

# THE WEST OF ENGLAND IN NUMBERS



## BRISTOL + BATH

190+
Life Sciences
businesses
hosted in the
West of England

Most productive city region in England outside London



1,165,600
Total population



90+
different languages
spoken across the
West of England

Regional economy worth over **£40bn** 



**£212m** invested in Life Science related companies in 2022

Bristol and Bath rank in the **top 20** European tech hubs for venture capital funding





From medical technology to synthetic biology, and digital health to advanced therapeutics, the region is thriving. Unique cross-sectoral collaboration coupled with an exceptional business support and growth ecosystem make the West of England the place to locate and succeed.

#### WHO'S HERE:

















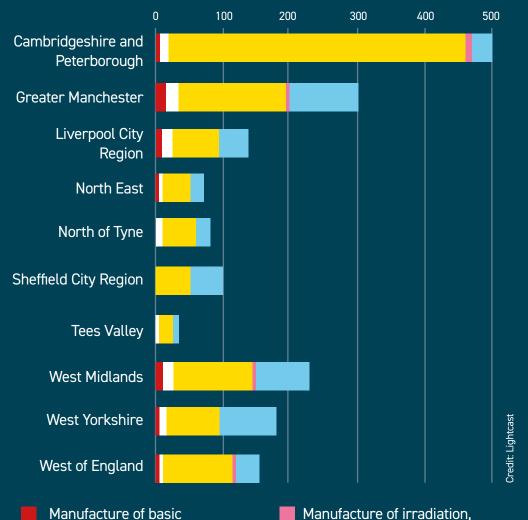




# NATIONAL AUDIENCE

# NUMBER OF LIFE SCIENCES BUSINESSES





electromedical and

and supplies

Manufacture of medical

and dental instruments

electrotherapeutic equipment

pharmaceutical products

pharmaceutical preparations

Research and experimental

development on natural sciences and engineering

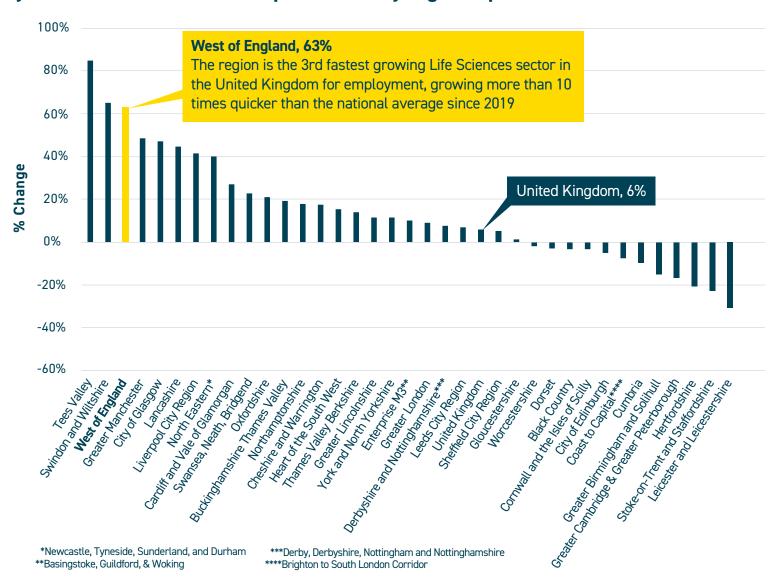
Manufacture of

# **EMPLOYMENT**



- The West of England region hosts 190+ Life Science businesses in total, providing approximately 4,219 jobs
- Overall productivity of the sector for the region is £88,000 per employee per year, around £7,000 more than the national average for the sector
- There are 1,646 more employees in the Life Science sector in the West of England than there were in 2019

# % Change in Employment in the Life Science sector 2019-2023 by Local Economic Partnership Area (or city region equivalent)



# LIFE SCIENCE & TECH ROLES IN THE REGION



The table to the right highlights the growth of a selection of roles across the West of England within the sector, between 2019-2022.

