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Development Fund

The View from TheHill

**Digital innovation in
healthcare in Oxfordshire
and the Thames Valley**



THEHILL

We want to improve healthcare using digital technology

Our mission is to inspire, enthuse and educate the healthcare workforce and support digital technology commercialisation and adoption.

We are an innovation cluster, network and incubator/accelerator programme working in Oxford with NHS Trusts, universities, digital developers, innovators and investors to catalyse commercial and impactful technological solutions in healthcare.

TheHill was created in 2016 to address the challenge of identifying and developing emerging innovations that arise from daily practice in our NHS partners, research in the academic institutions in Oxford and the ideas of entrepreneurial individuals.

We work with two universities and two NHS trusts in Oxford and with other networks and individuals in the region, across the UK and in Europe.

TheHill is establishing a community that is accessible, encouraging and inspiring, with components for learning, networking, co-working, and business building.

We offer support to anyone who shares our vision and goals.

"Digital health cannot happen in isolation. It requires a multidisciplinary approach. TheHill's work is key to bring together people concerned with digital healthcare from different paths."

**Fred Kemp,
Deputy Head of Licensing & Ventures,
Life Sciences, University of Oxford**



We bring together creative and innovative individuals and groups

We work with patients, carers, nurses, doctors, healthcare professionals, designers, developers, researchers, business leaders, investors – and anyone with an interest in using new technologies to improve healthcare.

Whether you're in 'the system' or outside it, we will help you make connections and overcome barriers.



Come to us for inspiration and support in developing your idea

We guide innovators through a development pipeline to implement solutions with the potential to transform care and improve the lives of patients and healthcare professionals.

Seconded experts-in-residence work with the steering committee, project managers and administration team to provide expertise and mentoring for SMEs.



We collaborate with and signpost to investors and industrial partners

We work across the Oxfordshire and Thames Valley ecosystem which includes a world-class health and life sciences cluster comprising research, clinical and commercial entities.

Our region is also within the 'golden triangle': of research universities located in Cambridge, Oxford, Milton Keynes and London; a key area for healthcare in the UK.

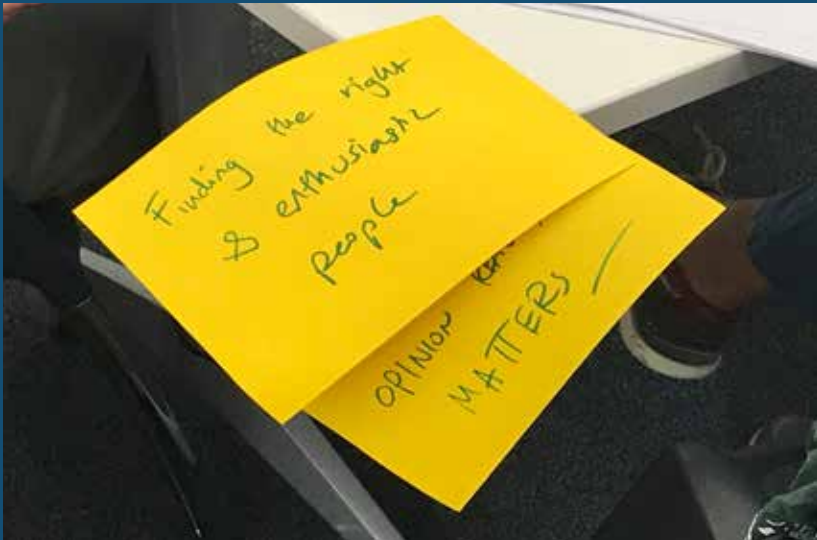


Innovation Support for Business

TheHill offers grant-funded support for startups

Our in-house team provides a bespoke programme of support interventions.

SMEs enter a stage-gated system to move them through a development pipeline with the help of workshops, group sessions with partner companies, 1:1 support from the experts-in-residence, NHS roundtables, introductions, demonstrations, conferences and 1:1 mentoring.



