Where ideas thrive

Our 2021 story
Highlights from our Annual Review 2021

READ MORE
Scan the QR code to view our full Annual Review
Our 2021 story

It has been a very successful year for Cambridge Enterprise. There were 154 licences, up 25% on the previous year, a record 430 consultancy contracts, and a doubling in our seed fund portfolio valuation to £107 million. Importantly, including our support for translational funding, we returned £17 million to the University, its departments, its academics and third parties.

Within the numbers, there are some special highlights. Centessa’s IPO made it the newest Cambridge unicorn, Apollo Therapeutics raised a $145 million investment, and we supported three Cambridge companies—Nyobolt, Echion Technologies, and Carbon Re—which are all developing new technologies focused on reducing carbon emissions.

As we recognise the wonderful achievements of this year, Cambridge Enterprise is also looking to the future. We have developed a new strategy that will bring enhanced focus to how we can support the Cambridge academic community in developing impact from their ideas.

We also commit to playing a more active role in developing the Cambridge Cluster. We are fortunate to be at the centre of Europe’s most successful university innovation ecosystem. We want to ensure we shape its ongoing development and help to connect the talent and innovation within it, allowing the ecosystem to further scale and thrive.

I would like to conclude by acknowledging the enormous achievements of my predecessor Dr Tony Raven, who led Cambridge Enterprise throughout the period captured in this report. It is my privilege to celebrate Tony’s outstanding work, and that of the whole Cambridge Enterprise team.

As we contend with two generation defining challenges—COVID-19 and climate change—the most consistent ray of hope has come from innovation and its capacity to develop solutions that can truly improve the world. That is our mission, to help the University’s researchers bring positive change to the world through their research.

Dr Diarmuid O’Brien
Chief Executive
Apollo Therapeutics

Pioneering collaboration launches its next phase

Apollo Therapeutics, a unique collaborative venture to speed development of breakthrough medical discoveries—devised by the University of Cambridge, Imperial College London, and University College London and embraced by pharmaceutical giants AstraZeneca, GlaxoSmithKline, and Johnson & Johnson Innovation—was launched as a £100 million biopharmaceutical company in June 2021.

The University of Cambridge, Imperial College London, and University College London first launched Apollo Therapeutics with AstraZeneca, GlaxoSmithKline, and Johnson & Johnson Innovation in 2015.

In June, just five years after its launch, Apollo Therapeutics unveiled its next stage, announcing its rebirth as a multinational, biopharmaceutical company as well as the completion of a £100 million investment.

First conceived in 2011 by the technology transfer offices of the University of Cambridge, Imperial College London, and University College London, Apollo was created to bridge the so-called Valley of Death, the interval when promising new research can wither and die for lack of funding.

In June, just five years after its launch, Apollo Therapeutics unveiled its next stage, announcing its rebirth as a multinational, biopharmaceutical company as well as the completion of a £100 million investment, led by Patient Square Capital and joined by Rock Springs Capital, Reimagined Ventures, and UCL Technology Fund. The funds are supporting advancement of Apollo’s expanding pipeline of treatments—across oncology, major inflammatory disorders, and rare disease—is an excellent demonstration of why funding, collaboration, and the commercialisation of research at UK global research universities is so crucial for the future care of patients, the treatment of disease, and the strength of the economy.

Iain Thomas
Head of Life Sciences, Cambridge Enterprise

In June, just five years after its launch, Apollo Therapeutics unveiled its next stage, announcing its rebirth as a multinational, biopharmaceutical company as well as the completion of a £100 million investment.

Apollo’s expanding pipeline of treatments—across oncology, major inflammatory disorders, and rare disease—is an excellent demonstration of why funding, collaboration, and the commercialisation of research at UK global research universities is so crucial for the future care of patients, the treatment of disease, and the strength of the economy.
Three portfolio companies merge into a new pharmaceutical giant

In February 2021, Centessa Pharmaceuticals plc, a newly-created entity, acquired three Cambridge Enterprise portfolio companies: ApcinteX, Morphogen-IX, and Z Factor. The new company was launched with $250 million in Series A financing—one of the biggest in recent years—led by blue-chip investors.

A decade ago, Cambridge Enterprise’s Life Sciences team made a strategic decision; they determined that one of the fastest ways to move promising research outcomes toward the clinic was to develop each opportunity within a dedicated, single-asset spin-out company. Cambridge Enterprise would get involved very early on and not only manage the intellectual property but also invest in critical proof of concept work and help build the investment proposition. Cambridge Enterprise found funders that were keen to invest in the single-asset model. This approach received a ringing endorsement in February when newly-created entity Centessa Pharmaceuticals plc acquired ApcinteX, Morphogen-IX, and Z Factor from our portfolio.