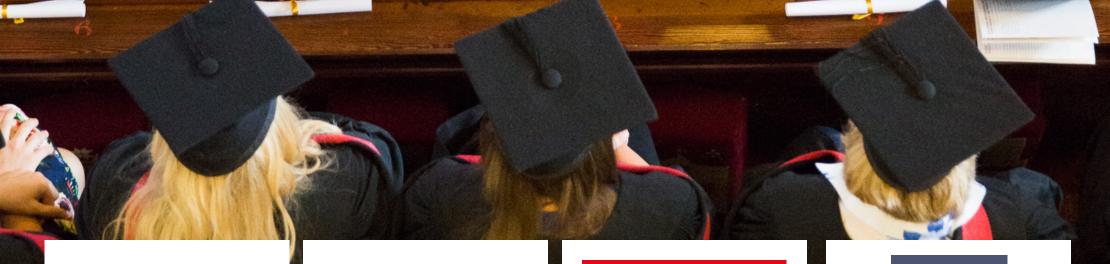


Job Type	% Change (2019- 2022)	% of Total Jobs in Industry Group (2021)	Education Level
Biological Scientists and Biochemists	198%	12.10%	Honours, Bachelor's degree
Laboratory Technicians	110%	7.00%	Level 4 NVQ; Intermediate, DipHE, DipFE
Physical Scientists	199%	4.20%	Honours, Bachelor's degree
Research and Development Managers	160%	4.10%	Honours, Bachelor's degree
Natural and Social Science Professionals	212%	3.70%	Honours, Bachelor's degree
Electronics Engineers	223%	3.40%	Honours, Bachelor's degree
Business and Financial Project Management Professionals	227%	3.00%	Honours, Bachelor's degree
Functional Managers and Directors	244%	2.70%	Honours, Bachelor's degree
Business and Related Research Professionals	329%	1.90%	Honours, Bachelor's degree
Chemical Scientists	224%	1.80%	Honours, Bachelor's degree
IT Business Analysts, Architects and Systems Designers	265%	1.70%	Honours, Bachelor's degree
Business and Related Associate Professionals	246%	1.60%	Honours, Bachelor's degree  Honours, Bachelor's degree  Level 3 NVQ; A Levels  Level 3 NVQ; A Levels
Engineering Technicians	150%	1.40%	Level 3 NVQ; A Levels

# A WORLD-LEADING TALENT POOL

BRISTOL + BATH

The region is home to four world-class universities attended by over 80,000 students, of which over 19,000 are studying Science, Technology, Engineering, and Maths (STEM) subjects.







UWE University of the West of England

BATH SPA UNIVERSITY

University of Bristol ranked #55 Globally and #9 UK (QS World University Rankings 2023).

7th for UK graduate employability with alumni being amongst the highest paid graduates in the UK.