We offer

- Help with any healthcare innovation with a digital component.
- Insight into and access to the UK health system.
- Learning from healthcare professionals and patients.
- Entrepreneurship and business support, education and advice with a healthcare focus.
- Introductions to industrial partners and investors.
- Case studies from our development pipeline.
- Connections and networking into our ecosystem.

How to apply

To apply for grant-funded support, visit our website www.thehilloxford.org or email us connect@thehilloxford.org

The Oxfordshire Local Enterprise Partnership and the Innovation Support for Business programme

TheHill is part funded from the European Regional Development Fund through OxLEP's Innovation Support for Business programme.

Oxfordshire Local Enterprise Partnership (OxLEP) champion's Oxfordshire's economic potential, acting as a catalyst and convener to drive a dynamic, sustainable and growing economy.

The OxLEP Business team has secured European Regional Development Funding (ERDF) to run three programmes which help Oxfordshire's SMEs to start, grow, innovate, and escalate.

TheHill is a partner of one of these three programmes, Innovation Support for Business (ISfB), which is a three-year £5.2m programme. ISfB supports innovative Oxfordshire entrepreneurs and businesses by:

- Assisting in developing and commercialising innovations.
- Enhancing research and innovation infrastructure in Oxfordshire.
- Promoting business investment in research and innovation.
- Developing links between businesses and researchers.



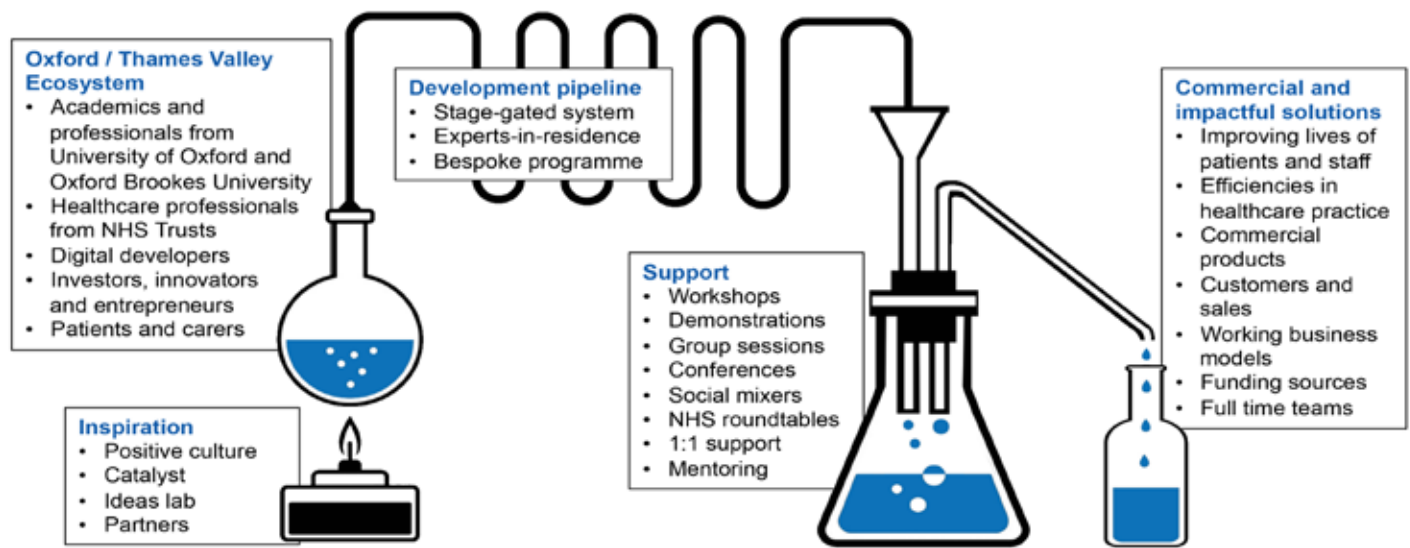
As well as TheHill and OxLEP Business, the programme's delivery partners include the University of Oxford, Cherwell District Council and Oxford City Council. Together they provide a customisable portfolio of help for eligible entrepreneurs, start-ups and businesses to encourage innovation, including:

- Go-Create Grants.
- Innovation Support via:
 - coaching and mentoring.
 - workshops, seminars and masterclasses.
 - access to equipment, expertise and resources.

