-southlondon.org

Imperial College Health Partners
www.imperialcollegehealthpartners.com

Kent, Surrey and Sussex
www.kssahsn.net

North East and North Cumbria
www.ahsn-nenc.org.uk

Innovation Agency: AHSN for the North West Coast
www.innovationagencynwc.nhs.uk

Oxford
www.oxfordahsn.org

South West
www.swahsn.com

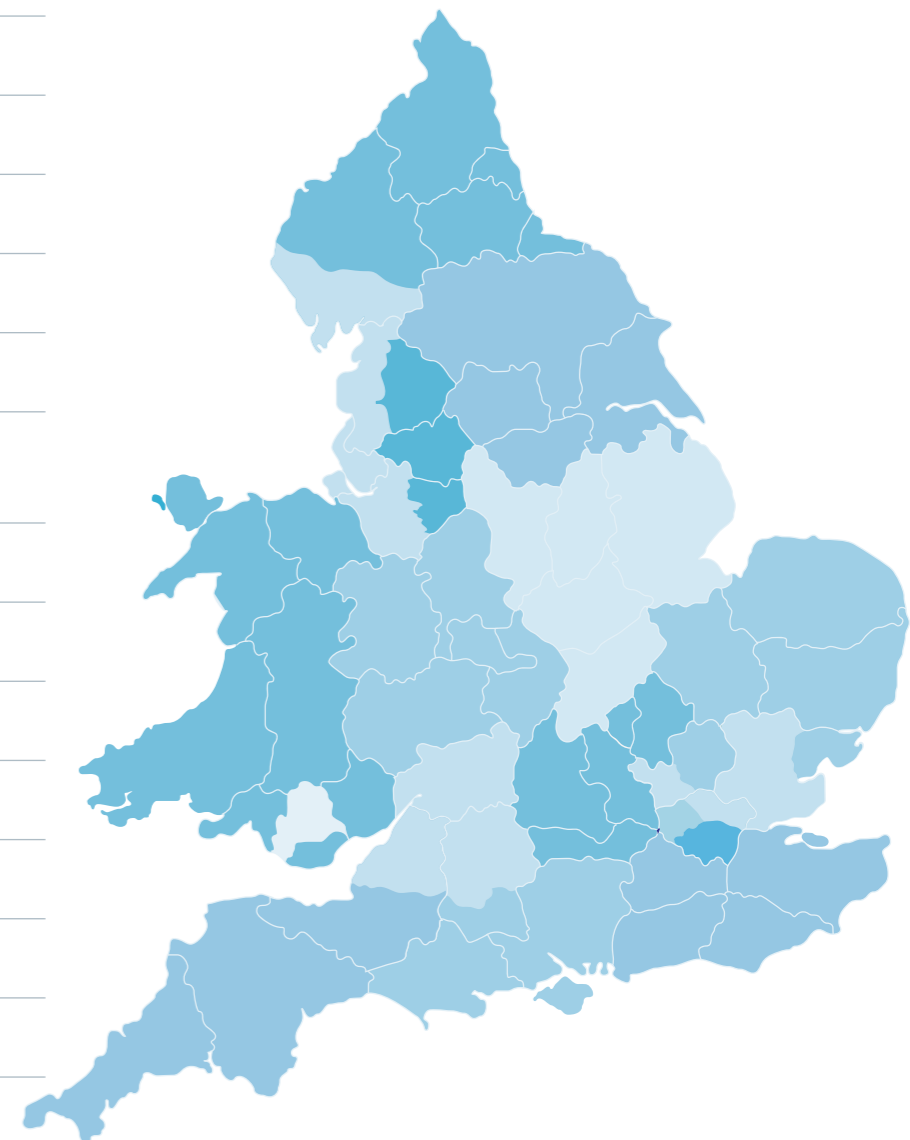
UCLPartners
www.uclpartners.com

Wessex
www.wessexahsn.org.uk

West Midlands
www.wmahsn.org

West of England
www.weahsn.net

Yorkshire & Humber
www.yhahsn.org.uk



INNOVATIONS FUNDED THIS YEAR

Winners 2015/16

Company	Funding phase	AHSN or country location	Amount	Description
Biosensors	7 - child and maternal health phase 2	NWC	£849,585	BioSensors is developing BioSensor Array, a flexible sensor pad attached to a patient that wirelessly transmits regular estimates of a range of blood biovariables. The readings are taken by non-invasive transdermal electromagnetic wave detection rather than blood sampling, so avoiding bruising and pain.
Digital Creativity in Disability	7 - child and maternal health phase 2	NWC	£1,000,000	Digital Creativity in Disability is developing a novel enuresis alarm, WarnDry, which predicts nocturnal enuresis by learning from regular patterns of behaviour.
Bering	7 - integrated care phase 2	KSS	£797,446	Bering is developing a mathematical model to predict unplanned emergency hospital admissions with 91% accuracy. The model uses key factors that determine individual risk, allowing for a person-centred response.
Docobo	7 - integrated care phase 2	KSS	£921,372	Docobo is developing an analytical intelligence system for population health and well-being with partners at Crawley, Horsham and Mid Sussex CCGs. It will provide rich intelligence to identify people with complex needs, including those with a particular risk of social isolation. It will support care co-ordination between agencies leading to improved services in the community.
ADI	7 - medicines adherence phase 2	Y&H	£996,826	ADI has developed a smartphone-based intervention to improve adherence with long-term medication in patients with, for example, hypertension and diabetes.
Folium Optics	7 - medicines adherence phase 2	WoE	£999,778	Folium Optics is developing technology to help people manage their medicines. My Health Tags attach to medicine packets and log when a patient has taken a dose and tell them when the next dose is due. They can also wirelessly share information with clinicians, carers and family if the patient wishes.
