

# Life Sciences Strategy

for the Cambridge cluster





Where  
life-changing  
science

*changes lives  
here first*

# The Cambridge cluster life sciences strategy

A cohesive Cambridge life sciences vision and strategy is needed to maintain the region as a global destination for life sciences talent and investment.


Informed by leaders across the Cambridge life sciences and healthcare community, this strategy has been crafted by Cambridge University Health Partners (CUHP) on behalf of the Cambridgeshire ecosystem.

Life sciences community partners have embraced the strategy. By inspiring and organising collaboration, we aim to ensure everyone benefits from the work of our world-class researchers, clinicians and industry scientists.

## Delivery partners





A photograph of Professor Rebecca Fitzgerald, a woman with short brown curly hair, wearing a blue patterned jacket. She is smiling and holding a small, dark, porous spherical object (the Cytosponge) in her right hand and a thin white thread in her left hand. The background is a blurred laboratory or office setting.

The Cytosponge: an early  
cancer detection device  
invented by Professor  
Rebecca Fitzgerald OBE,  
University of Cambridge

## Setting the scene

Our scientific innovators hold the key to tackling a growing global health burden. We must support their search for solutions to new threats posed by the rise in mental health disorders, ageing populations, poor diet, extreme weather events and air pollution.

With its unique mix of academia, NHS and industry working side by side in one close-knit city, Cambridge is one of the most collaborative and innovative life sciences and healthcare ecosystems in the world.

**This strategy details how  
we can sustain our globally  
outstanding ecosystem.**

# The Cambridge ingredients



30+

science and technology campuses, including one of the largest in Europe



2

leading universities, providing higher and further education, with many world-class research institutes



3

leading research-active NHS trusts, working in physical and mental health



4

world-class research institutes, Babraham, Wellcome Sanger, Laboratory of Molecular Biology and the EMBL-EBI



600+

life science companies, from start-ups to multinationals, including Abcam, AstraZeneca, GSK, Illumina

The UK's leading medical school in the **University of Cambridge's School of Clinical Medicine**

A culture of **world-changing innovation** stretching back hundreds of years

Funding from some of the UK's largest charities, **British Heart Foundation** and **Cancer Research UK**

Access to **integrated, high-quality** health, genomic, biological, social and economic data

**"A safe place to do risky things"**

- Dr Andy Richards CBE

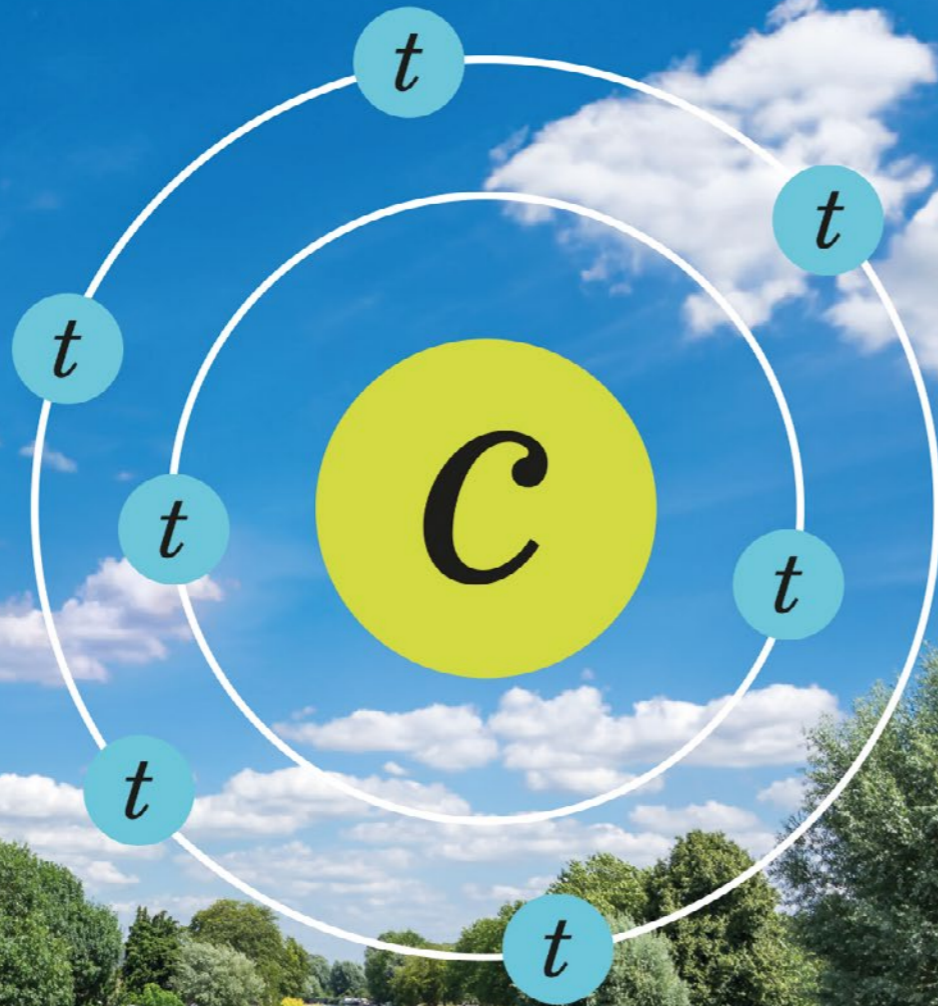
Cambridge Where Innovation Makes History

