

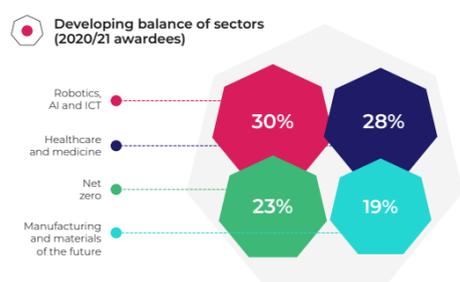
Enterprise Hub

2020/21 Annual Review

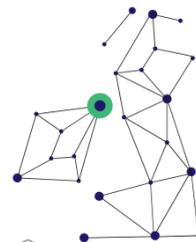
The Royal Academy of Engineering's Enterprise Hub runs three programmes for entrepreneurial engineers at different career stages. Each one offers equity-free funding, an extended programme of mentorship and coaching, and a lifetime of support through connection to an exceptional community of engineers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

Since its launch in 2013, the Enterprise Hub has supported over 200 of the UK's brightest technology 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 shows highlights of our progress in 2020/21.

2020/21 highlights



Beauhurst report: Spotlight on Spinouts
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

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.

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Growth and funding highlights

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.

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

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.

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

FourJaw
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 councils, along with the Sheffield City Region Combined Mayoral Authority and the England European Regional Development Fund.

Tokamak Energy
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.

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COVID-19: response and resilience

The Enterprise Hub team quickly adapted to a new way of working, moving all training online and ensuring that Hub members still received support.
Twelve webinars provided targeted support under the theme of 'building future resilience'. Open to all, the webinars focused on people, business strategy and funding.
The Enterprise Hub Virtual Pitch Event investor session was held at the end of April 2020. It was the first major online event the Academy has held.



- Hub members responded to the pandemic with innovations in AI and engineering**
- 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.
- Slingshot Simulations** created AI-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.
- Humanising Autonomy** worked to understand social distancing implications and passenger behaviour using AI, to enhance safety and improve public transport interchanges in Manchester.
- Hexigone Inhibitors** produced hand sanitiser for the NHS, councils and care homes.
- LettUs Grow** donated food from their farm modules.
- Sonobex** made and donated hundreds of free 3D-printed PPE visors to the NHS.
- Axial3D** made over 20,000 face shields for healthcare workers, as well as producing testing swabs.

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The Hub's Future Vision

- 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.



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2020/2021 results



Meet some of our 2020/21 awardees

- Enterprise Fellows**
 - Dr Iris Kramer ArchAI**
ArchAI automatically detects archaeology on Earth observation data. It will reduce construction costs and protect historical sites by identifying archaeology at the earliest planning stages.
 - Dr Youmna Mouhamad Myana Naturals applicator-comb**
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 Batteries Technologies**
Breathe Batteries 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**
Additive Instruments' smart surgical tool senses and adjusts the force being applied by the surgeon, reducing the chance of fracture during implant surgery and shortening the learning curve for new surgeons.
 - Matt Escott Protolaunch**
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**
SLAMCore'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.
 - Claire-Elise Orleach Utonomy**
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.

We are grateful to our network of supporters whose generosity and commitment make the Enterprise Hub's work possible.

Meet all of our members here