Armourgel Medical	7 - musculoskeletal phase 2	ICHP	£876,436	Armourgel Medical is developing a hip protector that integrates active protection, has revolutionary garment design and has the latest in wearable electronics in the thinnest protector design on the market.

Mira Rehab	7 - musculoskeletal phase 2	UCLP	£642,882	Mira Rehab is developing Exergames, clinically-based video games using exercises and movements for game interaction. The games are specifically designed to improve strength and balance to prevent falls and improve function in older people.
Red Embedded	7 - Telehealth/ Telecare for people with learning disabilities phase 2	Y&H	£998,798	Red Embedded systems already operate a remote video communications system (v-connect) that links patients with a range of different health problems to their care providers. The current project extends this system to help learning disabled people.
Maldaba	7 - Telehealth/ Telecare for people with learning disabilities phase 2	UCLP	£550,000	Maldaba is developing My Health Guide, an app that will give adults with learning difficulties a tailored solution to their medical and day-to-day life needs, enabling them to capture information and communicate preferences and wishes far more effectively than before.
Cupris Health	7 - Telehealth/ Telecare for people with learning disabilities phase 2	HIN	£827,117	Cupris Health is developing an otoscope that gives a detailed eardrum image and has an audiometer for hearing assessment. Supported by an app and online platform it can be used for people with learning disabilities allowing ear examinations and hearing tests to be conducted by carers, in more familiar environments without the need to go to the doctor.
Inspiration Healthcare	8 - Brain injury phase 1	E Mids	£97,200	Inspiration Healthcare is developing a breathing system for use in hospital ITUs to treat acute brain injury through inhalation of novel gases. Future plans include a portable device for use by paramedics in the field to deliver the therapy within the critical 'golden hour'.
GSPK Design	8 - Brain injury phase 1 and phase 2	Y&H	£498,262	GSPK Design is developing EMgage, a wireless control unit that allows patients to control ancillary assistive technology equipment using small muscle movements.
Obex Technologies	8 - Brain injury phase 1	Eastern	£754,303	It is important that brain injury patients are treated holistically and with seamless access to relevant patient information for everyone caring for them. Obex Technologies is developing an existing, proven hospital-based registry platform and extending its applicability into community healthcare.

