

Invest in UK University R&D

Agritech in the Midlands

Prospectus



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Forge the future of agritech with universities in the Midlands

The UK's agricultural market is one of Europe's biggest. Its population of professional farmers and growers are keen to adopt new technologies that will help them become more efficient.

The Midlands is the home of some of the most productive farming land in Europe, world class research institutes and a history of innovation in food production. With 20% of the country's agritech businesses based in the Midlands, the region hosts some of the UK's most significant concentrations of economic activity in this sector.

Remarkable new technology means the UK can now decarbonise its agriculture sector and help its food supply chain become more sustainable, and the Midlands is well placed to be at the forefront of innovation in this exciting sector.

Through their world-class facilities, research expertise, invention and talent universities across the Midlands are a global driving force in the development of agritech.

Together, they offer a unique opportunity for international companies to invest in research **translation, innovation, co-location** and **integration** into a world-class talent pool and extensive regional supply-chain across key agritech sectors. International businesses can also take advantage of the UK's extensive package of incentives and financial support for R&D investors.

Redefining how universities and industry work together.

Through pioneering co-location, joint research and agritech demonstrator initiatives, Midlands universities are redefining how academia works in partnership with the wider food and farming sector.

Midlands universities are leading the way in developing research and technology to fuel the future agritech and agrifood economy, in collaboration with corporate partners like Morrisons, McDonalds, and PepsiCo, as well as extensive SME networks. Together, the partnerships host research and innovation centres, fund projects, support start-ups, and more, to develop innovative solutions to the world's agricultural problems across farming, sustainability, and the agrisciences.

Over 11,000 university students graduate each year in agritech-related fields across Midlands universities.

The universities of the Midlands provide the foundation for one of the world's most significant concentrations of agritech research and translation. This spans two key sectors:

- Agrifood manufacturing
- Farming

The Midlands region hosts national facilities developed in partnership with the UK Government, universities and industry. Its cross-cutting R&D enablers include:

- Applied technology
- Biosciences
- Sustainability

The Midlands is at the forefront of developing new technologies to grow and process food, while developing new methods of addressing the threats to future agriculture. Our heritage and track record of innovation and partnership between universities, government and businesses mean that we will be at the cutting edge of the next great agritech revolution as well.

So, if you want to...

- invest in outstanding R&D-related **capital and regeneration opportunities; co-locate your business on a university science or technology park** to take advantage of the world-class agritech science, engineering and innovation eco-system in the Midlands;
- **undertake joint research, product-creation, development and testing** using globally distinctive research facilities and dedicated innovation and knowledge transfer support;
- invest in **equity and patient capital opportunities** across a burgeoning spin-out and scale-up portfolio of companies emerging from our region's universities;
- **attract outstanding talent** from some of the world's agritech graduates and academics to work for and with your business; and
- **benefit from the UK's package of generous financial support and tax incentives** for innovation, which has led to more than half of all UK-based R&D business expenditure being undertaken by foreign-owned companies...

...then come and forge the future of agritech with leading UK universities across the Midlands.

This prospectus has been developed by the Midlands' Universities as Drivers of Trade and Investment programme, a collaboration between the universities and growth organisations from across our region and is supported by the UK Government.

Our region

The Midlands is home to a thriving regional economy. More than 800,000 businesses are based in the region, generating 4.46 million jobs and £240 billion GVA per year. It is the second-biggest regional economy in the UK behind London, and is growing. The Midlands is home to 20 universities, and hosts more than 350,000 students and 100,000 graduates a year. The population is well-educated and young. All this contributes to a highly-skilled environment and a ready-and-accessible talent pipeline for potential projects.



Universities and agritech in the Midlands – major R&D assets

Key

- University
- Agri-Food
- Farming
- Applied Technology
- Biosciences
- Sustainability

WOLVERHAMPTON

- University of Wolverhampton

BIRMINGHAM

- University of Birmingham
- BIFoR FACE
- Birmingham City University
- Birmingham Institute of Forest Research Free Air Carbon Enrichment Facility
- Centre for Sustainable Energy Use in Food
- Aston University
- Wolfson Centre for Photonics for Food and Agri-Tech

WORCESTER

- University of Worcester

STOKE-ON-TRENT

- SmartParc SEGRO
- Keele University
- Staffordshire University

- Precision agriculture
- Sustainable farming technology
- Harper Adams University
- National Centre of Precision Farming
- Agri-EPI Centre & Midlands Dairy Research Centre

DERBY

- SmartParc SEGRO
- University of Derby

Sheffield
Leeds
North East
M1 MOTORWAY (NORTH)



HEREFORD

COVENTRY

- Coventry University
- University of Warwick
- Wellesbourne Campus
- Advanced Bioimaging Research Technology Platform

NOTTINGHAM

- Biotechnology and Biological Sciences Doctoral Training Programme
- Nottingham Trent University
- Centre for Animal, Rural and Environmental Sciences Research

- University of Nottingham Sutton Bonington Campus
- European Infrastructure for Multi-scale Plant Phenotyping and Simulation for Food Security in a Changing Climate
- High-field NMR
- Food Innovation Centre, University of Nottingham
- International Centre for Brewing Science
- Sir Peter Mansfield Imaging Centre (SPMIC)
- Centre for Applied Bioethics
- Food Processing Facility
- Food Systems Institute
- PluriCells
- University Farm
- Hounsfield Facility: 3D X-ray imaging

LOUGHBOROUGH

- Food and Feed Analysis Consultancy and Training Service
- Loughborough University

LEICESTER

- De Montfort University
- University of Leiceste

CRANFIELD

- Cranfield University
- Centre for Soil, Agrifood and Bioscience
- Cranfield Environment Centre

M1 / M6 MOTORWAY (SOUTH)

- Cranfield University
- Northampton
- London

LINCOLN

- Agritech and food manufacturing
- University of Lincoln
- Lincoln Institute for Agri-Food Technology
- National Centre for Food Manufacturing

REGION WIDE INITIATIVES

- Food Consortium Collaborative Training Partnership
- DTPs Midlands Integrative Biosciences Training Partnership
- Midlands Engine Food and Drink Sector and Supply Chain
- Innovate UK Agritech Centres
- UK Food Valley
- South Lincolnshire Food Enterprise Zone
- Food Action & Research Midlands Network



Science and innovation pedigree

At the heart of the Midlands' science and innovation landscape are its world-class universities. **Midlands Innovation (MI)** is a partnership of eight research-intensive universities in the Midlands region of England: Aston University, University of Birmingham, Cranfield University, Keele University, University of Leicester, Loughborough University, University of Nottingham, and University of Warwick.

The partnership leverages the research expertise of its members to address the challenges facing society, and to support the development of new technologies, products, and services. Key areas of focus include advanced manufacturing, digital innovation, energy and sustainability, and health and life sciences. The organisation collaborates with industry, government, and other partners to ensure that its research is relevant and useful.