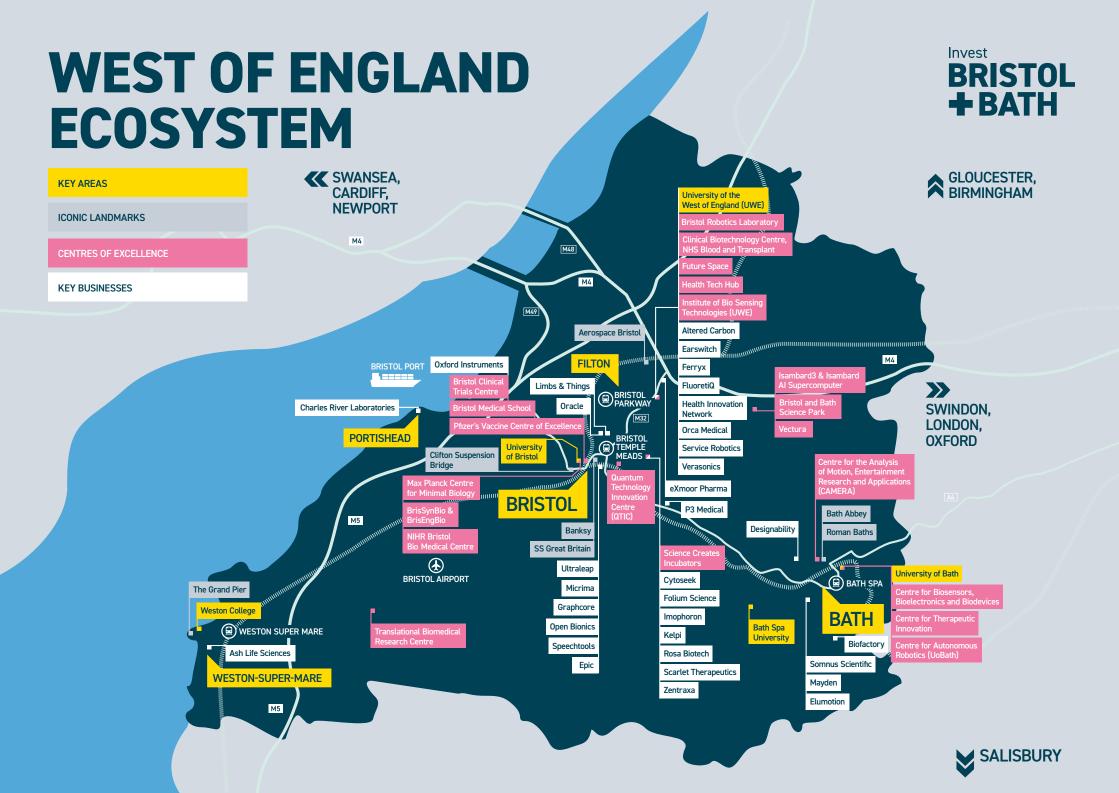
University of Bath named University of the Year 2023, and in the top 5 in the UK for student satisfaction (86.6%).

Ranked 4th in the UK for employment after six months (Guardian University Guide 2020).

University of the West of England (UWE) Bristol ranked joint second in England for student satisfaction (National Student Survey 2020).

Circa 76% of UWE research is ranked 'internationally excellent' or 'world leading'.

**Bath Spa University** is one of the greenest universities in the UK (Uswitch Green Universities Report 2022).



WORLD CLASS ECOSYSTEM

## BRISTOL +BATH

#### **BrisSynBio for Synthetic Biology**

A multi-disciplinary research centre that focuses on the biomolecular design and engineering aspects of synthetic biology.

#### Max Planck Centre for Minimal Biology

Aims to advance the future of health and medicine by understanding the fundamental nature of life.

#### **Biomedical Research Centre**

World leading expertise in genomic and epigenomic epidemiology, mendelian randomisation and innovative statistical methodologies.

#### **MRC Integrative Epidemiology Unit**

Leading a proportion of the UK's most advanced population health science research through development and application.

## SPHERE (Sensor Platform for Healthcare in a Residential Environment)

Developed and deployed a first-generation sensor system for health-related behaviours of a household.

#### **Pfizer Vaccine Centre of Excellence**

The first Pfizer Centre of Excellence to open outside of the USA, dedicated to the design, development and use of next-generation vaccines.

#### **Bristol Robotics Laboratory (BRL)**

The most comprehensive academic centre for multi-disciplinary robotics research in the UK.

#### **Health Tech Hub**

Focused on advancing technology that enables people to live independently and manage their own health and well-being.

### Avon Longitudinal Study of Parents and Children (ALSPAC)

A world-leading birth cohort study.

#### **SETsquared Partnership**

A world leading business incubator and enterprise partnership comprising six research-intensive universities: Bath, Bristol, Cardiff, Exeter, Southampton and Surrey.

#### **Bristol & Bath Science Park**

A world-class environment that provides the space, flexibility and support for science and technology businesses.

#### **Centre for Therapeutic Innovation (CTI)**

The centre transforms cross-disciplinary translational research, via innovation, to attain precision medicine.

## Centre for Bioengineering & Biomedical Technologies

Addressing the grand challenges in human health and wellbeing through transdisciplinary and translatable bioengineering research.