**"The phenomenon of Cambridge, its university and its cluster, is an inspiring reminder of the great power of human ingenuity to create new enterprises and industries, to make life better and more productive for all of us... Cambridge was the obvious choice when Microsoft decided on the location for its first research centre outside of the US in 1997"**

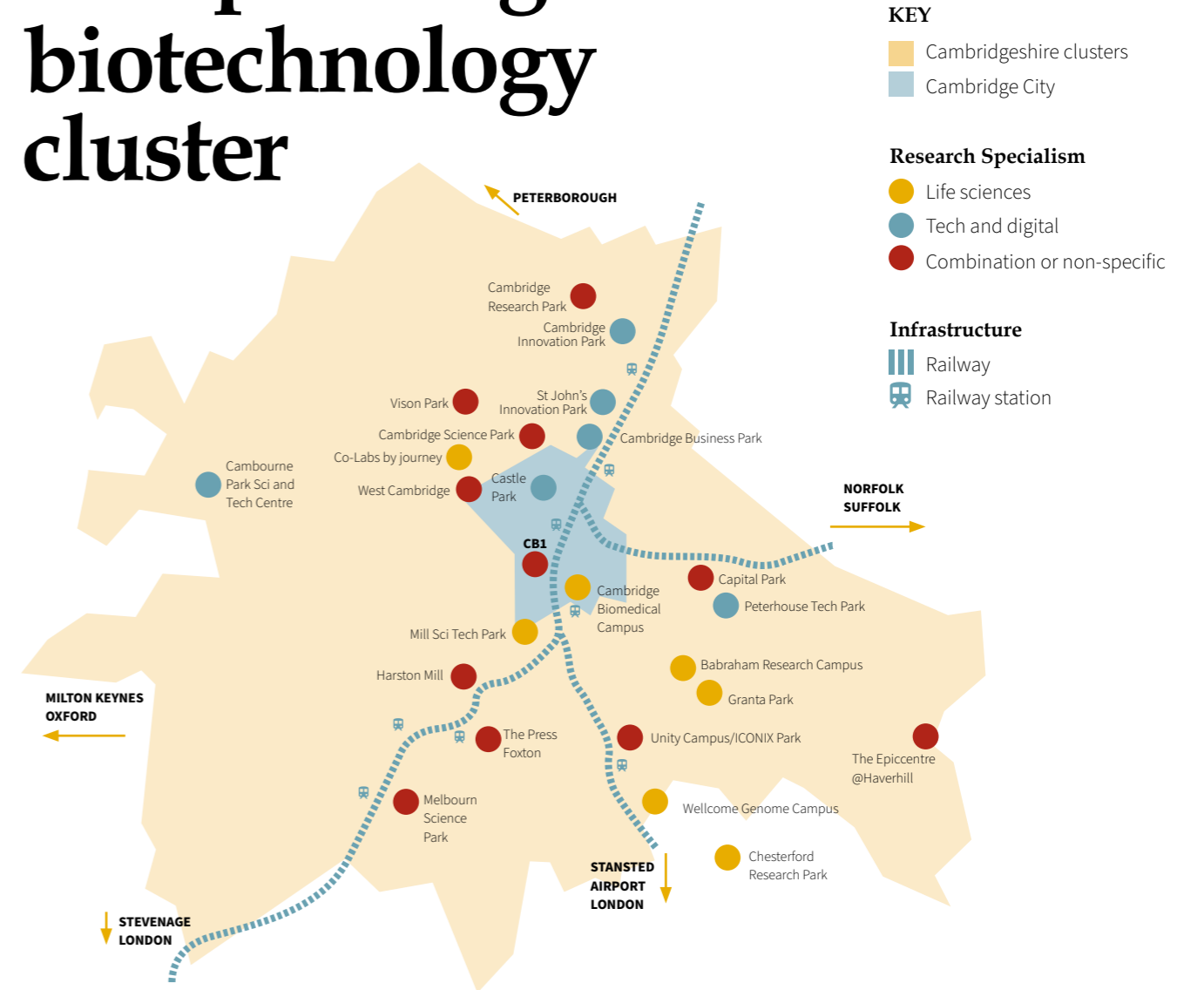
- Bill Gates



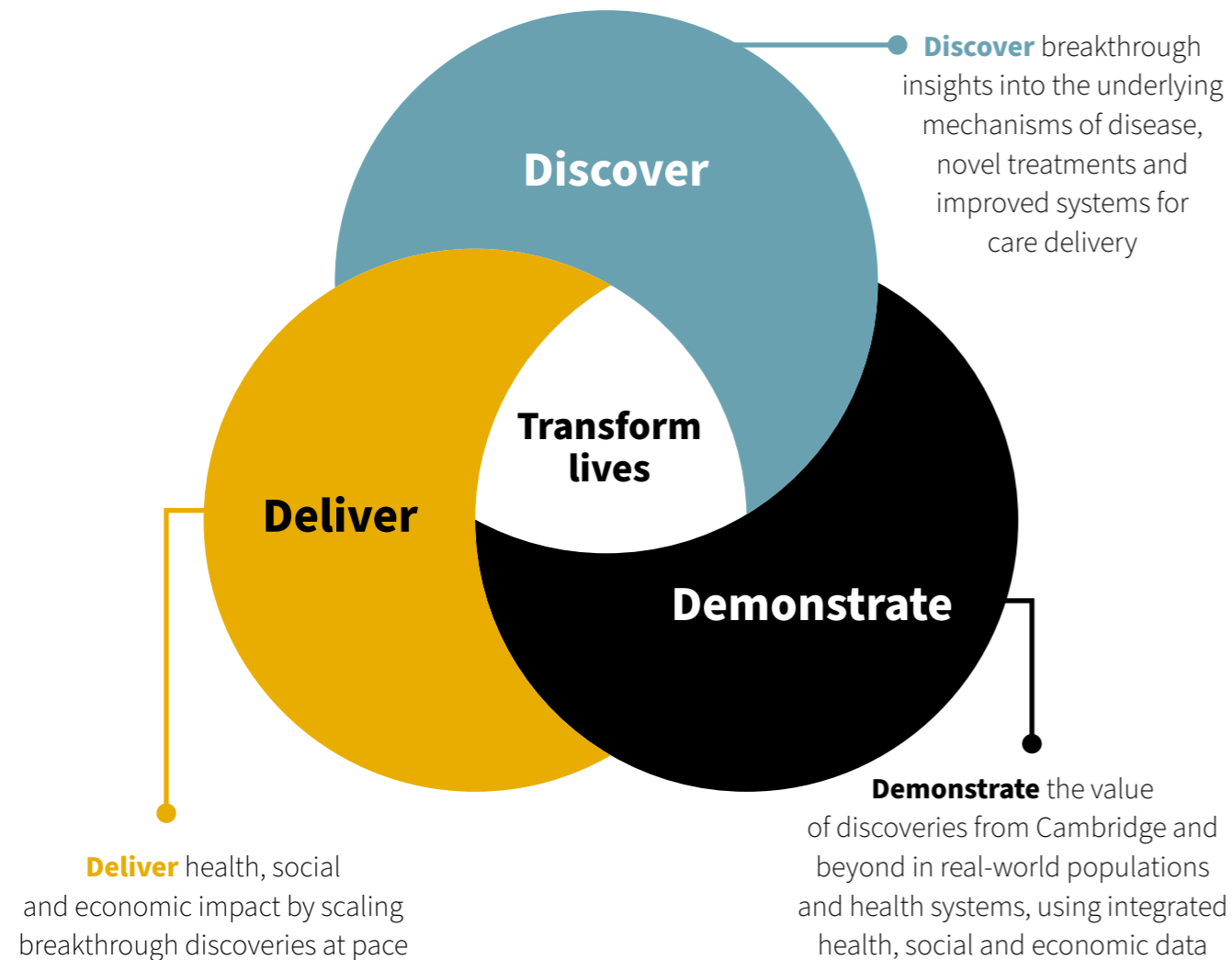
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# Cambridge Europe's largest biotechnology cluster