Midlands Enterprise Universities (MEU) is a group of universities with a common mission to support economic growth and innovation in the region. These are Birmingham City University, Coventry University, De Montfort University, Nottingham Trent University, Staffordshire University, University of Derby, University of Lincoln, and University of Wolverhampton. MEU offers a wide range of programs and initiatives to support students, researchers, and entrepreneurs in the Midlands. MEU also supports collaborative

research and development projects that focus on regional priorities, such as advanced manufacturing, digital innovation, and healthcare. Many of these advances support innovation that help the wider agri-food economy, such as food production, farming and sustainability.

In addition to these leading universities, the Midlands is home to a network of renowned research centres and innovation hubs. For instance, the Manufacturing Technology Centre (MTC) in Coventry is a world-leading facility for advanced manufacturing research and development. Equipped with state-of-the-art equipment and expertise, the MTC collaborates with businesses to drive innovation, increase productivity, and support the growth of the manufacturing sector. This, in turn, supports those manufacturers in the food production and agritech sector.

The Midlands is home to a number of the **UK Catapult Centres**, covering Energy Systems (Birmingham and Derby), Satellite Applications (Leicester), and two focused on high-value manufacturing: the MTC near Coventry, and WMG at the University of Warwick. Catapults help turn ideas into commercial applications by addressing the gap between technology concept and commercialisation.

At a time when global events are placing increasing pressure on food production and supply chains, the **UK Agritech Centres** are working with farmers and businesses across the agrifood value chain to support greater efficiency, resilience and profitability. They support the development, evaluation and delivery of technology and data-driven solutions to the challenges faced by the agricultural industry. Their reach extends across all key industry players - science, business and government - and they provide a shared voice to inform and influence industry priorities and highlight important issues. Each Centre has its own unique focus, offering capabilities that can lead the world in delivering sustainable food and farming solutions. A number of the centres are based, or have research spokes in the region - reflecting the importance of the Midlands to the agritech sector.

The UK Agri-Tech Centres will now be forming a single entity and working with Innovate UK to develop a proposal for a new single agri-tech catapult with integrated capability. These centres are: Crop Health and Protection, Centre for Innovation Excellence in Livestock and Agricultural Engineering, Precision and Innovation Centre. This will facilitate stronger innovation, commercialisation, adoption, and research. Catapults are technology and innovation centres spanning over 50 locations across the UK, transforming the UK's capability for innovation in sectors of strength. We include the details of the current Agritech Centres in our R&D index.

The Midlands' science and innovation pedigree extends beyond academia to encompass various industry sectors. Agrifood, agriculture, and sustainability industries have flourished in this region, benefiting from cutting-edge research and development activities. **Walkers**, for example, was founded in Leicester and maintains a significant presence there, and there is a strong SME community collaborating with the universities. The strength of the automation sector and the benefits of collaborating with the universities in the Midlands can be seen through success stories like **Saga Robotics**, which grew out of a collaboration with the **University of Lincoln's Agri-Food Technology institute** and has secured millions in funding to support the future of soft fruit farming.

Led by the University of Lincoln, the £4.9 million EPRSRC agri-tech cluster project aims to make the LINCAM region an agri-tech gateway for the world. This will enable the development of technologies at commercial scale and provide export opportunities for agri-tech companies and inward investment opportunities within both the agri-tech and primary production sectors. Key regional partners are civic society and an industry sector that supports 88,000 jobs, generates a gross added value of £3.8 billion and farms over 50% of the UK's grade one agricultural land.

World-leading agritech sectors in the Midlands



Agrifood manufacturing

The UK's export strengths in food and drink are driven by innovation built on many decades of investment in food production processes, brands and local product identities. Food and drink manufacturing constitutes the largest manufacturing sector in the UK, contributing over £96bn per annum, and employing over 3.3m people, and buying two thirds of the UK's agricultural produce.

The UK food industry has a clear objective of producing high quality, safe and nutritious and affordable food at lowest environmental cost. It has an extremely broad technology base with supply chains extending from primary production, through processing, logistics and retail into restaurants, hotels, hospitals and the homes of the entire population. It exists within a global context addressing challenges such as reducing the environmental footprint of food products, reducing waste and producing more from less in response to increasing pressure on natural resources and higher demand from a growing world population.

There are food manufacturing and processing sites all across the Midlands, including Marmite, Pilgrim's UK, Walkers - which produces over 11 million bags of crisps a day in its Leicester site - and Cadbury, which produces 1.5m Cadbury Creme Eggs a day in Birmingham.

There are an estimated 857,000 jobs linked directly to the food chain in the region, equivalent equal to 17.6% of all employment, with 214,000 jobs in core commercial production and supply chain. Supporting this sector, the **Midlands Future Food Alliance** – comprising local partners, universities and industry – collaborates to help tackle the challenges of a 'zero waste food chain' and 'food product innovation'. The Alliance seeks to bring industry together with researchers to support the adoption of digitalisation and further benefit from advances in technology. This helps investors in the sector forge new products, develop integrated systems (production, manufacturing, storage and distribution) and enter new markets.

Businesses seeking to grow their agrifood business in the Midlands can benefit from a wealth of centres of research and development, and a pool of expert researchers. The **National Centre for Food Manufacturing (NCFM)**, based at the University of Lincoln, works across the food manufacturing supply chain, supporting every stage of the product life-cycle, from farm to fork, and sea to plate. NCFM has extensive laboratory and technical research facilities available to support academic and business innovation and development. The wide array of facilities provides the sector access to specialised equipment which can support research and development for food quality analysis, concept testing, sensory screening, and proximate analysis.



University of Lincoln: Thorvald Platform testing inside a polytunnel, Riseholme Park Campus.

Elsewhere, at the University of Nottingham, the **Sutton Bonington Campus** has been a focus for agriculture and food research since 1893 and is currently home to the 445-hectare University Farm. The **Food Systems Institute** offers research expertise and capabilities across the food system. It brings together researchers from across disciplines and works with industry and policymakers to deliver solutions to transform the food system, from production and processing, through to transport, consumption and waste.

Automation, an important feature in more modern food production, is supported by an array of research collaboration opportunities across the region. **Lincoln Agri-Robotics (LAR)**, at the University of Lincoln, is the world's first global centre of excellence in agricultural robotics. This exciting centre bridges and expands the strong collaboration that exists between two leading research groups at the University of Lincoln: the **Lincoln Institute for Agri-Food Technology (LIAT)** and the **Lincoln Centre for Autonomous Systems (L-CAS)**. LAR aims to drive support robotic innovation and technical advancement in agriculture, drawing on a network of academic excellence, industry partnerships, and funding organisations.

- Over 11million packets of crisps are produced each day, at the Walkers factory in Leicester.
- Over 200,000 Midlands jobs are supported through the food production supply chain.
- The University of Nottingham has been an internationally recognised centre of agriculture and food research for 125 years, through the University Farm at the **Sutton Bonington Campus**



Cranfield University: Glasshouse facility.