Advanced Digital Innovations	8- Child and Adolescent Mental Health phase 1 and phase 2	Y&H	£1,099,966	ADI is developing CAMHS Open Outreach Platform (CO-OP) that uses digital media to provide personalised support resources for young people with anxiety, depression and self-harming behaviour, and their parents. As part of an early CAMHS assessment and intervention strategy, CO-OP provides software apps and services built around a Personal Health Record and interfaces with professional systems such as SystemOne, CareNotes, and VLEs in schools.
uMotif	8- Child and Adolescent Mental Health phase 1	UCLP	£95,220	uMotif is developing a mobile software application to deliver structured support for young people who are self-harming or are at risk of self-harm.
Cadscan	8- Diabetic Foot Ulcer phase 1 and phase 2	NWC	£1,061,644	Cadscan is developing a cost-effective system for making tailored insoles to prevent ulceration without the typical wait. A 3D foot scanner will quickly measure a foot in 3D, capturing the foot contour and high-pressure zones. Then, with the addition of the patient's weight, will automatically generate 3D printing patterns for different types of shoe. A purpose-designed 3D insole printer will be designed to print this pattern quickly providing a complete, low-cost, easy-to-use, on-demand solution.
Peacocks Medical Group	8- Diabetic Foot Ulcer phase 1	NE&NC	£75,840	Foot orthoses (FO) are commonly used to reduce plantar pressure in the feet of people with diabetes. Peacock Medical Group's project addresses the design and finite element optimisation of new kinds of FOs directly from 3D scan data and pressure measurements. The FOs would be manufactured directly via 3D printing.
Astrimmune	8- Medical Imaging phase 1	EM	£100,000	For high throughput fluid-flow cell imaging for bladder cancer monitoring and diagnosis, Astrimmune has developed the unique capability to biochemically analyse and image individual cells en masse under high-speed flow conditions. The company will develop enabling software tools to allow application of the technique as a cheaper, non-invasive alternative to cystoscopy for the post-surgical monitoring of bladder cancer.
Gold Standard Phantoms	8- Medical Imaging phase 1 and phase 2	UCL	£1,099,732	Gold Standard Phantoms is developing a model of brain perfusion to be used as a calibration device for the measurement of quantitative parameters using Magnetic Resonance Imaging (MRI). Usually, MRI scanners provide images radiologists look at to diagnose illnesses. The new device will allow MRI scanners to provide images representing real numbers, in this case the amount of blood flowing through the brain. These quantitative parameters will allow radiologists and doctors to diagnose several diseases, such as Alzheimers disease, earlier.

BrainMiner	8- Medical Imaging phase 1	UCLP	£1,097,851	BrainMiner is developing Diagnosis in Dementia (DIADEM), an automated, extensible, and personalised healthcare platform for assisting the clinical diagnosis of dementia using multi-modal imaging and non-imaging data. DIADEM aims to make the best use of currently available imaging data by delivering a software infrastructure that can automatically and intelligently analyse MR imaging data and feed the results to the end-user clinicians in a visually intuitive fashion.
SOMA Analytics	8 - Outpatient Services phase 1	UCLP	£99,521	SOMA Analytics has developed Kelaa, a digital health product that will screen and monitor outpatients' mental health status on a scientifically-validated basis using non-invasive mobile technology. SOMA's solution will allow clinicians to appropriately prioritise outpatient resources by need/risk, including follow-up appointments, while offering a means to provide remote, tailored interventions that enhance the recovery of patients suffering mild to moderate depression or anxiety disorders.
Message Dynamics	8 - Outpatient Services phase 1	KSS	£548,117	Message Dynamics is developing an innovative bed-exit sensor that improves carer response times and gives fewer false alarms.
Ulsys	8 - Outpatient Services phase 1	Y&H	£99,996	Ulsys is developing a wearable solution to significantly enhance and monitor the treatment of venous leg ulcers, enabling pro-active management, patient participation and more efficient use of outpatient treatment resources.
Safekeeping Solutions	9 - Falls phase 1	WM	£99,315	Work is being undertaken to validate the technical feasibility and commercial value of an innovative bed-exit sensor that has been invented by Safekeeping Solutions. The study will provide the evidence that the novel technology is desired by clinicians and can be used to develop an accurate and prompt bed-exit sensor.
Rinicare Ltd	9 - Falls phase 1	NWC	£99,694	A non-invasive System to Avoid Fall Events (SAFE) that combines a thermal imaging optical sensor and bespoke algorithms to detect changes in a patient's position in bed, so the relevant action can be taken to prevent them falling out of bed. Suitable for both hospital and community care, it can be customised to suit the characteristics or behaviours of the patient.