In addition to the three Cambridge spin-outs, Centessa acquired a further seven biotechs, each a portfolio company of a fund affiliated with Medicxi or Index Ventures at the time of the acquisition. Centessa Pharmaceuticals went on to raise $330 million in one of the largest initial public offerings by a biotech of 2021.

The merger and fund raisings have provided the constituent programmes with capital and centralised resources, plus research and manufacturing support from contractors, all of which will help them accelerate and scale their work. Morphogen-IX, which was founded in 2015, is based on 15 years of research from Professor Nick Morrell’s lab at the University of Cambridge’s Department of Medicine. Morphogen-IX is developing novel treatments for pulmonary arterial hypertension (PAH), a severe and life-limiting disease that affects the blood vessels in the lungs, leading to heart failure. The therapeutic they have developed, MGX292, could provide the first disease-modifying approach to PAH. Current therapies may alleviate some of the symptoms, but there are no medical options that alter the underlying disease or its outcome.

ApcinteX was spun out from Professor Jim Huntington’s lab at the Cambridge Institute for Medical Research, working with Dr Trevor Baglin (Cambridge University Hospitals). ApcinteX is developing a novel treatment for alpha-1-antitrypsin deficiency (AATD). AATD affects around 1 in 2,000 people in Western countries, where a single mistake in the DNA encoding the protein alpha-1-antitrypsin (A1AT) causes both liver and lung disease. In 2021, Centessa shared the data from the Phase 1 Part B study as the first demonstration that a pharmacological chaperone can provide functional increases of the target Z-A1AT protein. Having nurtured and funded Morphogen-IX, ApcinteX, and Z Factor, Cambridge Enterprise is excited to see their continued advancement.

Saurabh Saha
CEO, Centessa Pharmaceuticals

With the first-of-its-kind model, we are bringing together programmes with robust genetic and biological validation under one new pharmaceutical company that provides centralised resources to enable and empower asset-focused teams to advance highly impactful programmes for patients.

Centessa Pharmaceuticals raised $330 million in one of the largest initial public offerings by a biotech of 2021.

The new company was launched with a $250 million Series A financing—one of the biggest in recent years—led by blue-chip investors.

Centessa Pharmaceuticals

The merger and fund raisings have provided the constituent programmes with capital and centralised resources, plus research and manufacturing support from contractors, all of which will help them accelerate and scale their work.

Morphogen-IX, which was founded in 2015, is based on 15 years of research from Professor Nick Morrell’s lab at the University of Cambridge’s Department of Medicine. Morphogen-IX is developing novel treatments for pulmonary arterial hypertension (PAH), a severe and life-limiting disease that affects the blood vessels in the lungs, leading to heart failure. The therapeutic they have developed, MGX292, could provide the first disease-modifying approach to PAH. Current therapies may alleviate some of the symptoms, but there are no medical options that alter the underlying disease or its outcome.

ApcinteX was spun out from Professor Jim Huntington’s lab at the Cambridge Institute for Medical Research, working with Dr Trevor Baglin (Cambridge University Hospitals). ApcinteX is developing a novel treatment for alpha-1-antitrypsin deficiency (AATD). AATD affects around 1 in 2,000 people in Western countries, where a single mistake in the DNA encoding the protein alpha-1-antitrypsin (A1AT) causes both liver and lung disease. In 2021, Centessa shared the data from the Phase 1 Part B study as the first demonstration that a pharmacological chaperone can provide functional increases of the target Z-A1AT protein.

Having nurtured and funded Morphogen-IX, ApcinteX, and Z Factor, Cambridge Enterprise is excited to see their continued advancement.

Saurabh Saha
CEO, Centessa Pharmaceuticals

With the first-of-its-kind model, we are bringing together programmes with robust genetic and biological validation under one new pharmaceutical company that provides centralised resources to enable and empower asset-focused teams to advance highly impactful programmes for patients.

Centessa Pharmaceuticals raised $330 million in one of the largest initial public offerings by a biotech of 2021.

The new company was launched with a $250 million Series A financing—one of the biggest in recent years—led by blue-chip investors.

The merger and fund raisings have provided the constituent programmes with capital and centralised resources, plus research and manufacturing support from contractors, all of which will help them accelerate and scale their work. Morphogen-IX, which was founded in 2015, is based on 15 years of research from Professor Nick Morrell’s lab at the University of Cambridge’s Department of Medicine. Morphogen-IX is developing novel treatments for pulmonary arterial hypertension (PAH), a severe and life-limiting disease that affects the blood vessels in the lungs, leading to heart failure. The therapeutic they have developed, MGX292, could provide the first disease-modifying approach to PAH. Current therapies may alleviate some of the symptoms, but there are no medical options that alter the underlying disease or its outcome.