# The Cambridge strategy for changing the world



# Cambridge highlights

**21 Nobel Prizes**  
awarded to Cambridge STEM scientists since 2000

**300+ patents**  
per 100,000 residents – double any other UK city – driving UK innovation

**No 1 in the world**  
highest-intensity science and technology cluster – Growth Innovation Index 2022, 2023 and 2024

**9** STEM subject areas at the **University of Cambridge** ranked top in *The Times* and *The Sunday Times* Good University Guide 2025

**90%**  
**of DNA and RNA sequences** produced worldwide stem from Solexa-Illumina's next-generation DNA sequencing

**\$950m (£725m) of venture funding** was invested into life sciences start-ups and scale-ups in the Cambridge area between 2015 and 2020

**1/3**  
**of world's new drugs today** are monoclonal antibody technologies, which have their birthplace in Cambridge. This is in addition to DNA discovery, IVF, modern computing, and Dolby sound

**24 'unicorn' \$1bn companies,** including Abcam, ARM, Bicycle Therapeutics, Cambridge Antibody Technology, CMR, Darktrace, GW Pharmaceuticals, Solexa

**19%**  
**annual growth** in turnover and 10% in employment, outpacing every other sector over the past three years

**600+**  
**life science companies** based in Cambridgeshire, including AstraZeneca, which is the single largest R&D investor in Europe

**6 of top 10** drugs in use across the world were developed in the Cambridge cluster



# Cambridge cluster life science goals

Within a decade we can:

Discover

Demonstrate

Deliver

**remain No 1**

intensive science  
and technological  
cluster globally

**+50%**

high-quality  
start-ups

**x3**

strategic, mid-  
to long-term  
partnerships  
with academic  
institutes

**x2**

clinical trial  
participant  
recruitment

**£18bn**

target for gross  
value added (GVA)  
by life sciences

**+10**

increase in number of  
globally influential  
researchers

**850**

active  
clinical  
trials in  
progress

**5-year**

reduction of the regional  
inequality gap for people  
living in good health

**+10%**

increase in world-  
leading publications

**30**

new innovations  
tested for the  
first time in trust  
landing zones

**10**

new billion-dollar  
life science  
companies

**x3**

increase in jobs  
generated by  
life science and  
healthcare sector



# Our five-pillar strategy to stay world-leading

To remain a destination of choice for global life sciences, we need to invest in the five pillars: **Talent, Place, Data, Funding and Network**



Discover

Demonstrate

Deliver





**Nursing training at  
Anglia Ruskin University**

# Attracting the best **Talent**

**Foster and attract the skills, and develop the culture required for discovery and innovation**

## Our progress so far

- Anglia Ruskin University (ARU) to open a dedicated School of Apprenticeships
- Championing a regional Opportunities Hub to support brokerage, placements and mentorship across the cluster
- Increased apprenticeship numbers and creation of new courses in response to workforce needs, such as lab sciences and data-science degree apprenticeships
- Cambridge University Hospitals ranked in the top 10 of health and social care UK Apprenticeship Employers 2024
- Initiation of a pilot to support apprenticeship brokerage on the Cambridge Biomedical Campus

## What's next?

- Support for specialisms beyond the traditional life sciences knowledge engine, including data, AI, machine learning and engineering
- Develop a multidisciplinary talent pool that expects talent to move between, and work across, different institutions, take risk, value diversity and drive impact from discoveries
- Facilitate a range of entry levels to life sciences employment, to leverage local talent and wider regional economic benefit from cluster activity
- Embed commercial awareness and leadership training and mentorship, to enhance and nurture an entrepreneurial culture
- Encourage inward investors to bring in new international growth talent to support scaling businesses and to provide a scale-up talent linkage service
- Create new, green health and life sciences roles, and additional skills, to transition the health and life sciences sector to a green sustainable economy

**Key enabler:** 2,000 new health and life sciences apprenticeships



Royal Papworth Hospital, the first NHS hospital trust to receive “outstanding” across all five areas by the Care Quality Commission (CQC)