Ally Labs Ltd	9 - Functional difficulties phase 1	ICHP	£99,460	Ally is an in-home early warning system for detecting increased frailty in elderly people. Sensors in the home and on their keys work together to track daily living patterns – identifying unusual changes in routing and alerting carers to immediate and potential health concerns via a mobile app, including sharp declines in health such as worsening dementia or the early onset of flu.
Buckingham Healthcare	9 - Functional difficulties phase 1	Wsx	£13,805	A patient exercise system designed to maintain a patient's pre-admission level of function and improve their muscle strength while in hospital with a view to being discharged home more quickly.
Acute Technology Ltd	9 - Functional difficulties phase 1	EM	£99,760	Sensors for existing medication packaging so that carers can remotely monitor medication consumption and assist people with adherence. The sensor can be added to weekly medication trays at minimal cost with no change to current pharmacy procedures and it connects with communications technology that can be easily installed in every home.
Inclusiviti	9 - Functional difficulties phase 1	ICHP	£100,000	The Inclusiviti Chair delivers more mobility than conventional wheelchairs by using intuitively controlled Mecanum wheels. Mounted in groups of four, Mecanum-wheeled systems allow unrivalled manoeuvrability. The company are also testing a motorised mechanism to raise and lower so users can reach a kitchen worktop or sit at a table, and an automatic tilting mechanism that increases stability on ramps.
11 Health	9 - Functional difficulties phase 1	Ox	£99,500	Ostom-i Alert is a sensor that clips onto any ostomy bag and sends Bluetooth alerts to an app on a patients' mobile device telling them when their bag is filling. This can help prevent overflows and spills, particularly at night, and will improve patients' quality of life. The information could also be emailed to patients and clinicians.
Sky Medical Technology Ltd	9 - Incontinence phase 1	Ox	£96,002	Faecal Incontinence (FI) is often treated with electrical nerve stimulation delivered through needle or TENS approaches which are costly and inconvenient for the NHS and the patient. OnPulse™ is currently employed in hospitals under NICE guidelines to prevent DVTs occurring following surgery and can be repurposed to help treat FI. The Geko – a small, self-adhesive device – employs small electrical impulses to gently activate nerves in the body. When the Geko is being used to treat FI, it fixes next to the ankle where it stimulates the tibial nerve. It has been shown to significantly reduce levels of FI in patients and allows them full mobility.