ApcinteX was spun out from Professor Jim Huntington’s lab at the Cambridge Institute for Medical Research, working with Dr Trevor Baglin (Cambridge University Hospitals). ApcinteX is developing a novel treatment for alpha-1-antitrypsin deficiency (AATD). AATD affects around 1 in 2,000 people in Western countries, where a single mistake in the DNA encoding the protein alpha-1-antitrypsin (A1AT) causes both liver and lung disease. In 2021, Centessa shared the data from the Phase 1 Part B study as the first demonstration that a pharmacological chaperone can provide functional increases of the target Z-A1AT protein. Having nurtured and funded Morphogen-IX, ApcinteX, and Z Factor, Cambridge Enterprise is excited to see their continued advancement.

Saurabh Saha
CEO, Centessa Pharmaceuticals
The investment, ongoing support, and relationship we have with Cambridge Enterprise have been important parts of our growth and are helping us to take this technology to market in record time. We are excited to be building on the discovery by the Grey group at the University of Cambridge to commercialise a fast-charging battery system, and our strong relationship with the Cambridge ecosystem is key to this.

Sai Shivareddy
CEO and Co-Founder, Nyobolt

Nyobolt was spun out of the Yusuf Hamied Department of Chemistry in 2016. It was co-founded by Professor Clare Grey and Dr Sai Shivareddy to commercialise their novel ultra-high power battery technology, which is based on years of research.

As the world races to electrify transportation, the need for much better batteries has become increasingly urgent. If consumers are to embrace electric vehicles, they will need to see batteries that address charge anxiety by enabling electric vehicles (EVs) and other devices to charge much faster. And in a world where sustainability is imperative, these batteries must also last longer, be recyclable, and have a viable second life. Nyobolt has the solution for fast charging batteries and is working to address all of these knotty problems.

Nyobolt’s technology is based on a decade of research on battery anode materials led by Professor Clare Grey. In 2018, Grey and her team determined that niobium tungsten oxide could dramatically improve the performance and longevity of batteries. She teamed up with Dr Sai Shivareddy, who had invented cutting-edge supercapacitors and led international product development teams in the battery industry, to co-found Nyobolt.

Nyobolt’s team of experts has pioneered a new class of battery technology that achieves record-breaking ultra-fast charging. The technology combines high power density with a long cycle life and competitive energy density. This solves critical unmet needs in multiple markets, providing solutions for applications from power tools to EVs and represents a paradigm shift in battery technology, supporting the transition to a green, sustainable future.

In February 2021, Cambridge Enterprise joined in an £8 million Series A investment round for Nyobolt and continues to play an active role in the company as part of the board. Led by IQ Capital, the Series A round also included participation from Silicon Valley investors. The funding has enabled Nyobolt to expand globally, build pilot facilities, and grow its engineering and application capabilities. It has also assembled a world-leading implementation team that brings together decades of experience at Tesla, Lotus, Samsung, Dupont, Dyson, General Electric, A123, Innovate UK, and Arthur D. Little.

Nyobolt has the potential to transform the automotive and consumer appliance industries, helping to achieve a greener and more sustainable future. Its significance to the post-carbon world cannot be overstated.
Cambridge GaN Devices

Reshaping power electronics for a greener future

Giorgia Longobardi
CEO, Cambridge GaN Devices

The Series A is a great recognition of our success to date, with new and existing investors confirming the strength of our technology. Cambridge GaN Devices has grown significantly since 2016, and we are thrilled to be in a position to deliver several products to market following decades of leading research in the reliability of power devices.

In November 2016, we announced that Cambridge GaN Devices was the joint winner of our annual Postdoc Business Plan Competition, taking home a £20,000 investment. Less than five years later, we again released news about the company. This time, however, the news was the completion of a £9.5 million Series A funding round.

Built on a decade of research in the Electrical Power and Energy Conversion Group in the Department of Engineering, Cambridge GaN Devices, or CGD, was co-founded by Dr Giorgia Longobardi and Professor Florian Udrea. The company was created to develop opportunities arising from the team’s proprietary application of gallium nitride (GaN) to the silicon-based semiconductor transistor manufacturing process.

CGD’s engineers have developed a range of GaN power devices, IceGaN®, that are much higher performing than state-of-the-art silicon-based devices, enabling significant reductions in the size and weight of power converters, while producing energy efficiencies higher than 99%.

The company’s range of IceGaN® transistors is customised for applications in critical markets, such as consumer and industrial Switch Mode Power Supply, lighting, data centres, and electric or hybrid electric vehicles. The higher efficiency of CGD devices, combined with their ease of use, will mean CGD GaN can easily replace silicon in key applications. CGD devices will also enable more compact power systems and better use of energy resources.