Agritech farming

One of Midlands' biggest economic strengths is in farming, with the Midlands being the second highest exporting region for food in the UK - £1.8bn of food was exported in 2021. Well known examples include Stilton cheese, Bramley apples and Melton Mowbray pork pies.

Up to 30% of the English vegetable crop is picked in Lincolnshire, and 70% of all fish consumed in England is processed in Grimsby. Worcestershire and Herefordshire are national centres of primary production in soft fruit, which alongside Warwickshire makes up over one-fifth of the value of England's fruit industry. Livestock are also an important part of the food chain across the Midlands, particularly in Lincolnshire, Staffordshire, Leicestershire, Shropshire, Herefordshire and Derbyshire.

Farmers in the region, and the extensive supply chain that supports them, are able to access a number of internationally recognised centres of research. Harper Adams University, based near Newport, in Shropshire, is uniquely placed in the UK as a school of agriculture with an engineering department and commercial farming practice alongside its teaching and research. It is home to the **National Centre for Precision Farming (NCPF)** providing world-leading research and partnerships with businesses and universities in both crop and livestock production.

Harper Adams is also a partner in the **Agricultural Engineering Precision Innovation Centre (Agri-EPI)**, which delivers research, development, demonstration and training on precision agriculture and engineering for the livestock, arable, horticulture and aquaculture sectors. Cranfield University, in Bedfordshire, is also a core partner, with Agri-EPI having research sites at both Harper Adams and Cranfield. Agri-EPI has a strong network of researchers and facilities with a proven track-record of taking new ideas from theory to practice. The centre has two core goals when supporting industry partners: maximising profitability and enhancing the sustainability of food supply chains.

The University of Lincoln's 200-hectare Riseholme Campus is home to the **Lincoln Institute for Agri-Food Technology (LIAT)** and includes Lincoln Agri-Robotics and Lincoln's EPSRC Centre for Doctoral Training in Agri-Food Robotics. The Campus comprises of a mixed farm which includes arable land, woodland, watercourses and livestock such as Lincoln Red cattle and Lincoln Longwool sheep. The site also includes a dedicated strawberry crop research site, walled garden with trial plots for teaching and research as well as a refrigeration research unit and agri-robotics workshop.

- Up to 30% of the UK's vegetable crop is grown and picked in Lincolnshire.
- Worcestershire, Herefordshire and Warwickshire make up over 20% of the UK's soft fruit industry.
- 70% of all fish consumed in the UK is processed in Grimsby.



Cranfield University: Glasshouse facility.



Enablers of research and development in agritech

University of Lincoln: Strawberry plants inside a polytunnel, Riseholme Park Campus.

Biosciences

The Midlands has the highest crop and livestock output of all English regions. Along with swathes of arable land, agritech clusters in the Midlands benefit from dedicated cluster support environments and connectivity with leading research and innovation spaces.

This includes food enterprise zones (in Lincolnshire), dedicated innovation parks such as **Ni.Park**, and expertise at universities such as Harper Adams, Nottingham, Lincoln and more. There are currently significant opportunities for greenfield investment across the food enterprise zones and beyond, including two High Potential Opportunities in Telford and Wrekin and one in Greater Lincolnshire.

Underpinning much of this agritech activity is innovation in biosciences. The **Centre for Formulation Engineering**, at the University of Birmingham is developing solutions to problems facing the food, pharmaceutical, biotechnological, fast moving consumer goods and speciality products sectors. Foods should be safe, optimised for health benefits, and enjoyable to prepare and eat. Yet, a number of these criteria are conflicting. The Centre has significant expertise in the development, formulation, and application of novel food and beverage technologies. This interdisciplinary approach, both in terms of science and policy, enables organisations collaborating with the University to benefit from the latest technological developments.

Based at the University of Nottingham, the **International Centre of Brewing Science**, is a centre of excellence for brewing technologies and research, based within the School of Biosciences. Scientists work with the brewing industry to meet the challenges of the 21st century; researching novel process developments targeted towards increased sustainability, efficient resource usage and minimising waste or effluents. The approach is truly multi-disciplinary, providing new solutions by bringing together expertise in crop science, malting, brewing, engineering, novel materials and environmental science.

Also in Nottingham, a viable alternative to traditional meat production is being developed. Cellular agriculture is based on growing stem cells in a laboratory in large quantities to create meat products. The critical step underpinning this technology is the quality of the cells used to start this process. **PluriCells**, developed by the University of Nottingham, supplies high-quality, traceable and stable pluripotent stem cell lines from sheep, pigs and cattle. All of which are available under research or commercial license from the University of Nottingham.

Customers now actively seek to reduce their meat intake with 31% more adults planning to eat more meat-free than in the previous year, and 43% of UK consumers changing their habits to help the environment.

Between 2021 and 2022, investment in the cultivated meat sector in the UK rose from £12m to £59m. This makes Britain the number one nation in Europe for sustainable protein funding.



Applied technologies

There are four designated **UK Agritech Centres**, working with farmers and businesses across the agrifood value chain to support greater efficiency, resilience and profitability. Each Centre has a base in the Midlands. The Centres work to drive greater efficiency, resilience and wealth across the agri-food sector, and are supported by Innovate UK. The UK Agri-Tech Centres will now be forming a single entity and working with Innovate UK to develop a proposal for a new single agri-tech catapult with integrated capability. These centres are: Crop Health and Protection, Centre for Innovation Excellence in Livestock and Agricultural Engineering, Precision and Innovation Centre. This will facilitate stronger innovation, commercialisation, adoption, and research. Catapults are technology and innovation centres spanning over 50 locations across the UK, transforming the UK's capability for innovation in sectors of strength.

Their reach extends across all key industry players - science, business and government - and they provide a shared voice to inform and influence industry priorities and highlight important issues. Each Centre has its own unique focus, offering capabilities that can lead the world in delivering sustainable food and farming solutions.

One centre, the **Crop Health and Protection** (CHAP) centre, works to support the UK to be a global leader in the development of applied agricultural technologies by nourishing a growing population sustainably while delivering

economic, environmental and health benefits to society. It works to increase crop productivity for future generations through the uptake of new technologies in agriculture, by building networks of world-class scientists, farmers, advisors, innovators and industry to prioritise needs, develop innovative agritech solutions and translate them into the field to ensure market adoption.

CHAP's **Crop Storage Research Facility**, in partnership with the Agriculture and Horticulture Development Board, at Sutton Bridge in Lincolnshire provides research, expertise and training for the crop storage industry and specialises in potato and other field vegetable or top fruit storage for producers, supply chains and the broader industry. All work here can be quality assured to ISO 9001. The site is an Officially Recognised Efficacy Testing Organisation for data submission to the Chemicals Regulation Division of HSE.