For further information on the ISfB programme and what it can offer you and your business, visit oxfordshirelep.com/isfb or contact innovation@oxfordshirelep.com

Photograph taken at the OxLEP Growth Hub marketplace 2019

TheHill development pipeline for SMEs



Oxfordshire and the Thames Valley is the place to find heathcare innovation

Here in Oxfordshire and the Thames Valley there is a strong history of healthcare innovation, from Oxford Instruments, a spin out of the University of Oxford, founded in 1959, which provided the first superconducting magnets for MRI scanners (magnetic resonance imaging), through to a wealth of start-up and growing companies in the region today.

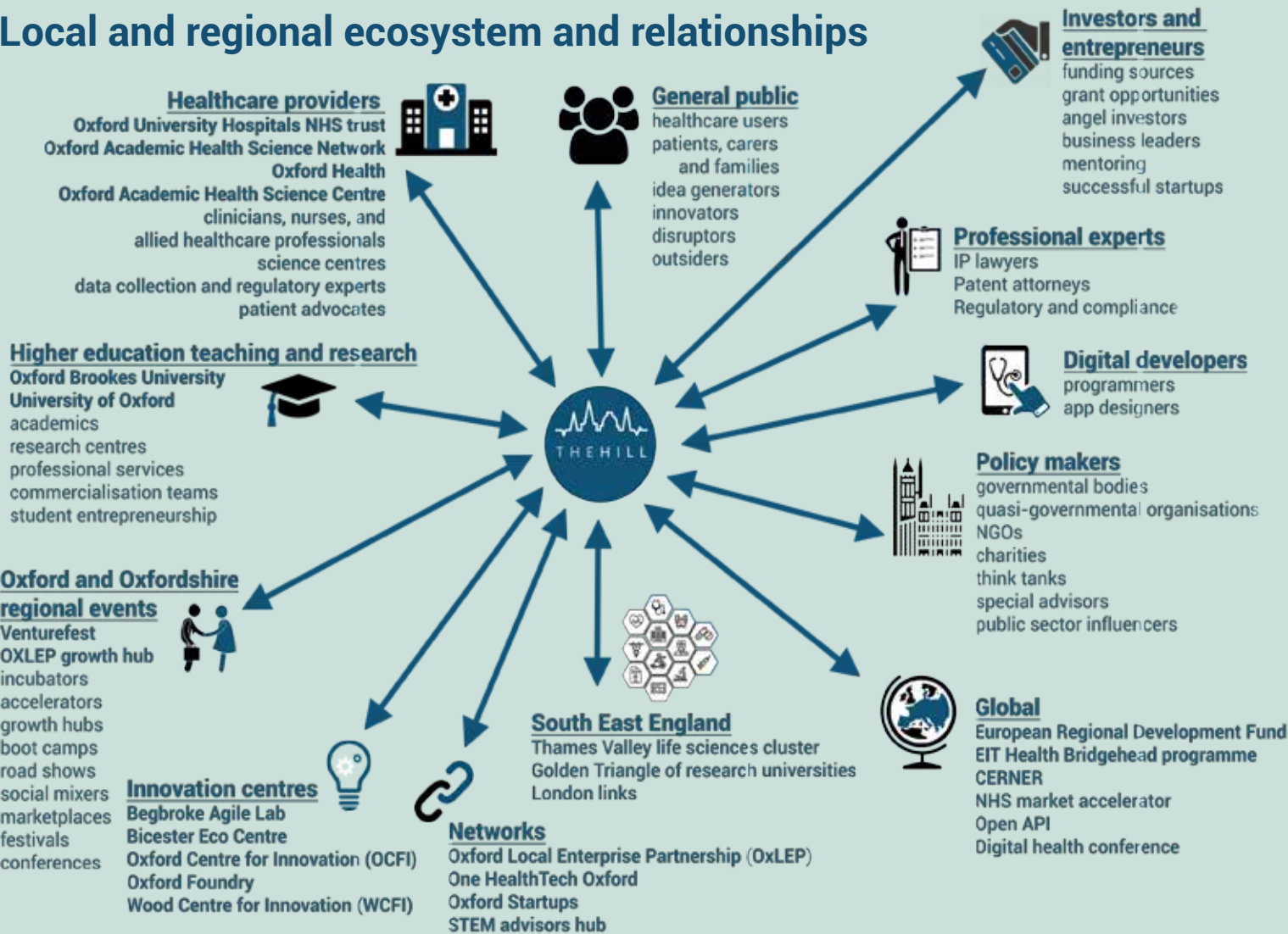
New models for innovation abound, including Sensyne Health's new collaboration with Oxford University Hospitals to enable data-driven innovation and clinical AI (artificial intelligence). This thriving commercial scene is underpinned by world leading research coming out of the five universities in the region as well as research facilities at the national innovation campus at Harwell. The world's largest integrated healthcare system, the NHS, is well represented, including the National Spinal Unit at Stoke Mandeville; the John Radcliffe Hospital, one of the NHS's largest teaching hospitals; and extensive primary and community care facilities.