Docobo	9 - Incontinence phase 1	KSS	£100,000	CHitFIT Connected Health interface to Faecal Identification Transducer aims to exploit the endogenous fluorescence (autofluorescence) signal from stool and use this to differentiate between urine and faeces in pads worn by adult patients in a number of clinically relevant areas: (a) elderly and/or incontinent patients in care homes; (b) hospitalised incontinent patients and (c) patients in the home with temporary (e.g. during colon cancer treatment) or permanent (e.g. wheel-chair bound spinal injury patients) faecal incontinence.
JVS Products Ltd	9 - Incontinence phase 1	Wsx	£98,814	JVS Products are investigating the anti-microbial activity of a novel biocide and assessing its acceptability as a one-step cleaning treatment for intermittent catheters. This development will lead to an easy-to-use, evidence-based alternative to single use Indwelling Catheter (IC).
Lucid Group Ltd	9 - Incontinence phase 1	GM	£99,996	Development of An-i-sys, a rapid diagnosis for the causes of faecal incontinence by complete investigation of anorectal function in one patient session. Lucid aims to develop a unique 3 in one diagnostic device. The device would help intuitive, fast and economic measure biophysiological markers (pressure, sensation and muscle contractility – via EMG), enabling more precise diagnosis of the functional deficits in faecal incontinence at primary care.
365 Response	10 - Resource planning phase 1	Y&H	£99,710	Healthcab puts patients in control of their transport when they need it the most. Healthcab gives patients safer, more reliable transport to and from healthcare settings, while providing new tools to commissioners to ensure that best quality and value is being achieved.
SA IP	10 - Resource planning phase 1	WoE	£98,660	SortED' provides tablet-based assistance for emergency nurses and managers.
Cambridge Clinical Management Analytics	10 - Resource planning phase 1	Eastern	£90,149	A decision support tool for predicting and managing emergency department crowding.

Snap40	10 - Resource planning phase 1	Scotland	£98,873	Feasibility Study Senda: A pro-active patient health monitoring platform. The company's solution, Senda Triage, is an advanced machine learning and artificial intelligence software platform that continuously calculates the probability of a patient deteriorating in the future or requiring admission. Senda consumes patient-specific data from a variety of different sources including continuous vital signs from Snap40's own wearable device as well as from electronic health records.
Ubisense Ltd	10 - Resource planning phase 1	Eastern	£31,496	Ubisense Ltd technology accurately locates the position of tagged items within an indoor environment, monitoring interactions between these objects and utilising the information to drive software applications. The technology is currently used in challenging manufacturing environments to monitor, control and optimise complex assembly processes. There are a number of surprising parallels between the ad-hoc, non-linear, processes used in off-line rework and those found in A&E Departments. Therefore, this project explores whether the same proven techniques, employed by over half of the major automotive companies, could be used to generate similar benefits within A&E for patient flow and admissions management.
Ubisense Ltd	10 - co-ordinating admissions phase 1	Eastern	£99,960	Ubisense Ltd technology locates the position of tagged items, monitors interactions between them and uses it to drive software applications. It is used in manufacturing environments. This project explores whether the same proven techniques, employed by over half of the major automotive companies, could be used to generate similar benefits within A&E for patient flow and admissions management.
IXICO	10 - co-ordinating admissions phase 1	UCLP	£98,244	MyBrainBook is a digital platform that allows patients with cognitive impairment and dementia to capture information about themselves and share it with friends, family, and health and care professionals. The personalised care and support plans include an 'urgent care plan' that gives the emergency services real-time access to information to help ensure the appropriate pathway is chosen, avoiding A&E admissions where possible.
Kernow Health Solutions	10 - co-ordinating admissions phase 1	SW	£93,652	Health ePass is a patient written record of their health comprising their medical conditions, medications, next of kin, mobility and other useful facts. It can also store scanned in documents such as hospital correspondence and care plans. Patients can share their record securely via a simple electronic scanning function, making the information available to clinicians as they choose. It pre-populates clinicians' paperwork, allowing them to verify and amend, rather than collect all the information again.