The **Natural Light Growing** (NLG) Centre at the University of Warwick Life Sciences, Wellesbourne Campus has been built to investigate the impact of full spectrum natural light on crops within a protective environment. This project is seeking to realise the development of a new approach to commercial protected crop production utilising full UV spectrum natural daylight. For the first time, this has enabled the cost effective replacement of glass with Ethylene tetrafluoroethylene (ETFE), a material that allows full UV penetration.

Cranfield University is partner in two Government funded Centres for Agricultural Innovation, these are the Agricultural Engineering Precision Innovation Centre (Agri-EPI), and CHAP a network of expertise focused on Crop Health and Protection. Cranfield is also partner in several UK funded doctoral training centres - including FoodBio Systems and Fruit Crop Research.

Imaging has immense potential for a wide range of uses in applied agricultural technology. The **Hounsfeld Facility**, based within the School of Biosciences at the Sutton Bonington campus of the University of Nottingham, offers 3D X-Ray imaging facilities for the agritech sector. Opened in 2014, it houses state-of-the-art X-ray CT equipment integrated with automated robotics. This enables scientists to explore the internal architecture of biomaterials and support research into environmental sustainability and global food security. A particular focus is rhizosphere research into microscopic root-soil interactions.

The new **Agri-EPI** building at Harper Adams, in Shropshire, is designed to accommodate research and development projects for consortia that will, in most cases, include both industry and academic partners. The building has been designed to accommodate a range of activities from traditional engineering to robotics, automation, laser technology, sensor development, and software development. All of which have the potential to become applied technologies.

- 30% of UK food logistics starts or passes through Greater Lincolnshire.
- Greater Lincolnshire has more than 4,000 high-technology agri-food SMEs.

Sustainability

Moving toward net zero remains a key challenge for the food production supply chain. Agritech has sustainability at the core of its research goals, be it in farming, agri-food manufacturing, applied research, or the supply chain. For agritech businesses seeking to develop more sustainable methods of production, the Midlands is well placed to support your needs.

The **UK's Centre for Innovation Excellence in Livestock (CIEL)**, one of the UK's four Agritech Centres of expertise, is a world-leader in livestock research and technology for sustainable food production. It works to bring sustainable technologies and processes to livestock food production within the UK and worldwide. It also acts as the broker for one of the world's largest livestock science hubs, working with leading researchers and industry partners across the supply chain to identify challenges, potential solutions and routes to research and development (R&D) funding.

Harper Adams University is a partner in CIEL. Its modern beef research platform – **Beef Grower Finisher System** – measures intake of feed and water, greenhouse gas emissions, body weight and feeding behaviour of individual cattle, to assess feed efficiency in growing and finishing animals. It aims to improving the profitability and sustainability of beef farming, together with defining best practice for farms in the future - increasing the efficiency of beef production while reducing environmental impact.

The £6 million **Centre for Dairy Science Innovation (CDSI)** is a state-of-the-art extension to the University of Nottingham's longstanding dairy facilities. Also, a partner in CIEL, it brings together existing expertise in dairy science, dairy herd health and welfare and dairy food science, and positions the University at the forefront of research into the health, nutrition and welfare of dairy cows. It aims to develop guidelines for precision nutrition of cows, evaluating the impact of spatial environment on the health, welfare and production of housed dairy cows to lead to more sustainable farming methods.

The Midlands also has a strong pipeline of high quality graduates and researchers, working in sustainable methods connected to agritech.

The Lincoln Institute for Agri-Food Technology (LIAT) based at the University's Riseholme Campus is home to a working farm with specialist research facilities. It seeks to support and enhance the future of food and agriculture productivity, efficiency, and sustainability through research, education, and technology. The Institute supports a number of undergraduate and postgraduate degrees supporting industry leading research into robotics, automation, sustainability and digital innovation.



Invest in a partnership with Midlands universities



UNIVERSITY OF
LINCOLN

Research translation

Universities in the Midlands have an exceptional track-record of working with the world's largest companies, helping translate fundamental research into industry-leading innovations.

Our universities have dedicated teams and institutes that provide a concierge service to companies seeking to access our expertise, technology-platforms and equipment you won't find anywhere else in the world. With dedicated research farms, labs, and world class researchers, agritech investors also have access to a pipeline of high quality graduates from across the Midlands.

We will work with your R&D divisions to support everything from product design, development, testing, joint application for UK Government funding and direct contract research.

The University of Warwick and the University of Nottingham are both in the **Top 5 recipients of the £885m of Innovate UK Funding allocated across the UK in the last 10 years.**

Innovation

Midlands universities have been supporting the innovation eco-system of their local and regional economies for decades. If your business is looking to access innovation support chains, our dedicated support programmes, funding and networks can help you do this. Through co-funded Government schemes like Knowledge Transfer Partnerships (KTPs), which is one of the most successful, long-running innovation schemes anywhere in the world, we help business of all sizes to innovate using the knowledge and expertise of UK universities.