Photograph taken at TheHill and Oxford Startups shared social mixer event in June 2019

The Thames Valley is the fastest growing economic region in the UK outside of London, and with accelerators, incubators, European-funded support programmes and international connectivity via hub airport Heathrow, is an ideal place for digital health start-ups to thrive and scale.

Local and regional ecosystem and relationships



How we're working across the region, the country and Europe.

TheHill runs bi-monthly regional networking events for the digital healthcare community, drawing in entrepreneurs, investors, software engineers, clinical staff, and support services and signposting resources across the regional ecosystem as well as our own activities. Our partner Trusts include four secondary care hospitals, eight community hospitals and a wide network of community services stretching from Bath to Milton Keynes, with a wide range of specialisms and a thirst for innovation. We assist staff in the Trusts to express and explore ideas from the frontline, and in 2020 will be rolling out a pilot programme of digital skills modules to help staff better understand and interact with technology.

Our community of innovators, entrepreneurs and researchers benefit from workshops on topics such as health economic evaluation, business models in healthcare and user-centred design, funded by the European Regional Development Fund. These workshops and associated 1:1 support to enable connections into the healthcare system are open to any SMEs registered in England. Our aim is to help regional and national SMEs with strong ideas, by giving them the knowledge and networks that they need to scale their innovations.



Photograph taken at TheHill and Oxford Startups shared social mixer event in June 2019

We also recognise that being open to innovations strengthens the regional ecosystem and enables the National Health Service to get the best possible technologies to improve efficiency and patient outcomes.

Our Market Access Accelerator, a one-week intensive experience designed to get innovators up to speed on how to engage with the UK's National Health Service, is open to companies from across Europe and is fully funded for selected participants.

We will also be running a Europe-wide Bootcamp in 2020 focussed on helping early stage start-ups design their systems for good technical integration into NHS patient record systems, providing a streamlined experience for users of the technology and enabling our regional Trusts to benefit from these technologies.

TheHill's digital healthcare Innovation Showcase at Venturefest 2019

Venturefest Oxford was set up in 1998 as an annual event that brings together innovators, investors and entrepreneurs to make connections that lead to new investments, new businesses and new ideas in the high-tech sector. The event celebrates successes in the knowledge economy in the region and provides a focal point for the local innovation ecosystem.

This year the Innovation Showcase will be sponsored by TheHill, Oxfordshire's digital health innovation community.