# Creating the best Place

**Develop the infrastructure to support discovery and innovation, while creating an environment in which talented people want to work and live**

## Our progress so far

- Outline business case and planning approved for two specialist hospitals, plus £3m provision for future care planning in recent Budget
- Place Forum established to facilitate planning and coordinated input to future Cambridge developments
- Delivered space capacity for life science innovation, including co-labs-by Journey (West Cambridge), The Press by Mission Street (Foxton), BioMed Realty and Babraham Research Campus development and 1000 Discovery Drive on the Cambridge Biomedical Campus

## What's next?

- Future-proof research facilities and develop core shared infrastructure and assets that support physical and virtual collaboration, serving specific disease foci and new research interfaces
- Support NHS trusts to create fit-for-the-future healthcare facilities that support research and innovative models of care
- Provide flexible space for business at all stages of the translational pipeline, and seek funding and partnerships to deliver additional incubator, accelerator and prototyping space
- Ensure local clusters can support a high quality of life, with effective and sustainable long-term transport solutions and infrastructure to support productive and liveable communities

**Key enabler:** 10 million square feet of new space for life sciences





# Curating an integrated and accessible **Data** environment

**Put world-leading, trusted and accessible healthcare and research data to work**

## Our progress so far

- Secured £10m to develop and co-lead Secure Data Environment that will collect healthcare data from across the eastern region and make it accessible for research
- Building out integrated research data infrastructure through use cases such as BloodCounts! and Cynapse
- Support for joined-up data governance initiatives such as Consent for Contact campaign and Statement of Principles
- Wellcome Sanger Institute and EMBL-EBI add to the Human Cell Atlas project with the Human Lung Cell Atlas, enhanced Heart Cell Atlas, and location of cells of the early human limb

## What's next?

- Build public trust and engagement in the use of healthcare data
- Identify and develop data assets that improve care delivery, fuel discovery and allow the evaluation of innovation
- Democratise and simplify the architectures and infrastructure, to support development and access to data assets
- Partner with national and global experts and develop commercial approaches that allow co-development and access to data assets

**Key enabler:** 100% accessibility of useable NHS data





# Bringing Funding into the cluster

**Increase access to a range of funding mechanisms to support discovery, translation and scale-up**

## Our progress so far

- New investment and talent into the ecosystem: Automata, BioNTech, Novo Nordisk
- Dedicated ecosystem Investor Engagement Manager to facilitate relationships with global investors, hosting multiple USA venture capitalists annually
- First UK investment by Flagship Pioneering of £50m into Quotient Therapeutics
- Multi-million funded Cambridge life sciences consortium, with the Advanced Research and Invention Agency (ARIA), will fast-track radical new technologies to revolutionise brain health
- GSK is investing more than £50m into the Cambridge-GSK Translational Immunology Collaboration (CG-TIC). This five-year collaboration aims to increase the precision of immune-related disease treatments with new and existing therapies

## What's next?

- Leverage government funding with charity, philanthropy and industrial partnerships, providing larger pools of seed and growth capital
- Fill the gaps in current funding proposition by attracting new investors to the cluster and supporting investment of UK capital into life sciences
- Increase commercial research and care delivery partnerships
- Develop cross-institutional funding propositions for UK government, philanthropy, industry and venture capitalists

**Key enabler:** 50% increase in annual Cambridge region investment





Networking in Cambridge  
at the 2024 Innovation  
Cambridge summit

# Supporting capabilities through the **Network**

**Evolve our mechanisms and support capabilities for partnerships, internally and externally**

## Our progress so far

- Delivering the life sciences arm of Innovate Cambridge, including helping to develop the strategic partnership with Manchester
- Established landing zones across NHS providers to support innovation and adoption
- Developed linked innovation function within Cambridgeshire and Peterborough Integrated Care Board
- Royal Papworth and Cambridge University Hospitals co-location and sharing of training and clinical services
- Biannual Life Sciences Advisory Council meeting established for the Cambridgeshire ecosystem

## What's next?

- Develop our Integrated Care System and Primary Care Networks in a way that optimises care and facilitates discovery, proving and scaling of innovation
- Build on landing zones in our healthcare providers for adoption, evolution and evaluation of innovation
- Strengthen and simplify the ability to rapidly execute legal, commercial, intellectual property and ethics arrangements across the NHS, academia and industry
- Expand, coordinate and simplify the landscape for early translation
- Develop our shared narrative and external communication