Co-location

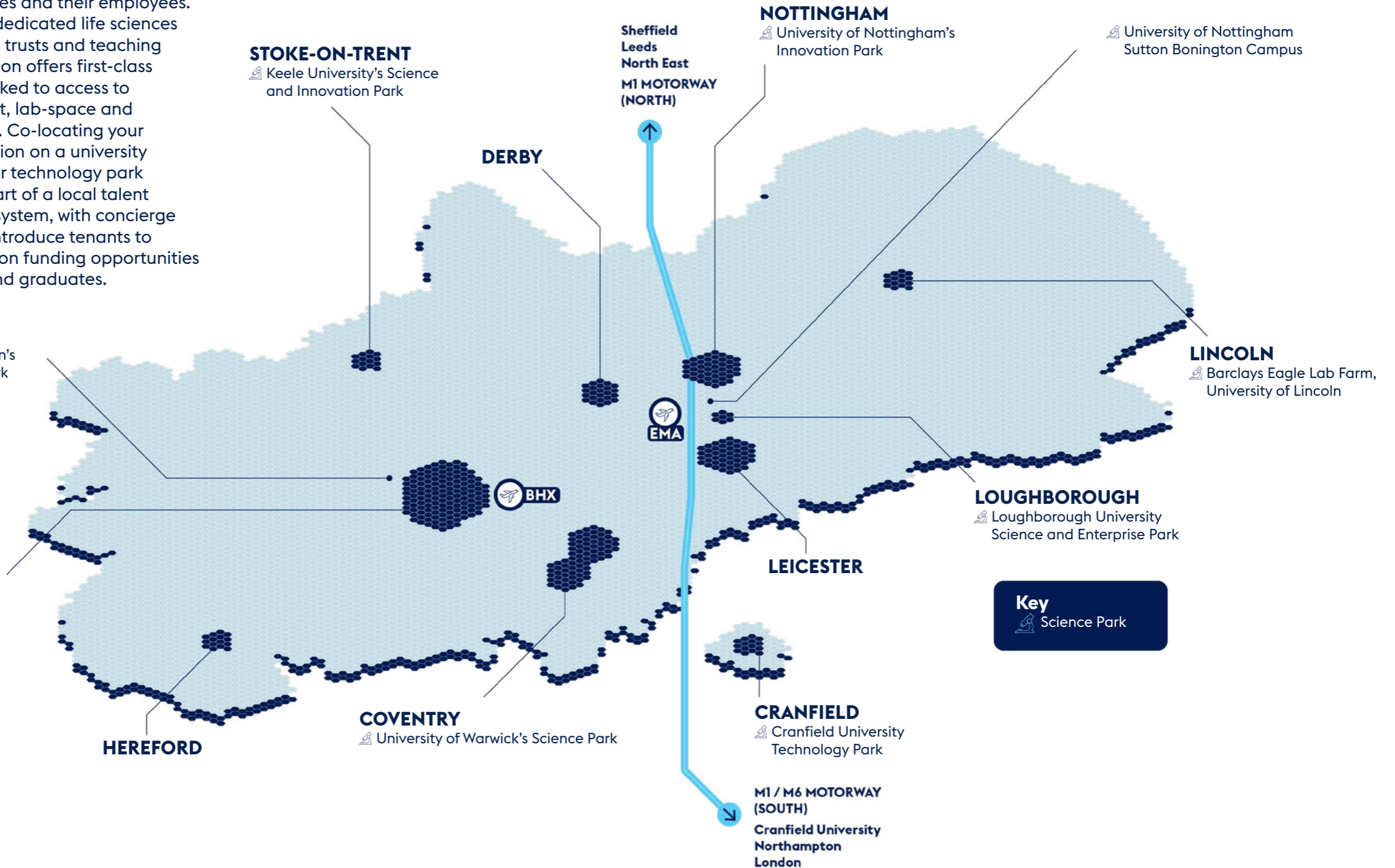
There are numerous university-linked science, innovation and technology parks across the Midlands, which are home to hundreds of businesses and their employees. Many of these have dedicated life sciences spaces linked to NHS trusts and teaching hospitals. Each location offers first-class office space often linked to access to dedicated equipment, lab-space and engineering facilities. Co-locating your business or R&D division on a university science, innovation or technology park places you at the heart of a local talent and innovation eco-system, with concierge services in place to introduce tenants to researchers, innovation funding opportunities and both students and graduates.

WOLVERHAMPTON

University of Wolverhampton's Science and Technology Park

BIRMINGHAM

University of Birmingham's Research Park



Regeneration and integration

Universities across the Midlands work in partnership with the UK and Local Government to help drive economic growth through innovation and inward investment. Through a range of public-private partnerships, universities are involved in over 20 major economic development opportunities identified by the Midlands Investment Portfolio, worth over £10bn in Gross Development Value. In the West Midlands, universities work with the Combined Authority and Growth Company to host one of only three UK Innovation Accelerators.

Through four of the Department for Business and Trade's High Potential Opportunities programme, Midlands universities have dedicated inward investment concierge support for agritech clusters. These include the SmartParc SEGRO site in Derby, precision agriculture in Telford, food processing automation in Lincolnshire, and sustainable farming technology in Telford and Wrekin.

Our commitment is that if our universities can't help, we will introduce you to someone who can.

Talent

Home to 20 universities, the Midlands hosts over 350,000 students and 100,000 graduates a year.

Our universities will work in partnership with local economic growth organisations to develop tailored skills and training package – from degree apprenticeships, to dedicated training and skills programme, to industry-funded PhDs – to support the growth of future industries and your business.



University of Nottingham: Graduating students.



Brilliant ideas | Successful businesses | Global impact

Midlands Mindforge - £250m patient capital fund combining the spinout portfolios of eight leading UK universities

Midlands Mindforge is an ambitious, patient capital investment company aiming to transform ground-breaking science and technology into successful businesses with the potential to positively impact our world and accelerate the commercialisation of research from our partner universities - Aston, Birmingham, Cranfield, Keele, Leicester, Loughborough, Nottingham, and Warwick.

By providing capital and company-building skills to university spinouts and early-stage IP rich businesses in the Midlands, we will build the foundations of a new technology eco-system in the region and create companies that can drive economic growth whilst delivering real-world impact.

Midlands Mindforge is an independent company that aims to raise up to £250m from strategic corporate partners, institutional investors and qualifying individuals.

Mindforge will “invest with impact” to found and scale transformational science backed companies in sectors such as Clean Technologies, AI and Computational Science, Life Sciences and Health Tech, to create highly skilled jobs and support the UK’s ambition to become a science and technology superpower.

enquiries@midlandsmindforge.com.



Directory of significant Agritech R&D assets across the Midlands and its universities



Investor support

Remarkable new technology means the UK can now decarbonise its agriculture sector and help its food supply chain become more sustainable.

The UK's agricultural market is one of Europe's biggest. Its population of professional farmers and growers are keen to adopt new technologies that will help them become more efficient.

The domestic and international market is growing and, with a highly skilled workforce, a pro-business environment and an emerging ecosystem that supports collaboration, this is a fantastic opportunity for investors to take advantage of the UK's momentum in this area.

Agritech investment opportunities in the UK are focused around 3 main areas:

1. World-class science

The agritech space is rich in talent and the UK has a proven ability to develop new products and successfully bring them to market with commercial partners.

2. Progressive farming

The UK's food manufacturing and retail sectors are introducing innovation to drive the farm supply chain. This technology will increase productivity, meet customer demand and improve the environment.

3. A dynamic business environment

As one of the easiest places to do business compared to other major countries in Europe, the UK has a competitive pricing and tax and tariff environment (especially for R&D and innovation) and stable reliable supply chains.

Commercial maturity

The UK agritech sector is growing throughout the UK. In particular, it's flourishing in the Midlands, where the dairy sector and precision engineering companies have a major presence.



Key UK assets

There are four centres for agricultural innovation located across the UK to specifically support the growth of clean agritech. These hub and spoke research centres have bases nationwide, but with a strong presence in the Midlands. Supported by Innovate UK, each centre can support investors to find partners, and identify funding opportunities. UK government support for agri-research is around £320 million per year, with an additional £90 million through its Industrial Challenge Fund to help transform food production. The UK Agri-Tech Centres will now be forming a single entity and working with Innovate UK to develop a proposal for a new single agri-tech catapult with integrated capability. These centres are: Crop Health and Protection, Centre for Innovation Excellence in Livestock and Agricultural Engineering, Precision and Innovation Centre. This will facilitate stronger innovation, commercialisation, adoption, and research. Catapults are technology and innovation centres spanning over 50 locations across the UK, transforming the UK's capability for innovation in sectors of strength.

They cover:

Agrimetrics

Agrimetrics focuses on agricultural informatics and metrics of sustainability using data science and modelling to build a more productive, sustainable and efficient food system. It plays a key role for any UK business that offers modern agri-focused products and services in both the UK and global markets.

Crop health and protection

The [Centre for Crop Health and Protection](#) will revolutionise how farmers manage crop threats including pests and disease, both in the UK and overseas.