The investment round announced in February was co-led by IQ Capital, Parkwalk, and BGF, and was joined by Cambridge Angels, and Cambridge Capital Enterprise, Foresight Williams, Martlet Capital, and BGF, and was joined by Cambridge Capital Group. CGD is using the funds to enlarge its product portfolio, expand its markets and double the size of its team creating more sustainable electronics.

Versed AI

Harnessing artificial intelligence to reveal hidden supply chain risks

Versed AI is a University of Cambridge spin-out that applies its novel Natural Language Processing platform to help companies understand and manage potential risks in their multi-tier supply chains.

Versed AI was the winner of the Postdoc Business Plan Competition in 2019. It had started as a collaboration between Dr Simon Baker, a postdoc at the Department of Theoretical and Applied Linguistics and now CTO of Versed AI, and a PhD student at the Institute for Manufacturing in the Department of Engineering at the University.

Companies keep very close tabs on their suppliers because disruptions can be expensive, both financially and reputationally, but companies are often unaware of risks posed by their suppliers’ suppliers. What if a second-tier supplier operates in an unethical or illegal manner? It’s a blind spot in which serious risks can hide.

This is the problem Dr Baker, a postdoctoral researcher in the University’s Language Technology Lab, set out to tackle. Teaming up with Pascal Wichmann, a PhD student at the Department of Engineering, the two developed a technology based on Natural Language Processing and Machine Learning that could leverage millions of documents to reveal relationships among organisations, companies, products, and people. Uncovering these otherwise invisible relationships can expose potential sources of supply chain disruption, highlight risk concentrations, and help companies comply with modern slavery legislation.

In 2019, the two entered their technology in the Postdoc Business Plan Competition, now named in honour of the late Chris Abell, which is run annually by Cambridge Enterprise and the Entrepreneurial Postdocs of Cambridge. Their business was named Versed AI. To be ‘well versed’ implies having acquired expertise, which mirrors the capabilities of the technology to ingest a large amount of data and derive knowledge from it. ‘Versed’ also speaks to text, which is apt given the core technology is Natural Language Processing. Versed AI’s plan won over the judges, taking first prize and a £20,000 investment.

Supply chain disruptions are hugely costly to companies. A 2020 report by McKinsey estimated that, over the course of a decade, companies can expect to lose 42% of a year’s net earnings to supply chain disruptions. In the corporate world, 81% of companies lack good supply chain visibility. This limited visibility is an even bigger problem for SMEs. Providing an effective, new way to cut these losses offers a huge commercial opportunity.

Mining millions of words in news articles, business reports, and social media posts, Versed AI’s technology maps out multi-tier supply chains, revealing patterns and shining light on missing links. These blind spots might appear in buyer-supplier relationships, products and services, or manufacturing locations. This allows Versed AI to provide deep and actionable insights into supply chain sub-tiers, permitting companies to monitor, manage, and mitigate risk in a way that was never possible before.

Over the past three years, Versed AI has built on its victory in the Postdoc Business Plan Competition, winning a Y Combinator Startup grant and two grants from Innovate UK. In 2020, the spin-out was a winner of the London Business School Hackathon, a connection that came through co-founder and CEO Fenella Boyle. An inquiry from BT’s chief procurement officer led to a major contract with BT Source.

In 2021, Cambridge Enterprise was a cornerstone investor in a £1.2 million funding round for Versed AI, and in June the company took on its first full-time employee. The staff team has since grown to 19.
All globally influential universities must excel in research. They must also be highly effective at translating this research into beneficial impact for our society. Cambridge Enterprise does an excellent job helping researchers gain the most impact from their research. An investment in research is an investment in the future competitiveness of our innovation economy.

Professor Stephen Toope
Vice-Chancellor,
University of Cambridge

Cambridge Enterprise plays a key role in fostering and supporting the dynamic innovation ecosystem across Cambridge. Evidence of this can be seen in Centessa, the latest Cambridge unicorn. Indeed, Cambridge was named the ‘unicorn capital of Europe’ this past year, a testament to the strength of the Cambridge ecosystem, which ensures researchers maximise the impact of their work.

Professor Andy Neely
Pro-Vice-Chancellor,
Enterprise and Business Relations

Cambridge Enterprise is at the forefront of helping bring deep tech to reality. Our people understand the science, the opportunities, and the hidden risks along the way to creating impact for millions of people.

Ajay Chowdhury
Chairman,
Cambridge Enterprise
In 2021, the UK, in its role as COP26 President, called for a presentation demonstrating what the future could look like in a climate-resilient, net-zero world. Titled the Futures We Want, the resulting project was commissioned by the UK’s Department for Business, Energy and Industrial Strategy (BEIS) and delivery was led by professional services firm Deloitte together with Cambridge Zero, AECOM, One Young World, and Radley Yeldar. The effort brought together teams from around the world and across disciplines. Six case study regions—the UK, Brazil, India, Jamaica, Kenya, and the Arabian Peninsula—were chosen by BEIS.