Biovici	10 - co-ordinating admissions phase 1	Wales	£94,815	Biovici are developing an affordable, portable test that uses saliva to detect the presence of biomarkers linked with Traumatic Brain Injury (TBI). It will also be developed to analyse blood from a pin prick. The aim is to assist clinicians with diagnosis, therefore reducing the number of people attending A&E by screening at point of incident, aiding triage and effectively managing the flow of patients into the correct departments.
Serket Technology (now Healthera)	10 - Preventing admissions phase 1	Eastern	£79,400	Healthera will help patients and pharmacists manage medications to deliver better medical efficiency and health outcomes. The technology currently deployed in some pharmacies in East of England has been well received by pharmacists and patients. GPs are interested in using this platform for better understanding on patient needs and behaviour as well as serving the need for refills. Ambulance and A&E services can be greatly benefitted from quick understanding on patient medication history and behaviour.
Mologic	10 - Preventing admissions phase 1	EM	£100,000	Headstart is a new diagnostic for acute exacerbation of COPD.
Microbiosensor	10 - Preventing admissions phase 1	GM	£99,880	Microbiosensors are developing an innovation to reduce admissions through rapid diagnosis of urinary infections in the elderly.
Renephra	10 - Preventing admissions phase 1	GM	£99,079	The aim of this product is to reducing heart failure admissions using community based transdermal fluid removal.
Careflow Connect	10 - Preventing admissions phase 1	WoE	£99,937	The company are developing TACTIC - Team Communications for Integrated Care.
Farewill	10 - Preventing admissions phase 1	ICHP	£90,420	Farewill is developed patient facing advanced care plans.

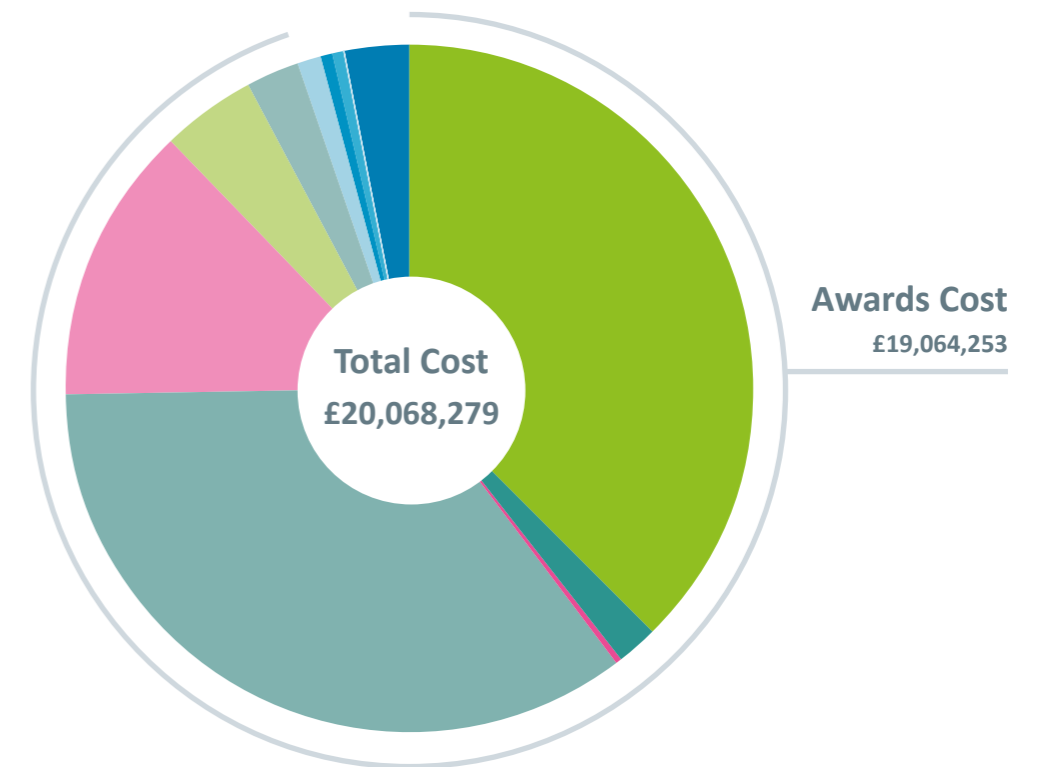
FINANCIAL REPORT

The draft financial year statement for 2015/16 is detailed below. The programme received £20,500,00 net cash from NHS England during the year and dispersed £20,473,408 net cash by 31 March 2016. The remaining balance of £26,592 is carried forward.