# STRONG NHS LINKS

THE BRISTOL & BATH REGION
HAS STRONG LINKS TO THE NHS;
DELIVERING SERVICES AND RESEARCH
PROJECTS ACROSS A RANGE OF AREAS,
THROUGH VARIOUS FACILITIES AND
ORGANISATIONS.

The North Bristol NHS Trust is one of the largest NHS trusts in the country. It serves a local population of around 500,000 people across South Gloucestershire, North Somerset and North Bristol.

Key capabilities include:

- Orthopaedics
- Neurosciences
- · Renal
- $\cdot \, \mathsf{Transplant}$
- · Neonatal care



The Royal United Hospitals Bath NHS Foundation Trust provides specialist services for rheumatology, chronic pain and chronic fatigue syndrome/ME. They are currently also building a new Cancer Centre: The Dyson Cancer Centre.

The NHS integrated care system in Bristol & North Somerset is the 2nd most active organisation in Research and Innovation within the UK.

Medical Physics and Bioengineering Department of the University Hospitals Bristol and Weston NHS Foundation Trust provide specialist diagnostic and imaging services, including medical photography. The headquarters of NHS Blood and Transport are located in Bristol. It supplies safe blood, tissues and solid organs to UK hospitals, as well as driving world-class research, and leading the way in specialist areas ranging from stem cell transplantation to molecular therapies. It is also home to one of Europe's largest blood transfusion centres.

Our region hosts one of the UK's Academic Health Science Networks (AHSNs): Health Innovation West of England. This network brings together the health service community, industry, higher education, research bodies, patients and the wider public to work in partnership. It has 19 members including NHS providers, integrated care boards and academia.

# DIGITAL HEALTH, MEDICAL TECHNOLOGY & DIAGNOSTICS







#### **DIGITAL HEALTH**

Digital health technologies use computing platforms, connectivity, software, and sensors for health care and related uses.



#### **MEDICAL TECHNOLOGY**

MedTech can save lives, improve health and contribute to sustainable healthcare. Through innovative devices and diagnostics, the industry delivers value to patients, healthcare professionals, healthcare systems and society.

#### **CAPABILITIES WITHIN THE REGION**

The Health Tech Hub facility at the University of the West of England's Frenchay Campus is dedicated to advancing technology that enables people to live independently and manage their own health and wellbeing. This is achieved through their work in the Assisted Living Lab.

Bristol Robotics Laboratory (BRL) is the most comprehensive academic centre for multi-disciplinary robotics research in the UK. It is a partnership between the University of the West of England and University of Bristol.

#### **DIAGNOSTICS**

Technological advances in diagnosis techniques can more rapidly diagnose and monitor disease and provide prognoses for patient triage and treatments. This helps to avoid the cost and health risks of using ineffective medicines.



#### **ASSISTED LIVING**

Robotics is playing an everincreasing role in life sciences applications. Not only are robots taking on monotonous tasks and streamlining processes in laboratory settings, they are also leveraging advances in delivering living assistance to those who need it most.

#### **KEY COMPANIES WITHIN THE REGION**

Digital Health	Medical Technology	Diagnostics
Okko Health	Open Bionics	Rose Biotech
Micrima	Earswitch	FluoretiQ

# CASE STUDY: OPEN BIONICS

DEVELOPING MEDICAL DEVICES THAT ENHANCE THE HUMAN BODY HAS LED TO WORLDWIDE ACCLAIM



Based in Bristol, Open Bionics were founded in 2014 with a focus on developing and delivering affordable, assistive devices that enhance the human body.

Their dedication to developing medical devices that augment the human body has garnered global recognition, pushing the boundaries of creativity and robotics, resulting in the ground-breaking Hero Arm.

The Hero Arm is the world's first clinically approved 3D-printed, stylish, multi-grip bionic hand suitable for both children and adults. Unlike conventional upper limb prostheses, which often offer hooks, grippers, or costly bionic hands, Open Bionics aims to make this technology as affordable as possible.