Cambridge Enterprise’s Consultancy Services team played a critical role behind the scenes, handling the complex contractual relationships among University staff and the many external entities involved. They also managed the financial arrangements, monitored the budgets, and ensured that everyone got paid.

Eight Cambridge-based postdoctoral researchers were involved with the evidence-gathering stages of the visions process, partnering with local experts on each of the case study regions to help gather and summarise available evidence. Through online meetings, chaired by Cambridge Zero director Dr Emily Shuckburgh, the local expert teams developed their ideas for the most important climate-relevant themes, economic sectors, impacts, and solutions to form the framework for each region’s profile. Evidence included scientific papers, government reports, and local news articles. The close collaboration with local expert teams throughout the process brought great depth of knowledge, and ensured that visions remained focused on the most important issues for each region.

The end result? Six visions that imagined a globally net-zero, climate-resilient future that people actually want to live in. The visions cover a series of cross-cutting themes, chosen to reflect the diversity of challenges and opportunities in building a sustainable future. The visions highlight innovations that could make this future a reality and explore what science can tell us about the wide-ranging benefits of achieving this future.

### Futures We Want

#### Determining the futures we want

In 2021, the UK, in its role as COP26 President, called for a presentation demonstrating what the future could look like in a climate-resilient, net-zero world. Titled the Futures We Want, the resulting project was commissioned by the UK’s Department for Business, Energy and Industrial Strategy (BEIS) and delivery was led by professional services firm Deloitte together with Cambridge Zero, AECOM, One Young World, and Radley Yeldar. The effort brought together teams from around the world and across disciplines. Six case study regions—the UK, Brazil, India, Jamaica, Kenya, and the Arabian Peninsula—were chosen by BEIS.

Cambridge Enterprise’s Consultancy Services team played a critical role behind the scenes, handling the complex contractual relationships among University staff and the many external entities involved. They also managed the financial arrangements, monitored the budgets, and ensured that everyone got paid.

Eight Cambridge-based postdoctoral researchers were involved with the evidence-gathering stages of the visions process, partnering with local experts on each of the case study regions to help gather and summarise available evidence. Through online meetings, chaired by Cambridge Zero director Dr Emily Shuckburgh, the local expert teams developed their ideas for the most important climate-relevant themes, economic sectors, impacts, and solutions to form the framework for each region’s profile. Evidence included scientific papers, government reports, and local news articles. The close collaboration with local expert teams throughout the process brought great depth of knowledge, and ensured that visions remained focused on the most important issues for each region.

The end result? Six visions that imagined a globally net-zero, climate-resilient future that people actually want to live in. The visions cover a series of cross-cutting themes, chosen to reflect the diversity of challenges and opportunities in building a sustainable future. The visions highlight innovations that could make this future a reality and explore what science can tell us about the wide-ranging benefits of achieving this future.

### Testing anti-viral materials

A University lab tests anti-viral materials for companies

In the COVID-19 era, the arcane term ‘fomites’ has become increasingly familiar. Fomites are objects, like doorknobs and table tops, that hold and passively spread disease. We have all become used to wiping down surfaces. Dr Graham Christie and Dr Ljiljana Fruk, researchers in the Department of Chemical Engineering and Biotechnology (CEB), had a better idea: engineering surfaces so any viruses that landed on them couldn’t stay alive long enough to be transmitted.

Working in collaboration with Professor Stuart Clarke of the Yusuf Hamied Department of Chemistry as well as Professor Peter Fryer and Dr Zhenni Jason Zhang from the University of Birmingham, they set out to design antiviral surfaces based on materials that would deactivate the viruses. In the process, the researchers also set up a special testing lab within CEB.

The embedded facility turns out to be useful for companies as well, which is where Cambridge Enterprise’s Consultancy Services team has been able to help. Cambridge Enterprise supported the lab’s work testing materials for eight companies, including one that is developing face-coverings with an anti-viral coating.

As well as following industry testing standards, the facilities at CEB aim for coronavirus applicability.

Dr Graham Christie

Researcher, Department of Chemical Engineering and Biotechnology

We follow the industry standard for testing for viruses on material (ISO18184:19) but we made some critical adaptations to give it more relevance. For instance, we conduct ‘splash tests’ with the virus, to mimic how droplets reach a surface through things like sneezing or coughing. Our lab is also set up to use mammalian coronaviruses in testing. Although many of the materials we test will have general anti-viral properties, this is the class of viruses the whole world is watching.

