### **Enterprise Hub**

2020/21 Annual Review

The Royal Academy of Engineering's Enterprise Hub runs three programmes for entrepreneurial engineers at different career stages. Each one offers equity-free funding, an extended programme of mentorship and coaching, and a lifetime of support through connection to an exceptional community of engineers

Since its launch in 2013, the Enterprise Hub has Since its launch in 2015, the Enterprise Hub has supported over 200 of the UK's brightest technolog entrepreneurs to realise their potential. We're now building on these foundations, growing in size and working towards new goals in member diversity, geographical reach and sector balance. This review vs highlights of our progress in 2020/21

### 2020/21 highlights

Developing balance of sectors (2020/21 awardees)



Increasing member diversity

**37**% of our 2020/21 awardees are female

Robotics, Al and ICT

Healthcare and medicine

Manufacturing and materials of the future

funding in 2020/21 (£423m to date)

Growth in follow-on funding £103m

30%

23%

Total valuation growth

current total valuation (to date)

28%

£538m

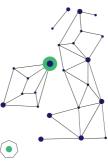


### Beauhurst report: Spotlight on Spinouts

Seauhurst

Published in January 2021 by the Academy and Beauhurst, the report is the first of its kind to map the UK's spinout landscape, examining trends, data, sectors, and geographic spread.

Read more here >



### Northern Ireland Hub launch

FourJaw

In October 2020, the first regional base for the Enterprise Hub was established in Belfast. Supported by Invest Northern Ireland, it operates out of Ormeau Baths co-working space.

Senior Regional Business Development Manager Gillian Gregg is based at the Belfast Hub, championing ambitious engineering entrepreneurs in Northern Ireland, and growing a local network of mentors, institutions, accelerators and investors.



Jelly Drops made its one millionth drop and has now served 7,000 customers. Jelly Drops' sugarfree sweets, made from 95% water, were originally designed to help people with dementia or suffering with dehydration to boost their water intake.

Oxford Heartbeat launched medical software PreSize®
Neurovascular in the NHS at St George's
Hospital London. The software is used by
clinicians to plan high-risk brain surgeries
in a safe virtual environment.

became a **certified**B-Corporation. Bio-bean is a clean technology compathat collects spent coffee grounds and transforms them into advanced biofuels and biochemicals.

Bio-bean

MediSieve who have developed a magnetic blood filtration tool, won a £1.6 million COVID-19 grant from UK Research and Innovation to trial a product designed to remove the inflammatory cytokine IL-6 from patients' blood. Removal of IL-6 can improve outcomes by preventing overreaction in the immune system.

Despite the obvious challenges, it's been an exciting

and successful year for Enterprise Hub

awardees

**Lightpoint Medical** received a CE Mark approval for its first robotic probe, SENSEI®, for sentinel lymph node detection. This means the miniaturised probes, designed to accurately identify cancerous tissue, will be commercially available for European hospitals.

Tokamak Energy

whose data analytics platform delivers productivity improvements for manufacturers, received grant funding from the Business Productivity Programme – a £4.7 million collaborative venture involving Barnsley and Sheffield concils, along with the Sheffield City Region Combined Mayoral Authority and the England European Regional Development Fund.

received £10 million in grant funding from the Department for Business, Energy and Industrial Strategy.

Tokamak aims to accelerate the development of commercial fusion power by combining two emerging technologies: spherical tokamaks and magnets made from high temperature superconductors.



∨ Scroll for more

### COVID-19: response and resilience

Hub members responded to the pandemic with innovations in AI and engineering

**Hexigone Inhibitors** produced **hand sanitiser** for the NHS, councils and care homes.

Vivacity Labs

produced traffic flow analysis data to support COVID-19 response measures. By differentiating between vehicle types and activity, they helped the Department for Transport construct its strategies.

LettUs Grow donated food from their farm modules. Slingshot Simulations

created Al-driven digital representations of social distancing in and around buildings. This helped analyse the relaxation of lockdown and the subsequent impact on local community and pollution levels in Leeds, as part of the 'Breathing Cities' project.

Sonobex

made and donated hundreds of **free 3D-printed** PPE visors to the NHS.

**Humanising Autonomy** 

worked to understand social distancing implications and passenger behaviour using AI, to enhance safety and improve public transport interchanges in Manchester.

Axial3D

made over **20,000** face shields for healthcare workers, as well as producing testing swabs.

Scroll



## Becoming truly national

Following the successful launch of the Northern Ireland Hub, the future vision sees us expanding to other regions to create a truly national resource, accessible to engineering innovators all across the UK.

Programmes We plan to **expand** the **programmes** to support a larger number of promising entrepreneurs every year. Alumni engagement offer

We will introduce an integrated programme of follow-on support for alumni, including advanced learning opportunities, the expansion of networks to generate commercial opportunities, funding and access to new market; and peer-to-peer activities to help create a self-sustaining community.

 Diversity and inclusion (D&I) We want to **go beyond** simply achieving or even exceeding our own targets, to take a leadership role on D&I in entrepreneurship.

for more Scroll

### 2020/2021 results



total applications with 113 outside London and South East (41%)



awardees (24 SMEs and 19



registered (136 to date)



# Meet some of our 2020/21 awardees



Dr Iris Kramer

ArchAl automatically detects archaeology on Earth observation data. It will reduce construction costs and protect historical sites by identifying archaeology at the earliest planning stages

Myana Naturals' device makes applying treatments to afro hair quicker and less painful. Its mission is to support women and make everyday haircare a celebration of their beauty.

# Dr Yan Zhao Breathe Battery Technologies

# Breathe creates software that significantly improves the performance, cost and safety of electric vehicle batteries. It works by monitoring and managing batteries to minimise degradation and enhance performance.

Dr Ruben Doyle

Additive Instruments' smart surgical tool senses and adjusts the force being applied by the surger reducing the chances of fracture during implant surgery and shortening the learning curve for new surgeons.

Matt Escott Protolaunch is developing an engine that is the key to enabling the development of a micro-launcher for small satellites. As well as using lightweight components, the engine enables the use of carbon-neutral fuels, removing the reliance on heavy high-pressure tanks.

## SME Leaders

Agnes Czako AirEx

# AirEx has developed a smart ventilation control that can reduce home energy bills by measuring temperature, humidity and air quality, combining this information with local weather and air quality data to enable automatic air flow regulation.

Owen Nicholson SLAMcore Limited SI.AMcore's technology can calculate an accurate position without the need for GPS, enhancing the capabilities of off-the-shelf sensors to enable commercially-viable solutions for applications such as warehouse robots and inspection drones.

Utonomy's technology allows gas distribution networks to control and manage pressure in order to reduce methane leaks, which have serious environmental and financial implications.

Dr Aurelien Trichet Oxford HighQ Oxford HighQ is developing next-generation chemical and nanoparticle sensors, and has developed a process that gives the precise control required for manufacturing optical microcavities on a commercial scale.

Christina King Tribosonics

Tribosonics' technology tackles wear, friction and lubrication issues in rotating equipment. Their high-end ultrasonic sensing and data capture platforms are in use across many industries.

Meet all of our members

<u>here</u>