TheHill is bringing nine companies to the showcase. Adaptix, who are revolutionising diagnosis through 3D images; Cotswold Health Technology who are developing wearables to help people with Parkinson's disease to walk; Dr Julian's accessible mental healthcare platform; KroniKare's AI-driven system to assess, diagnose and manage chronic wounds; Nye Health who have a new data driven approach to primary care; Team RAICQ's training platform for people who review medical imaging; TrustOnTap's application for helping elderly people access affordable care; Visiba Care who enable healthcare providers to see their own patients virtually, and Wizdish who have the first and only commercially available VR treadmill, a unique tool for medical research and clinical treatment.

Come and see how these innovative companies are hoping to change the way healthcare is delivered and improve the lives of patients and professionals.

Venturefest social mixer

TheHill has secured a private suite of rooms at Venturefest for our mixer. Join us to discuss how to maximise your networking, meet other digital health innovators, and hear from our exhibitors.

Photograph of Venturefest 2018 at Oxford Brookes University



Perspectives from TheHill

When your customer is not your consumer: selling to the NHS

Megan Morys-Carter



Sitting around a table with a group of investors in healthcare innovations, nothing comes out more strongly than concern over a business model that primarily involves selling to the UK's NHS. "It's a difficult sell" one complains, "so it needs a lot of money to get to that first sale". Someone else chimes in with "and difficult to scale – you start all over again the second time around". But why is it so difficult?

One of the reasons is a syndrome found in many industries across the world: the fact that the person benefitting from the product (the consumer) is not the person buying the product (customer). This is even more evident when no money changes hands at the point of use, as in the NHS. Instead the purchasing decisions are strongly separated from the use: different people, different timescales, different locations, and different priorities.

This issue occurs in many other industries where successful sales are made. Here are some of the strategies used to tackle it:

1. Marketing which appeals to the user, so that they can put pressure on the buyer. The classic example of this is children's toys, where adverts are targeted at children (the user) to excite them about the toy, which they then ask their parents to buy.
2. Point-of-sale messages which appeal to the buyer. Once the child has asked for the toy, the parent looks it up and decides whether to buy. At this point, on the packaging, there are often messages about the educational nature of the toy, designed to appeal to the parent (the buyer).
3. Pilots and trials: often the user, who might really want the product, cannot agree to a sale – but can agree to a free trial. Thus a piece of professional software, for example, might offer free or reduced rate trials with the expectation that the product will be able to prove its usefulness within the trial period.
4. A networking approach: in selling services to large corporates, building a large network within the target organisation means that several people can be encouraged to influence the budget-holder who

might make the purchase. This is particularly relevant if there is a choice between several providers, as recommendation from trusted sources is influential.

These strategies will also work within the NHS. The users who need to be excited about the product are the clinicians but you will also need to tick all the boxes for buyers in terms of evidence of effectiveness and cost savings. Pilot studies and clinical trials will demonstrate the product's efficacy and making more connections across the system always helps to create the enthusiasm and reputation needed to expand at scale.

To use these strategies effectively you need that first connection to someone who will help you sell. Here at TheHill we help our community by bringing together people from across the digital healthcare ecosystem and running a programme of activities where you can hear from people who make the decisions.

Megan Morys-Carter is Director of TheHill digital health innovation community. She also develops purpose-driven entrepreneurs through her social enterprise OxLaunch, volunteers with Oxford Startups and sits on the Board of The Oxford Trust.

“The sudden influx of technology, combined with a lack of robust governance, has led to distrust among some clinicians, patients, and healthcare providers. Technologies are consequently ignored or abandoned. Regulating digital health, while trying to create an environment promoting innovation, is challenging.”

Rishi Duggal, *British Medical Journal*

“digital transformation... applying the culture, practices, processes, and technologies of the internet era to respond to people's raised expectations... is going to disrupt every industry, including the one you work in.”

James Wallman, *Ideo Europe*

Product development: call in the experts

Antony David



So, you've got a great idea for a product and you've found investment to make it real but now you've actually got to execute your plan. How much experience of project management do you have in your team? How familiar are you with the regulatory environment? What's meant by design for manufacture? If you cannot confidently answer these questions, it's probably time to find someone who can. TechTribe talked to two local consultancies with years of experience.