Dr Graham Christie

Researcher, Department of Chemical Engineering and Biotechnology

Testing anti-viral materials

We follow the industry standard for testing for viruses on material (ISO18184:19) but we made some critical adaptations to give it more relevance. For instance, we conduct ‘splash tests’ with the virus, to mimic how droplets reach a surface through things like sneezing or coughing. Our lab is also set up to use mammalian coronaviruses in testing. Although many of the materials we test will have general anti-viral properties, this is the class of viruses the whole world is watching.

Dr Graham Christie

Researcher, Department of Chemical Engineering and Biotechnology

Testing anti-viral materials
TenU: sharing effective practices in research commercialisation

TenU is a transatlantic collaboration formed to capture effective practices in research commercialisation and share these with UK and US governments and higher education communities. TenU’s members are the technology transfer offices of the University of Cambridge, Columbia University, University of Edinburgh, Imperial College London, KU Leuven, University of Manchester, MIT, University of Oxford, Stanford University, and UCL.

In September 2020, TenU launched TenU Hosts, a quarterly event series offering opportunities for policymakers, thought leaders and leading practitioners to hold conversations on topical issues such as Economic Recovery, Entrepreneurial Ecosystems, International Investment, and Regional Opportunities. The series has attracted high-level representatives from governments, funding bodies, investment firms and universities. Many have attended all events, validating TenU’s approach and convening power.

In January 2021, TenU launched its website to formalise the collaboration’s presence in the technology transfer ecosystem and offer a platform to record the events and other developments. A high point, which increased TenU’s visibility across the EU and the English-speaking world, was the launch of the quick start guide on University Equity Stakes in Spin-Outs. The guide illustrates the complexity inherent in allocating equity in spin-outs in an easy and comprehensible way and offers up-to-date references for those wanting to delve deeper into these questions.

In the coming year, TenU will launch the TenU Future Leaders Programme, a highly anticipated training programme for mid-level technology transfer professionals from 12 TenU member and partner offices. Inclusive by design, the programme provides an opportunity to learn about each other’s offices and most successful practices in areas ranging from attracting academic inventors and creating graduate internship programmes, to closing the valley-of-death investment gap and offering founders the option of equity in exchange for technology transfer office support.

TenU is funded by Research England.

Updates

International relations and outreach

The pandemic had a substantial impact on our international work, with the abrupt cessation it brought to travel. But the pandemic also provided an exciting opportunity for us to study new ways of engaging and working.

Our international work encompasses both consultancy and training. On the consultancy side, the pandemic forced the cancellation of a visit to Cambridge by 20 Thai CIOs. However, encouragingly it led us to develop the effort into a much broader programme of activity designed to support and scale up the Bangkok entrepreneurial ecosystem, delivered remotely. We worked with our Thai partners on a white paper, developed an Innovation Club, using the successful Cambridge Network model, then created a methodology and framework for an entrepreneurial baseline study and dashboard. Frequent online meetings and correspondence over the past 12 months have led to a deeper working relationship than a five-day visit could ever have achieved.

We are now developing a further programme of activity with our partners.

On the training side, we moved online, as many others have done. We are exploring alternative platforms and learning a lot about engagement and attention spans in virtual environments. We successfully delivered a postdoc entrepreneurial bootcamp in Shangdong, China, we ran a series of webinars around software and health data for a network of Norwegian Technology Transfer Offices (TTOs) and we delivered a training programme for technology transfer professionals in Chile and Argentina.

The pause in our regular delivery also provided a great opportunity to review and reflect on past provision, and understand the real needs of some of the TTOs we were being approached by—especially those in developing countries. We identified a need to provide more support and we are perfectly positioned therefore to take advantage of the exciting new online learning platform launched by the University, Cambridge Advance Online. Having postponed and then cancelled our highly successful Open Programmes—a five-day residential course run annually in Cambridge—we started to develop a programme blending international best practice models of research commercialisation with insight into Cambridge Enterprise’s experience and expertise. We were delighted to see this launch in September 2021.

Helping humanities research to change the world

The humanities hold the key to a brighter future: whether sharpening our understanding of the value of arts and culture for human flourishing and wellbeing, bringing to the forefront the hidden histories which continue to shape contemporary society for good and ill, confronting the ethical challenges and solutions which technological developments will bring, or devising new ways for the public to make sense of the enormous streams of data with which we are bombarded in our increasingly digital lives.

Over the last three years, Cambridge Enterprise has set about a focused programme of work in supporting humanities and social science research community, offering a new approach to making an impact through commercialisation and social enterprise.

Supporting researchers in the humanities and social sciences to bring their innovative ideas to real-world fruition means embracing fresh thinking, critical rigour, sensitivity to cultural difference, and a deep-seated belief in the power of storytelling to bring about social change.

Take the work of Dr Saussan Khalil, whose novel method of phonics-based Arabic learning is already helping hundreds of children in the Arabic-speaking diaspora to increase their written literacy and sustain their cultural connections with contemporary Arabic writing and illustration.