**Key enabler:** Double the number of accelerator and incubator facilities

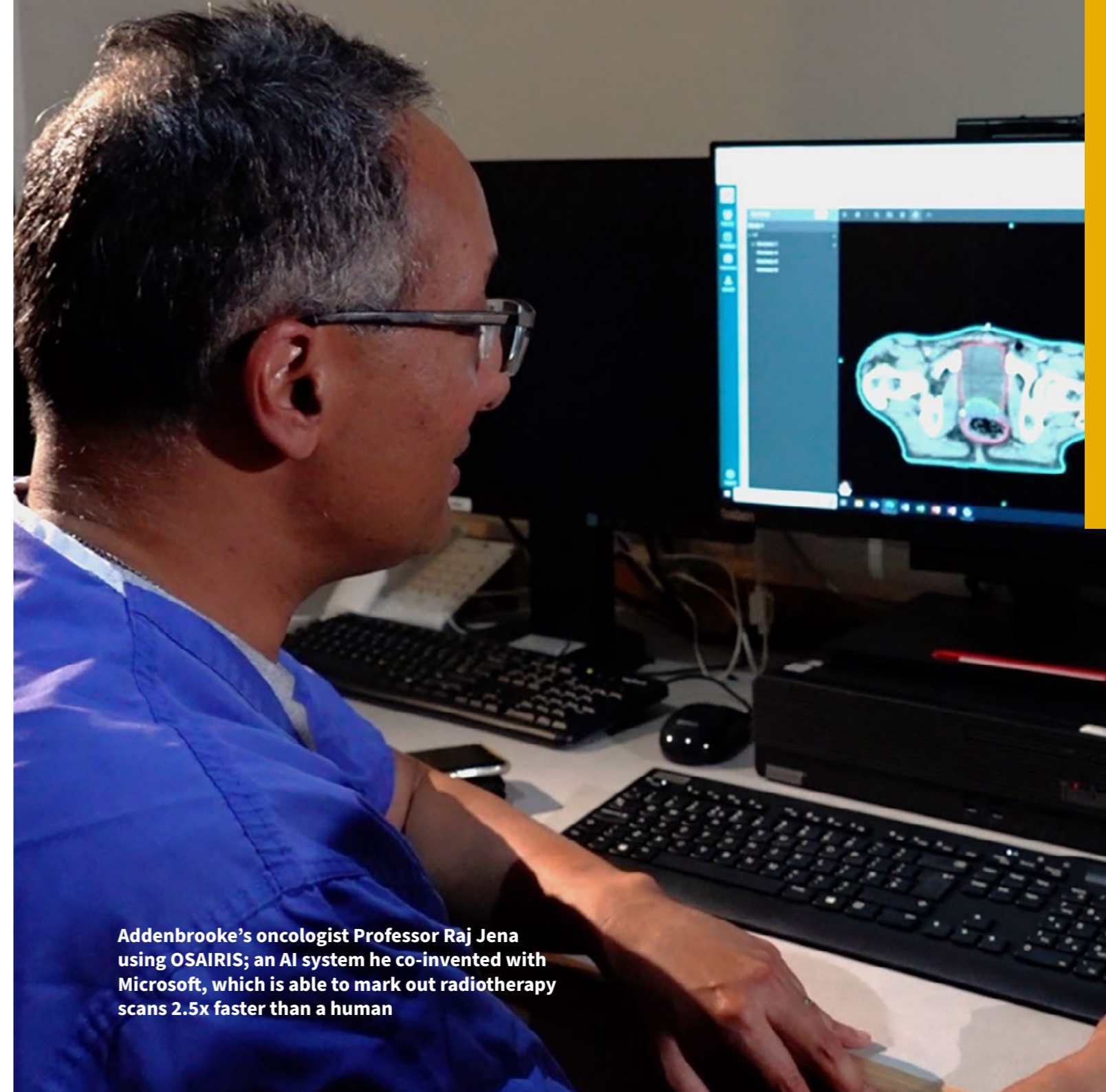


# What next? Five areas to revolutionise healthcare

Looking ahead, we will focus on developing five scientific areas in which Cambridge has the ingredients to excel, working with partners across the ecosystem to galvanise various existing proposals for these areas into one coherent story, which can be taken to politicians, investors and philanthropists.