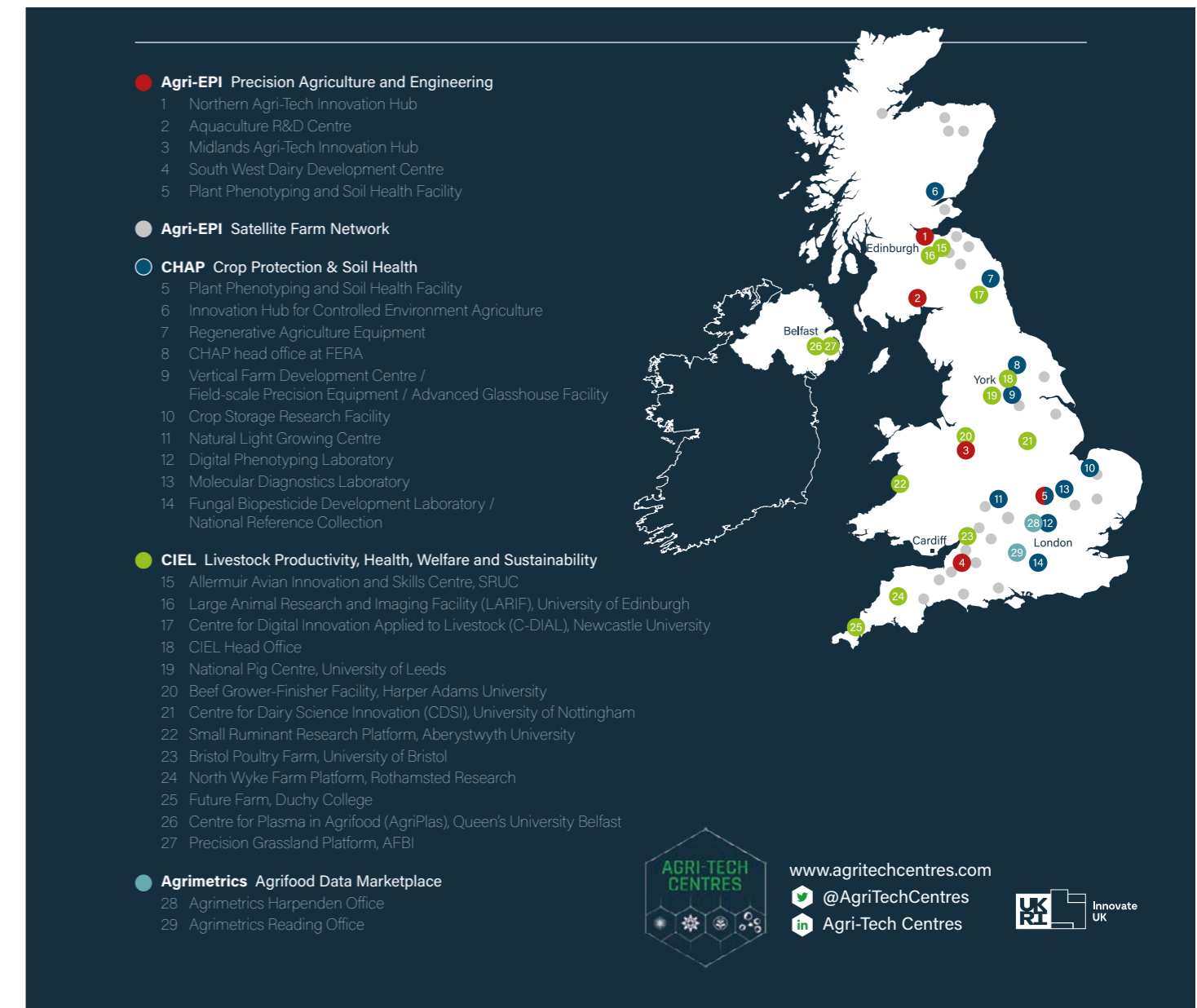
Livestock innovation

In agriculture, it's crucial that farmers and growers are successful. [The Centre for Innovation Excellence in Livestock](#) will create new livestock technology and products to boost the profitability and productivity of livestock farming.

Agricultural engineering innovation

The [Agricultural Engineering Precision Innovation Centre](#) operates in the new, fast-moving market of precision agriculture to help the UK's agri-food sector develop advanced technologies that will increase productivity and sustainability in UK agriculture.

Map of UK Agritech Centres



Agri-food

Investment opportunity – SmartParc SEGRO

Constructed on the former British Celanese site on the east side of Derby, **SmartParc SEGRO Derby** will be home to the first low-carbon food manufacturing community, employing 4,500 people. Built across 2 million sq ft, the state-of-the-art food manufacturing and distribution park aims to pave the way for the food industry to collaborate to meet the challenges of sustainable production, while also addressing the need for efficient direct routes to consumers.

The campus will provide food manufacturing facilities, from start-up incubation units through to large-scale manufacturing facilities, ranging from 50,000 sq ft to 400,000 sq ft and will be home to a **Food Manufacturing Technology Centre of Excellence** to future-proof the

food industry, offering education and career opportunities to secure both the local and global food supply chains. In May 2022 German food kit provider HelloFresh opened the first facility on site – a 118,000 sq ft unit called The Orchard. A 400,000 sq ft distribution facility for HelloFresh – The Windmill – is currently under construction on site and due to open in 2024.

SmartParc’s revolutionary energy sharing infrastructure will utilise wind and solar combined with central services, to deliver the most sustainable food production community in the country. As a development partner, SEGRO will provide a multi-million-pound investment to regenerate the brownfield site.

Warwick Crop Centre

Warwick Crop Centre is part of the University’s School of Life Sciences and is an internationally recognised centre for translational research in sustainable agriculture and horticulture and in food security. The School of Life Sciences was ranked second in the UK for Agriculture, Food and Veterinary research in the Government’s 2014 “Research Excellence Framework”.

Fresh produce, including ornamentals, is the Centre’s speciality. It also works on other crops, including oil seed rape. It undertakes a wide range of research in specialist laboratory, field and glasshouse-based facilities to provide high quality science expertise in areas including crop breeding, plant pathology, entomology, agronomy, crop nutrition and environmental research.

Being part of a research-active university, the Centre works collaboratively with other disciplines on a wide range of projects, to widen our offering in the areas of food and health. The University’s Global Research Priorities (GRP) programme provides a focus for multidisciplinary research in key priority areas that the University has identified as affecting global society. Warwick Crop Centre is very engaged with the ‘Food’ GRP as one of those priority areas through research and teaching, bringing together issues of food production and supply, environmental and social sustainability, governance, social justice, nutrition and public health.