Audited accounts will be available in September 2016.

Programme	Planned Spend	Actual Spend	Variance
Autumn 2013 Phase 2 Q3 & 4	£7,490,065	£7,531,747	£41,682
Autumn 2014 Phase 1 Q2	£468,425	£424,916	(£43,509)
Phase 3 Programme	£0	£40,000	£40,000
Spring 2014 Phase 2 Q2, 3 & 4	£6,549,999	£7,038,208	£488,209
Autumn 2014 Phase 2 Q1 & 2	£2,625,000	£2,635,879	£10,879
Spring 2015 Phase 1 Q1 & Q2	£1,039,992	£838,622	(£201,370)
Autumn 2015 Phase 1 Q1	£628,499	£554,881	(£73,618)
PMO Costs	£999,999	£999,999	£0
Irrecoverable VAT	£198,020	£405,129	£207,109
2015/16 Admin Costs – Audit, bank charges	£0	£4,027	£4,027
Additional In-Year Funding for CAMHS competition	£500,000		(£500,000)
Total	£20,499,999	£20,473,408	(£26,592)

COSTS



- Awards Cost Category**
- 5 Autumn 2013 Phase 2 £7,531,747
- 8 Autumn 2014 Phase 1 £424,916
- 6 Phase 3 Programme £40,000
- 7 Spring 2014 Phase 2 £7,038,208
- 8 Autumn 2014 Phase 2 £2,635,879
- 9 Spring 2015 Phase 1 £838,622
- 10 Autumn 2015 Phase 1 £554,881
- Admin Cost Category**
- Marketing & events £176,739
- Health economics £118,000
- Technical Assessors £127,000
- Legal, audit & accountancy £20,038
- Competition running costs £562,249

Total £20,068,279

• Irrecoverable VAT on the Awards £405,129 makes up the balance of £20.5m

OUR PLANS FOR 2016/17

Our programme is commissioned and funded by NHS England. Their business plan for 2016/17 makes clear they are continuing to focus on the triple aim vision set out in *Five Year Forward View* of **improving health and wellbeing, redesigned care and wise financial stewardship**. A core part of their plan, is the effort to ‘solve today’s issues by accelerating tomorrow’s solutions.’

For 2016/17 we will work with AHSN leaders on the following objectives.

- Build a **strong financial footing** for the programme beyond the annual budgeting cycle
 - Further build on dialogue with the devolved assemblies and Scottish Government to offer joint competitions.
 - Develop discussions with Ministry of Defence and the Department of Transport about common interests.
 - Develop discussions with appropriate partners to bring value propositions to the companies and programme.
 - Explore opportunities for Horizon 2020 backed investment.
 - Develop an offer to potential commercial and philanthropic funding partners based on the analysis of different funding vehicles undertaken in 2015.

- Improve the **identification of the problems** that will respond to technology intervention
 - Refine the needs analysis process especially by using the expertise of the healthcare KTN to better understand the needs and problems in a care pathway.
 - Further improve our needs articulation including how to identify needs in the system and how to incorporate research.
 - Agree with AHSNs a consistent approach to how SBRI and AHSNs will work together.

- Support the **adoption and spread of the developed solutions** in the NHS and wider international markets
 - Work with AHSNs to agree suitable adoption strategies for SBRI Healthcare-commissioned products.
 - Help contracted companies to engage with the test-bed and vanguard sites to make new technologies part of re-designed service offerings.
 - Secure new procurement frameworks where they are required.
 - Expand engagement with procurement bodies to ensure they are aware of our pipeline of products.
 - Use our comprehensive database to support a richer engagement with AHSNs and NHS England in order to support the take-up of products.
 - Run further learning events to share knowledge.
 - Support SBRI companies to access networking opportunities with NHS partners through AHSNs. Develop a joint programme that builds on business support available that targets assistance to SBRI-backed companies.

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solving today’s issues by accelerating tomorrow’s solutions.

”

SBRI Healthcare

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