Dr Khalil’s community-rooted approach is shared by the academic team behind Shaping Horizons, a new Cambridge social enterprise founded to bring innovation diplomacy and inclusive open research principles to bear on sustainability challenges in South America, co-founded by Dr Matias Acosta, researcher at the Centre for Latin American Studies. As researchers turn their attention to the challenges crystallised by the UN’s Sustainable Development Goals, we are proud to play our part in catalysing innovations like those of Dr Wesam Al Asali, whose venture Centro Educativo para la Cultura y la Auto-estima (CACE) leverages heritage craft and artisanal building methods to bring intrinsic sustainability to contemporary construction projects. Together we can unlock the innovation potential of humanities and social science research to shape a better world.

Our 2021 story

Our 2021 story

Helping humanities research to change the world

The humanities hold the key to a brighter future: whether sharpening our understanding of the value of arts and culture for human flourishing and wellbeing, bringing to the forefront the hidden histories which continue to shape contemporary society for good and ill, confronting the ethical challenges and solutions which technological developments will bring, or devising new ways for the public to make sense of the enormous streams of data with which we are bombarded in our increasingly digital lives.

Over the last three years, Cambridge Enterprise has set about a focused programme of work in supporting humanities and social science research community, offering a new approach to making an impact through commercialisation and social enterprise.

Supporting researchers in the humanities and social sciences to bring their innovative ideas to real-world fruition means embracing fresh thinking, critical rigour, sensitivity to cultural difference, and a deep-seated belief in the power of storytelling to bring about social change.

Take the work of Dr Saussan Khalil, whose novel method of phonics-based Arabic learning is already helping hundreds of children in the Arabic-speaking diaspora to increase their written literacy and sustain their cultural connections with contemporary Arabic writing and illustration.

Dr Khalil’s community-rooted approach is shared by the academic team behind Shaping Horizons, a new Cambridge social enterprise founded to bring innovation diplomacy and inclusive open research principles to bear on sustainability challenges in South America, co-founded by Dr Matias Acosta, researcher at the Centre for Latin American Studies. As researchers turn their attention to the challenges crystallised by the UN’s Sustainable Development Goals, we are proud to play our part in catalysing innovations like those of Dr Wesam Al Asali, whose venture Centro Educativo para la Cultura y la Auto-estima (CACE) leverages heritage craft and artisanal building methods to bring intrinsic sustainability to contemporary construction projects. Together we can unlock the innovation potential of humanities and social science research to shape a better world.

Our 2021 story

Helping humanities research to change the world

The humanities hold the key to a brighter future: whether sharpening our understanding of the value of arts and culture for human flourishing and wellbeing, bringing to the forefront the hidden histories which continue to shape contemporary society for good and ill, confronting the ethical challenges and solutions which technological developments will bring, or devising new ways for the public to make sense of the enormous streams of data with which we are bombarded in our increasingly digital lives.

Over the last three years, Cambridge Enterprise has set about a focused programme of work in supporting humanities and social science research community, offering a new approach to making an impact through commercialisation and social enterprise.

Supporting researchers in the humanities and social sciences to bring their innovative ideas to real-world fruition means embracing fresh thinking, critical rigour, sensitivity to cultural difference, and a deep-seated belief in the power of storytelling to bring about social change.

Take the work of Dr Saussan Khalil, whose novel method of phonics-based Arabic learning is already helping hundreds of children in the Arabic-speaking diaspora to increase their written literacy and sustain their cultural connections with contemporary Arabic writing and illustration.

Dr Khalil’s community-rooted approach is shared by the academic team behind Shaping Horizons, a new Cambridge social enterprise founded to bring innovation diplomacy and inclusive open research principles to bear on sustainability challenges in South America, co-founded by Dr Matias Acosta, researcher at the Centre for Latin American Studies. As researchers turn their attention to the challenges crystallised by the UN’s Sustainable Development Goals, we are proud to play our part in catalysing innovations like those of Dr Wesam Al Asali, whose venture Centro Educativo para la Cultura y la Auto-estima (CACE) leverages heritage craft and artisanal building methods to bring intrinsic sustainability to contemporary construction projects. Together we can unlock the innovation potential of humanities and social science research to shape a better world.
## Year in numbers