Over the past few years, Open Bionics has earned numerous prestigious accolades, including the James Dyson Award for Engineering, the Wired Social Innovation Award, and a Guinness World Record. Their dedication even led to them winning \$1 million at the UAE AI & Robotics International Award for Good.



# **AGRI-FOOD**

## BRISTOL + BATH

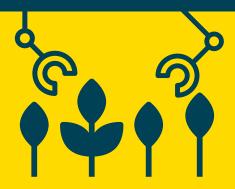




#### **NUTRITION**

Nutritional science has had a major impact on public health by identifying optimal nutrient intakes on a population-wide basis. Such advances have provided the rationale for healthy eating campaigns, which can produce significant health benefits.

 32% of Europe's agri-food tech funding went to UK businesses in 2019



#### **AGRI-TECH**

The Food WorksSW is a vibrant new centre of excellence for nurturing food and drink business, with state-of-the-art facilities, technical support and expert advice for start-up and potential high growth companies. Connecting producers to collaborate, innovate, identify new markets and create jobs within the sector.

- West of England Agriculture estimated £845m GVA
- Southwest food and drink exports estimated £560m (2020)

#### **CAPABILITIES WITHIN THE REGION**

Bristol Poultry Research Farm supports sustainable productivity and is driving consumer confidence by improving bird welfare. The region is home to expertise across its network through the Centre for Innovation in Livestock Excellence, Bristol Centre for Agriculture Innovation and Vertical Farming.

#### **KEY COMPANIES WITHIN THE REGION**

Agri-tech	Nutrition
LettUs Grow	Glaia
Dyson Farming	TasteTech
Yeo Valley	

**Credit: LettUs Grow** 

## BRISTOL + BATH

# redit: University of Bar

# ADVANCED THERAPEUTICS & BIOPHARMA



#### **CAPABILITIES WITHIN THE REGION**

NHS Blood and Transplant Gene Therapy Hub (Filton, North Bristol)

Part of the Clinical Biotechnology Centre (CBC). Manufacturing GMPgrade plasmids for over 20 years.

- The Hub supports both early phase academic-led and commercial gene therapy trials
- Facilitates the provision of cost-effective viral vectors and plasmid DNA to stimulate the UK's gene therapy sector



#### **ADVANCED THERAPEUTICS**

Advanced Therapeutics are treatments used to alleviate or prevent a particular disease. Examples of therapeutics include drug therapy, medical devices, nutrition therapy and stem-cell therapies.

A research project combining teams in Bristol, Cambridge, London, and NHS Blood and Transplant, are currently focused on growing red blood cells in a laboratory that can carry oxygen from the lungs to the rest of the body.



## BIOPROCESSING & BIOPHARMA

Bioprocessing is the process of increasing the number of living cells or other biologic systems/components (such as bacteria, viruses, enzymes, proteins, or nucleic acids) in a commercial bioreactor for biopharmaceutical manufacturing.

The University of Bristol and the University of Bath both have focussed research facilities identifying the networks of biomolecules.

#### **KEY COMPANIES WITHIN THE REGION**

Advanced Therapeutics	BioPharma
Scarlet Therapeutics	GenomeKey
eXmoor Pharma	Pfizer
Imophoron	

# CASE STUDY: eXmoor Pharma

THE BRISTOL AREA IS A GREAT PLACE TO BUILD ON OUR HIGHLY SKILLED AND KNOWLEDGEABLE CONSULTANCY



Since being founded as a biopharmaceutical and cell therapy manufacturing consultancy in 2004, eXmoor has since grown into a globally recognised leader in its field, completing more than 500 projects across 16 countries. In 2007 cell and gene therapy (to treat disease) were in their infancy, and so the team refashioned and brought in new skillsets to enable them to follow this new market.

In 2017, eXmoor Pharma moved into one of the region's tech accelerators: Future Space, based at the University of the West of England. Following steady growth at Future Space, eXmoor completed a \$35 million Series A round in May 2023 to launch eXmoor's Cell and Gene Therapy Centre, a 65,000 sq ft GMP manufacturing facility, purpose-built to develop and manufacture autologous and allogeneic cell therapies, as well as viral vectors.