Triteq has recently set up its Oxford office in the new Wood Centre for Innovation in Stansfeld Park. Established in 1983, the company has its headquarters in Hungerford and since 2008 has focused increasingly on products for medical, health and wellbeing, which now represent 65 per cent of Triteq's business. The proximity to one of the country's largest teaching hospitals and the relationship with TheHill digital health innovation community were significant attractions.

Angela Hobbs, Triteq's managing director, is keen to point out the importance of understanding the regulatory environment. "I find investors are aware of the regulations. During one such session, our client asked: 'Do we really need to be having this conversation for so long about this aspect?' But when they went to pitch they told us: 'Thank goodness we had that conversation, because the investors asked question after question about that'."

Andrew Larkins is head of technology at OPD, which is based in Jericho, close to Oxford's city centre and convenient he explains, especially for projects spun out of the universities. The company was founded in 2013 by Rupert Wilkinson and offers a broad range of services to help companies execute design projects from conception through to manufacture.

Larkins estimates about a third of OPD's work comes from startups or early-stage companies. The company works with test houses on type approvals. Larkins believes UK designers and manufacturers will continue to work to standards that allow them to append the CE mark, whatever the outcome of the Brexit negotiations. He offers this advice to startups thinking about their first product:

- Know your market: Understand your potential customers, your potential competitors and work out how you can delight your customers with as simple a product as possible.
- Think in terms of a roadmap, the generation you are developing and the two generations beyond that. So if you come up with a bright idea, you don't necessarily say 'no, we're not going to do that', you may say 'we won't include that in the first generation but that feature may go into a second version'.
- Focus on the most important outcome. Is it to prove there's a market, nail a viable price point, take a share of the market, demonstrate profitability, provide evidence of product performance? Sometimes, startups try to satisfy all these criteria and lose sight of what their investors want to see.

A chemistry graduate, Antony David, spent most of his career using and then making equipment for the music and broadcast industries. He was managing director of Oxford-based electronics and software company, Solid State Logic.

This article was first published by TechTribe, Oxford's latest source for healthcare and technology news. Visit www.oxford.techtribe.co for more.

What's been happening up at TheHill?

Our year so far...

January

Megan Morys-Carter joined the Hill as Programme Director, working with Glenn Wells and Nicholas de Pennington and Adele Carvalho. (See the whole team listed on page 15.)

The team moved into temporary office space in the John Radcliffe Hospital, having worked with students from Oxford Brookes School of Architecture to design our new innovation hub.

February

TheHill launched our programme for the year at the George Pickering Education Centre at the John

Radcliffe Hospital with a range of workshops and other events to provide support and inspiration to our network.

March

We started to provide 1:1 support to SMEs interested in engaging with the NHS, and began work on our community engagement and online presence. Rhiannon Lassiter joined the team as Head of Marketing.

April

We organised a User-Centred Design workshop at the Bioescalator Innovation Building on Old Road Campus. The workshop was run by local design and innovation firm, Triteq: a multi-disciplinary business supporting breakthrough projects from life-changing safety critical medical devices to fitness apps. Participants learned about the principles of user-centred design, heard best-practice examples and gained an understanding of how to apply this methodology to their own projects.

After the workshop, we hosted a social mixer with drinks and canapes, intended for everyone and anyone connected to TheHill. Forty attendees gathered in The Hub of the Bioescalator to discuss projects, share ideas and make connections.

May

Our programme of events continued with another over-subscribed workshop on Economic Evaluation at the Wood Centre for Innovation (WCFI). We attended the Oxford University Hospitals International Nursing and Midwifery Conference and celebrated International Nurses Day.

We had a stand at the NIHR Oxford Biomedical Research Centre Open Day and joined partners from the Oxford Local Enterprise Partnership (OxLEP) at the second Growth Hub Marketplace at Egrove Park in Kennington where we got to see some of the exciting startups across a wide range of fields including everything from massage therapy to an app to help with your car insurance.