### Investment in numbers

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-seed investments (2020-21)</td>
<td>7</td>
</tr>
<tr>
<td>Seed companies formed (2020-21)</td>
<td>7</td>
</tr>
<tr>
<td>Equity realisation returned to Cambridge Enterprise and University of Cambridge (2020-21)</td>
<td>£2.3m</td>
</tr>
<tr>
<td>Notable spin-outs: Solexa, VocalIQ and Centessa</td>
<td>Impact</td>
</tr>
<tr>
<td>Multiple across realised investments</td>
<td>3.4x</td>
</tr>
<tr>
<td>Total investments made in 146 companies</td>
<td>264</td>
</tr>
<tr>
<td>Current portfolio value</td>
<td>£106.9m</td>
</tr>
<tr>
<td>In follow-on funding raised by our portfolio companies since 1995</td>
<td>£2.7bn</td>
</tr>
<tr>
<td>Invested in 26 spin-outs (2020-21)</td>
<td>£34.4m</td>
</tr>
<tr>
<td>Invested over our fund lifetime</td>
<td>£5.6m</td>
</tr>
</tbody>
</table>

### Technology and knowledge transfer in numbers

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patents filed</td>
<td>250</td>
</tr>
<tr>
<td>Commercial and research licences signed</td>
<td>154</td>
</tr>
<tr>
<td>Invested in patents and proof of concept</td>
<td>£1.1m</td>
</tr>
<tr>
<td>In translational funding won with our support</td>
<td>£6.7m</td>
</tr>
<tr>
<td>Consultancy contracts signed, including extensions</td>
<td>430</td>
</tr>
<tr>
<td>Consultancy clients</td>
<td>250</td>
</tr>
<tr>
<td>In operating income generated from licensing and consulting</td>
<td>£9.7m</td>
</tr>
<tr>
<td>Researchers supported</td>
<td>2,042</td>
</tr>
</tbody>
</table>

These infographics present some of our performance highlights for the financial year 1 August 2020 to 31 July 2021. ‘Investment in numbers’ showcases some highlights from our Seed Funds team, and includes some cumulative data. ‘Knowledge transfer in numbers’ summarises our performance across our knowledge transfer activities: academic consultancy, intellectual property protection and development, and licensing.
Financial summary 2020-21

Cambridge Enterprise is driven by beneficial impact rather than by profit

Our mission—like those of our technology transfer counterparts at other globally-influential universities—is to help advance the novel insights and innovations of researchers into robust development and ultimately use by the public.

Our financial performance over the past 12 months illustrates the intricate relationship between income, cash flow, disbursements, and costs that are central to the business of supporting the University’s academics and researchers in their endeavours. This intricacy means our outputs over the short term are rarely a meaningful guide to our future performance.

Revenues may lag in a given year, but rebound in subsequent years. Since our bottom line is beneficial impact, not profit, we accept fluctuation and take the long view.

Development of deep tech is a long term endeavour; meaningful returns often come a decade or more after the initial investment.

Cambridge Enterprise income

*All figures in £’000s

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Amount (£’000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income generated by Cambridge Enterprise operations</td>
<td>£10,246</td>
</tr>
<tr>
<td>University and Higher Education Innovation Fund (HEIF) funding</td>
<td>£2,199</td>
</tr>
<tr>
<td>Income for services and other income</td>
<td>£1,249</td>
</tr>
<tr>
<td>Income before returns from equity realisation</td>
<td>£13,694</td>
</tr>
<tr>
<td>Equity realisation: income to Cambridge Enterprise and University Seed Funds</td>
<td>£2,257</td>
</tr>
</tbody>
</table>

Investment in IP assets (patent and proof of concept) | £1,066

Distributions to academics and external parties | £6,611

Distributions to University (departments’ share of IP income and Gift Aid from academics) | £2,183

Returns to University of Cambridge Seed Funds | £2,125

Operating costs (staff and other costs) | £5,447

Total expenditure £16,560

Total income £15,951

Where our income goes

*All figures in £’000s

<table>
<thead>
<tr>
<th>Source of Income</th>
<th>Amount (£’000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returns to University of Cambridge Seed Funds</td>
<td>£1,253</td>
</tr>
<tr>
<td>Distributions to academics and external parties</td>
<td>£6,470</td>
</tr>
<tr>
<td>Distribution to University departments</td>
<td>£2,183</td>
</tr>
<tr>
<td>Payments to external parties for equity realisation distributions</td>
<td>£141</td>
</tr>
<tr>
<td>Investment in patent assets and proof of concept</td>
<td>£1,066</td>
</tr>
<tr>
<td>Charitable donation to the University</td>
<td>£363</td>
</tr>
<tr>
<td>Support for Cambridge Enterprise</td>
<td>£915</td>
</tr>
</tbody>
</table>

Net operating surplus/(deficit) for the year £(609)
In 2020-21, there were 125 companies in the Cambridge Enterprise portfolio. Those spin-outs that grow and succeed often exit the portfolio through acquisition, and occasionally via a public listing. Over the lifetime of the University of Cambridge Seed Funds, this has generated billions of pounds in value. Below are a few examples of the current holdings.
Where ideas thrive