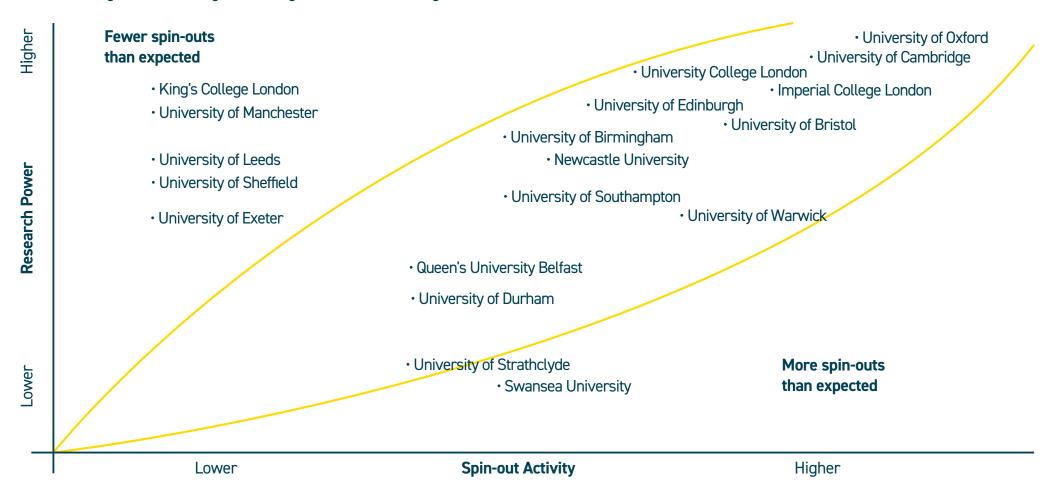


# **UNIVERSITY SPIN-OUTS**

# BRISTOL + BATH

#### Spin-outs v research power

(UK.RI Funding, Leiden Ranking, 'T'imes Higher Education Ranking)



The University of Bristol is a new entrant into the top 10 for university-funded spin-outs. The wider growth of the city and the university as a hub for life science start-ups is arguably driving its attraction to investors. The West of England's upwards progress through the rankings is notable and reflects the growth of Bristol as an increasingly important centre for life sciences.

The University of Bristol and the University of Bath are renowned for producing pioneering start-ups, with research power being the driving force for respective universities.

Source: LL, Life Science Start Up Report 2022

# THE WEST OF ENGLAND ROADMAP





#### **MISSION STREET - PROJEKT**

Mission Street are a leading specialist operator, investor and developer in Science and Innovation buildings and campuses with a committed UK platform of 1.5million sq ft. In July 2022, Mission Street and their joint venture partner, BentallGreenOak, unveiled the acquisition of 1 Temple Way, soon to be named 'Projekt.' Their vision includes the creation of Bristol's most expansive commercial innovation facility, encompassing 148,000 sq ft of wet labs, dry labs, office, and collaborative spaces.

The former Printing Press is to be repurposed and extended, incorporating the technical specifications that will cater for the region's fast growth innovation companies. Projekt has been designed to accommodate companies graduating from regional incubators as well as attracting the region's wealth of established companies from a broad range of innovation sectors.



#### **FUTURE SPACE EXPANSION**

Future Space, centrally located within the University of the West of England, serves as a hub for uniting entrepreneurs and tech innovators with scientists, researchers, and graduate talent. This dynamic environment fosters collaboration, innovation, and growth.

Exciting news for 2023, as Future Space unveils plans to expand with an additional 10,000 sq. ft of laboratory, office, and workshop space, scheduled for completion in March 2024.



# UNIVERSITY OF BRISTOL TEMPLE QUARTER

Temple Quarter will enable a dynamic ecosystem where the region's academic community can grow their ideas alongside community stakeholders, industry partners, and business connections.

This innovative campus serves as a catalyst for the broader revitalisation of Bristol Temple Quarter, the UK's largest regeneration area. Its design is geared towards amplifying the capabilities and potential of the creative, digital, and innovation sectors, aligning them with the ever-evolving demands of our changing world.