June

In June we hosted another social mixer in partnership with the team from Oxford Startups at the Wood Centre for Innovation. This was preceded by a short Networking Power Hour masterclass to make sure all our networking skills were on point for the event. Fifty attendees mingled in this beautiful new innovation space and had the opportunity to take a short tour.

We also attended hearings in Munich as part of our EIT Health grant applications for 2020.

July

We organised a workshop on Patient Engagement and Involvement run by Dr Siân Rees.

We invited companies to be part of our exhibition at Venturefest and held a strategy day with attendees from across the healthcare ecosystem.

Flora Hatahintwali and nurses at the OUH International Nursing and Midwifery Conference



Mike Foster, Centre Director, speaking at the TheHill and Oxford Startups shared social mixer event in June 2019



Dr Siân Rees and a workshop participant at the end of the Patient Engagement workshop

August

We invited applications for our first NHS Market Access Accelerator, launched our new website, and continued to work on our strategy for the next few years.

September

We're hosting this year's Innovation Showcase at VentureFest and running the market access accelerator

As the year continues you're sure to see TheHill team out and about. Please subscribe to our newsletter www.eepurl.com/gyaDPz, follow us on Twitter @TheHillOxford or visit our recently launched new website www.thehilloxford.org to find out what's next for TheHill.



Unit A, BA (Hons) Architecture students' design for a hub for TheHill, winner of the Architect's Journal student prize

Join us on our journey and get involved

NHS Market Access Accelerator 23-27 September

This September we are running a one week market access accelerator for companies wanting to sell into the NHS. All places are now filled, but please let us know if you'd like to join another cohort next year.

Business Models in Healthcare workshop 24 October

In October you can join us for a talk and panel discussion. Visit our website to sign up.

November social mixer

We organise mixers every two months, sometimes in partnership with other networks. Visit our website to sign up.

Get involved

We're looking for suppliers to help deliver our programme of support workshops for startups, for healthcare professionals to join our network of experts and for people who share our mission of making healthcare better using digital technology.

- **Subscribe to the newsletter for details of workshops, mixers and other events**
- **Apply for 12 hours grant funded support for SMEs**
- **Join our network of experts**
- **Register as an approved supplier**

connect@thehilloxford.org

TheHill team

Megan Morys-Carter, Director

Megan sits on the Board of The Oxford Trust, an independent charitable trust working across enterprise and innovation; science education; and public engagement with science. She also holds voluntary roles with the angel network OION and Oxford Startups.

Nick de Pennington, Digital Innovation & Population Health Lead, Oxford University Hospitals

Nick is a former neurosurgeon and co-founder of TheHill. He leads innovation activities at OUH and is Clinical Lead of the Thames Valley & Surrey LHCR. He is also one of NHS England's Clinical Entrepreneurs as CEO of Ufonia, a digital health start-up company developing autonomous voice-based clinical follow-up

Glenn Wells, Chair of TheHill board

Glenn leads the Oxford Academic Health Science Centre. His focus is on supporting the creation of knowledge and its application to deliver patient benefit.

Nicki Bromwich, Head of Strategic Partnerships, Oxford Academic Health Science Network

Nicki manages strategic partnerships with key companies, Universities, and NHS organisations, and supports SMEs developing innovations for health and social care.

Rhiannon Lassiter, Head of Marketing

Rhiannon was previously Marketing Manager for the Faculty of Technology, Design and Environment at Oxford Brookes University.

Adele Carvalho, Digital Innovations Officer

Adele has many years experience as a senior Executive Assistant in the Oxford University Hospitals.

Flora Hatahintwali, Project Manager

Flora previously worked as a project manager in nanotechnology company and spent ten years as a forensic scientist.



TheHill team members from left to right: Flora, Megan, Nick, Adele, Nicki, Rhiannon



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Credits

Front cover image View of Oxford city from South Park east of Oxford, credit Kamyar Adl

Back cover image Time Creative Fractal Digital Art Hour Clock, artist unknown

Page 7 image blue glass, artist unknown

Page 14 image Fractal Art, credit Marijana1

TheHill is supported by partners across Oxfordshire and the Thames Valley