Research Assets

University based

Centre for Soil, Agrifood and Biosciences

- Location: College Rd, Wharley End, Bedford MK43 0AL
- Key features: Research centre dedicated to understanding soil, plant, and microbial systems, working with agribusiness and governments around the world. Strengths in a broad range of soil science, from soil biophysics to applied soil management. Hosts the British Society of Soil Science and has links with the Institution of Agricultural Engineers.
- Opportunity: Collaborate on soil research underpinned by bioinformatics and connect with other businesses and international governments on food security challenges.
- Contact: valentina.tresidder@cranfield.ac.uk

Lincoln Institute for Agri-Food Technology

- Location: Lincoln Institute for Agri-Food Technology, University of Lincoln, Riseholme Park, Lincoln LN2 2LG
- Key features: Sector leading expertise in AI, robotics, engineering, crop science, environmental sustainability, food manufacturing, product development and supply chains. Part of the 200 hectare Riseholme Campus with facilities for crop trials, a demonstration packhouse facility, and a refrigeration research centre.
- Opportunity: Access specialist research and consultancy services across all agriculture and horticulture sector.
- Contact: enterprise@lincoln.ac.uk

National Centre for Food Manufacturing

- Location: The Centre of Excellence in Agri-food Technology, Holbeach, Spalding, PE12 7FJ
- Key features: Partnerships with leading equipment suppliers. Specialist facilities including food factories and cutting-edge automation. Part time and distance learning apprenticeship and training courses for food industry employees. Current research focuses on digitisation of the food sector, industry focused sustainability, and analytical techniques for food quality, safety, and nutritional performance.
- Opportunity: Access the Centre's world class facilities, receive training, and innovate with the researchers at the Centre.
- Contact: ncfm@lincoln.ac.uk

International Centre for Brewing Science

- Location: School of Biosciences, University of Nottingham, Sutton Bonington Campus, Loughborough, Leicestershire, LE12 5RD
- Key features: Research themes include high and very high gravity fermentations, future fermentables and processing of adjunct materials, beer sensory quality and flavour stability, yeast stress and fermentation performance, improving the sensory quality of non-alcoholic and low-alcohol beers, and beer dispense hygiene and quality. Research conducted has been trialled by many world famous brewers and farmers.
- Opportunity: Access research and facilities, and collaborate with world leading brewing science researchers.
- Contact: brewing.science@nottingham.ac.uk

Food Processing Facility

- Location: School of Biosciences, University of Nottingham, Sutton Bonington Campus, Loughborough, LE12 5RD
- Key features: Commercial scale food processing equipment for the development of new products and processes, including a thermos prism twin screw extruder, robotic universal processing system, and lagrade retort. Quality control lab with a range of instrumentation to assess processes and products. Development kitchen for further testing.
- Opportunity: Collaborate on research and development, secure funding for collaborative projects, and access facilities, equipment, and technical expertise.
- Contact: collaborate@nottingham.ac.uk

Food Systems Institute

- Location: University Park, Nottingham, NG7 2RD
- Key features: World leading research across the whole food system and value chain, from production and processing to consumption and waste. Brings together academia, industry, and policy makers to work toward delivery solutions ensuring access to sustainable food.
- Opportunity: Collaborate on research changing the future of food, and access the UK's world class food systems, facilities and researchers.
- Contact: br-rke-development@nottingham.ac.uk

Plant Growth Facility

- Location: Cranfield University
- Key Features: Cranfield is home to a range of plant growth facilities for experimental work involving plant physiology, plant phenotyping, plant-microbe interactions, and plant-soil interactions. The facilities include a unique platform for assessing pilot scale crop-soil systems and sensor development, and they integrate with our Soil Management Facility, Postharvest facilities and with the CHAP and AgriEPI AgriTech Centres for Agricultural Innovation.
- Opportunities: Collaborate on research underpinned by bioinformatics and connect with other businesses and international governments on food security challenges.
- Contact: a.j.thompson@cranfield.ac.uk

Warwick Crop Centre

- Location: Warwick Crop Centre, The University of Warwick, Wellesbourne, Warwick CV35 9EF
- Key features: Specialist laboratory, field and greenhouse-based facilities to provide high quality science expertise in areas such as crop breeding, plant pathology, entomology, agronomy, crop nutrition, and environmental research. Research partners in the Waitrose Agronomy Group and host the UK Vegetable Gene Bank.
- Opportunity: Collaborate through directly-funded or levy-funded projects and schemes, conduct field trials, and access facilities and research.
- Contact: cropcentre@warwick.ac.uk



Training

Food and Feed Analysis Consultancy and Training Service

- Location: Food Sciences Building, Sutton Bonington Campus, Loughborough, LE12 5RD
- Key features: Leading analytical, consultancy, and training service for food and biosciences industries. Focus on food chemistry and flavour chemistry. Hosts a range of separation and mass spectrometry equipment and triple quadrupole real-time mass spectrometry.
- Opportunity: Receive consultancy services and research conducted in unique world class facilities.
- Contact: ian.fisk@nottingham.ac.uk

Food Consortium Collaborative Training Partnership

- Location: Station Road, Chipping Campden, Gloucestershire, GL55 6LD, UK
- Key features: Consortium of food manufacturers, an independent science and technology provider and trainer, and the Nottingham Business School with a focus in resilient agriculture, enhancing nutrient quality, and resource utilisation. Provides industrial leadership, develops people, and delivers business facing training.
- Opportunity: Engage with some of the world's largest food manufacturers, including Pepsico, Nestle, and Mondelez.
- Contact: support@campdenbri.co.uk

Cluster organisations

UK Food Valley

- Location: Lincolnshire
- Key features: Supports Europe's largest agri-food tech automation and robotics cluster, a test-bed for investors endorsed by the UK government. Key priorities are accelerating food chain automation and digital technology adoption; delivering low carbon food chains; and developing the market potential of "naturally good for you" foods and new sources of protein.
- Opportunity: Locate in the UK Food Valley to access support and become a part of an innovative and successful agritech ecosystem.
- Contact: donna.maltby@lincolnshire.gov.uk

South Lincolnshire Food Enterprise Zone

- Location: Lincolnshire
- Key features: 17 hectares of bespoke, high quality business space for companies in the agritech and food manufacturing sector, including serviced development plots or purpose built offices and R&D workshops. Shares site with the National Centre for Food Manufacturing with an Institute of Technology and a Centre of Excellence in Agri and Food Technologies.
- Opportunity: Locate in the Food Enterprise Zone to take advantage of purpose built facilities for your business and be in the heart of the UK's innovative food sector.
- Contact: commercial@pygott-crone.com

Food Action & Research Midlands Network

- Location: University of Warwick, Coventry CV4 7AL
- Key features: Brings together experts, front line food poverty workers, campaigners, and academic researchers. Hosts workshops on food security, and issues related to food security such as the minimum food equipment for food safety.
- Opportunity: Join the network and attend workshops to network with key players in the industry and gain insight to challenges facing the sector.
- Contact: +44 (0) 24 7652 3523

Agritech farming

Investment opportunity – Precision agriculture

Precision farming will play a key role in the sustainable transformation of the global agricultural sector and Telford provides an ideal access point to this innovation-led opportunity. The UK is one of Europe's biggest agricultural markets and has a population of professional farmers and growers ready to adopt new sustainably focused, precision agritech solutions. Telford provides access to precision farming innovation, with strengths in agriculture, advanced engineering and technology development. Agritech is a fast-growing sector with global markets forecast to reach £37.6 billion by 2028. Using agritech solutions, precision farming plays a vital role in growing crops more sustainably and efficiently. Telford has the infrastructure and capabilities to develop these solutions for the UK and global agritech markets. Companies here can contribute to a technological revolution in precision agriculture with the design and development of satellite positioning systems; variable rate technology; geomapping; energy management systems; remote sensing; and, automated steering systems.