# FINANCIAL SUPPORT

WE'VE CREATED A PACKAGE OF SOFT-LANDING INCENTIVES TO HELP BUSINESSES LAND SEAMLESSLY

Invest Bristol & Bath understands the impact that opening a new premises or relocating can have for a business and its employees.

To help alleviate this, we've created a package of softlanding incentives to help new businesses land seamlessly in the region.

The package is offered in partnership with a variety of coworking and shared space providers, network and event organisations, recruitment agencies and other providers.

In addition, we work closely with the West of England Growth Hub, a free signposting service dedicated to supporting small and medium sized enterprise (SMEs) in their growth and prosperity. They collaborate with approved support providers and are well-versed in identifying additional grant and funding opportunities.

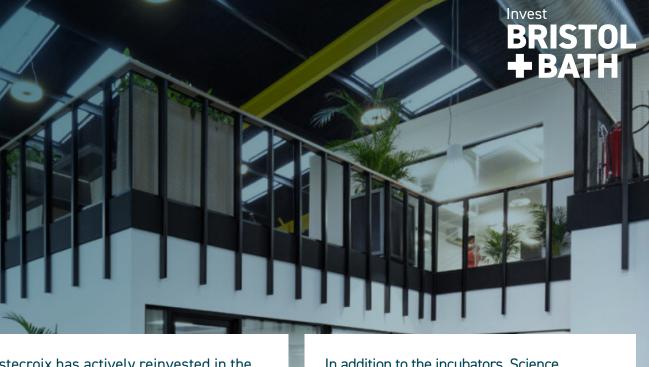
We're here to support your growth and make your transition to the West of England as smooth as possible.

Businesses in our region are welcome to apply for grants and funds such as (subject to eligibility):

- Business Innovation Fund
- Business Growth & Adaptions Grant
- Carbon Surveys



A DEEP TECH ECOSYSTEM FUELLING SCIENTISTS AND ENGINEERS TO TRANSFORM DISCOVERIES INTO DISRUPTIVE BUSINESSES





#### **ScienceCreates**

Founded in Bristol in 2017, Science Creates stands as a comprehensive deep tech ecosystem. It encompasses a strong networking platform, multiple incubators, STEM outreach provider, and a Venture Capital Fund.

The founder, Harry Destecroix, is a University of Bristol alumni and successful entrepreneur. Destecroix co-founded Ziylo, a University of Bristol spin-out, whilst studying his PhD at the University of Bristol. After successfully exiting his initial venture,

Destecroix has actively reinvested in the Deeptech and Life Sciences ecosystem of the West of England, catalysing the launch of numerous incubators, accelerators, and a Venture Capital Fund.

Science Creates' first facility was the St Philips incubator (previously Unit DX) which opened in 2017. It provides compact lab spaces and amenities for scientific enterprises in Bristol and the surrounding areas.

A few years later, Science Creates' second facility: the Old Market Incubator, was opened, doubling the size of the first incubator at 30,000 sq ft. This new site provides more extensive laboratory, office, and event spaces.

In addition to the incubators, Science Creates takes the initiative to manage the Science Creates Venture Capital fund. This fund focuses on early-stage investments, participating in pre-seed/seed rounds and offering support up to Series A. Their primary focus is on advanced technologies spanning biotech to quantum tech, collaborating with companies that share their mission of improving both human health and the environment.

A prime example of innovation within the Science Creates ecosystem is Scarlet Therapeutics. Scarlet Therapeutics played a pivotal role in a ground-breaking clinical trial, pioneering the growth of laboratory-cultivated blood transfused into patients, marking a world-first achievement.

# INVEST IN BRISTOL + BATH

A confidential and complimentary service.



International business



Regional partners



Talent and education



Regional visits



Property solutions



Industry connections service



Sector specialists



**Networks** 





**WHO'S ALREADY HERE:** 

NETFLIX amazon







**AIRBUS** 









HARGREAVES LANSDOWN