**The fly connectome: the first wiring diagram of every neuron in an adult fly brain. Produced by the Flywire Consortium, which includes researchers from the University of Cambridge and the MRC Laboratory of Molecular Biology**



**Addenbrooke's oncologist Professor Raj Jena using OSARIS; an AI system he co-invented with Microsoft, which is able to mark out radiotherapy scans 2.5x faster than a human**



# Investable propositions

**Deciphering and healing the brain**

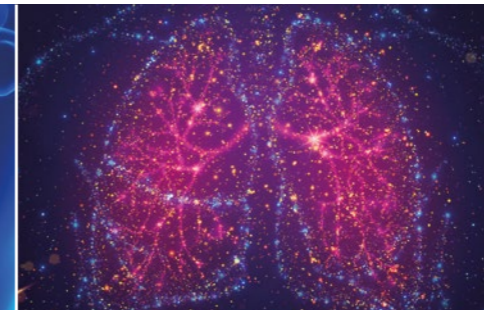
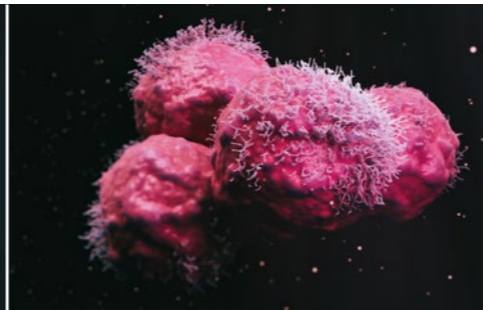
**Early diagnosis and prevention of cancer**

**Maintaining healthy hearts and metabolism**

**Helping people breathe easily**

**Setting people up for lifelong health**

**Therapeutic missions**



**Maximising our potential for translation and innovation across all modalities**



**Continue to push forward the boundaries of genomics**



**Harnessing AI to transform healthcare**



**Making our science work for neglected communities**



**Utilising the power of our immune systems**

**Cross-cutting enablers**



# What does **this strategy** mean to you?

**We intend to deliver globally differentiated and impactful outcomes for health and life sciences, in a place people want to live and work**

## **Local population**

World-class personalised healthcare, jobs in life sciences of every kind, great place to live and work that celebrates diversity

## **Entrepreneurs**

Access to funding, expertise, talent and shared resources, and ability to rapidly prove value; integrating discovery expertise

## **Research funders and investors**

Discoveries that deliver impact sooner in the real world; a growth mindset rooted in improving lives and valuing commercial skill sets

## **Developers/commercial agents**

Development of facilities in full partnership, with focus on maximising long-term benefit for all

## **Researchers, clinicians and professionals**

Ability to work at leading edge of science and care, with opportunities for flexible career paths and competitive remuneration

## **Health and care providers**


Local integration; commercial partnerships; and a population dataset that enables value-based care delivery and innovative treatments

## **Technology life sciences companies**

Access to ideas that cross boundaries; a place where employees want to be that provides opportunities to test new concepts rapidly

## **Local and national government**

Enhanced UK global reputation and competitiveness via research business opportunities facilitated throughout the UK



**Versius: a lightweight and mobile surgical robotic system enabling less invasive surgery, developed in Cambridge by CMR Surgical, manufactured in Ely**





## About Cambridge University Health Partners

Cambridge University Health Partners (CUHP) is one of eight Academic Health Science Centres in England whose mission is to improve patient healthcare by bringing together the NHS, industry and academia.

The partners are Anglia Ruskin University, the University of Cambridge, Cambridge and Peterborough NHS Foundation Trust, Cambridge University Hospitals NHS Foundation Trust, and Royal Papworth Hospital NHS Foundation Trust.



## About Innovate Cambridge

Innovate Cambridge is an initiative to promote the Greater Cambridge innovation ecosystem over the next decade, being the custodian of the innovation strategy and convenor of the ecosystem. The Innovate Cambridge mission is to ensure pioneering discoveries are successfully translated for local and global impact.

The initiative has more than 100 signatories to the charter, joining the three initiators – tech transfer office Cambridge Enterprise, investor Cambridge Innovation Capital, and the University of Cambridge.



## About Cambridgeshire & Peterborough Combined Authority

The Cambridgeshire and Peterborough Combined Authority was created in 2017 after a historic agreement between the UK government and the seven councils that together make up the Mayoral Combined Authority.

It has a range of responsibilities including transport, infrastructure, planning, economic growth, business support and adult education. It plays an important role in developing bold, ambitious plans for the future, advocating for and representing the region to bring in investment and funding to grow the economy for the benefit of all.