National Centre for Precision Farming

The Centre's mission is to establish global visibility and excellence in education and training, research and development, innovation and enterprise in precision farming and its exploitation in addressing global farming and food security issues.

The National Centre for Precision Farming is conducting state of the art research and collaborating in industrial projects that will enable farmers around the world to sustainably improve yields and profits whilst optimising their use of resources. As part of this work, the Centre brings together globally the farming industry, business, research, and academic organisations in joint ventures. It also promotes and supports the development and commercialisation of precision farming technologies, provide educational opportunities and are working to minimise the environmental impact farmers have on the world. Current research projects include Hands Free Hectare, involving automated machines growing the first arable crop remotely, without operators in the driving seats or agronomists on the ground.

Research Assets

University based

World Soil Survey Archive and Catalogue

- Location: Cranfield Environment Centre (CEC), Cranfield University, Bullock Building, B53, College road, Wharley End, Cranfield, Bedfordshire, MK43 0AL
- Key features: Largest UK national and international centre for R&D, consultancy and training in soils and their interactions with the atmosphere, land use, geology and water resources. Provides a secure home for soil survey reports, maps, imagery, and photographs over 80 years from 387 territories worldwide.
- Opportunity: Access the unparalleled database and conduct research on key soil issues to improve understanding.
- Contact: wossac@cranfield.ac.uk

National Centre for Precision Farming

- Location: Harper Adams University, Newport, Shropshire, TF10 8NB
- Key features: Conducts state of the art research enabling farmers around the world to sustainably improve yields and profits whilst optimising their use of resources. Brings together the global farming industry, business, research, and academic organisations in joint ventures. Supports and promotes the development and commercialisation of precision farming technologies.
- Opportunity: Collaborate with the Centre on projects to develop and utilise new technologies improving outcomes for and reducing burdens on farmers.
- Contact: +44 (0) 1952 820280

Agri-EPI Centre and Midlands Dairy Research Centre

- Location: Poultry Dr, Edgmond, Newport TF10 8JZ
- Key features: Focuses are maximising dairy cow welfare, nutrition, housing, and sustainable livestock systems. Facilities include milking robot, 3D body condition camera, robotic scraper, herd navigator, cow activity monitors, closed non-grazing space, and indoor trial areas, with space for up to 60 cows across the Centre.
- Opportunity: Conduct research and develop products and solutions in through the Centre's facilities.
- Contact <https://agri-epicentre.com/contact/>

Plasma Agriculture

- Location: The Wolfson School of Mechanical, Electrical and Manufacturing Engineering, Loughborough University, Loughborough, Leicestershire, LE11 3TU
- Key features: Loughborough University's research into low-temperature gas plasma shows promise as an efficient green technology for enhancing agricultural productivity, food quality, and safety. Research conducted in partnership with Royal Holloway University of London and national and international industrial partners. Funded through the Biotechnology and Biological Sciences Research Council (BBSRC).
- Opportunity: Work with the research group to conduct field tests and commercialise technology.
- Contact: ws.phdadmin@lboro.ac.uk

University Farm

- Location: University Farm, Farm Office, Sutton Bonington Campus, University of Nottingham, LE12 5RD
- Key features: 445 hectare farm producing over 2m litres of milk a year, and a range of crops, while providing facilities for teaching and research. Research projects cover a diverse range of agricultural and horticultural issues across arable, dairy, and sheep enterprises.
- Opportunity: Access highly trained agricultural professionals and world class research in your industry field.
- Contact: farm@nottingham.ac.uk

Centre for Animal, Rural and Environmental Sciences Research

- Location: Brackenhurst Lane, Southwell, NG25 0QF
- Key features: Part of the School of Animal, Rural and Environmental Sciences with four key themes: animal health; ecology and conservation; natural environment; and sustainable agriculture and food security.
- Opportunity: Access research and facilities in a range of land-based disciplines at NTU's dedicated Brackenhurst Campus.
- Contact: enquiries@ntu.ac.uk

Training

CTP Sustainable Agricultural Innovation

- Location: Harper Adams University, University of Warwick, Cranfield University, and University of Leicester
- Key features: Groundbreaking partnership between leading businesses, charities, and research providers to offer outstanding training for agri-food sector. Partners include Sainsbury's, Pepsico, and others. Projects cover a range of topics including genetics, agronomy, pathology and entomology, and data science.
- Opportunity: Access world class talent and research, and host industrial placements.
- Contact: ctp-sai-info@niab.com



Applied technology

Investment opportunity – Food processing automation

Precision farming will play a key role in the sustainable transformation of the global agricultural sector and Telford provides an ideal access point to this innovation-led opportunity. The UK is one of Europe’s biggest agricultural markets and has a population of professional farmers and growers ready to adopt new sustainably focused, precision agritech solutions. Telford provides access to precision farming innovation, with strengths in agriculture, advanced engineering and technology development. Agritech is a fast-growing sector with global markets forecast to reach £37.6

billion during 2028. Using agritech solutions, precision farming plays a vital role in growing crops more sustainably and efficiently. Telford has the infrastructure and capabilities to develop these solutions for the UK and global agritech markets. Companies here can contribute to a technological revolution in precision agriculture with the design and development of satellite positioning systems; variable rate technology; geomapping; energy management systems; remote sensing; and, automated steering systems.

Investment opportunity – Ni.PARK

A leading agritech research and innovation hub, putting the UK at the forefront of high efficiency agriculture. Ni.PARK is based in Newport, Telford. The site supports agritech related businesses in association with Harper Adams University, a globally recognised centre in agritech research. Harper Adams is leading the way in agricultural technology - having built up expertise, facilities, research centres and industry partnerships to drive forward the development and adoption of smart machines for more efficient, sustainable farming.

For investors seeking to locate their agritech business, Newport is a thriving university town located in the heart of the country with easy access to national and international markets. Ni.PARK comprises approximately 25 acres (10 hectares) of cleared, greenfield employment land with a Knowledge Exchange Hub to accelerate the use of technology in agriculture. Led by Harper Adams, the Hub will open up Harper Adams’ successes of integrating agritech engineering work in crop and livestock production.

The Hounsfield Facility, University of Nottingham

The Hounsfield Facility is based within the School of Biosciences at the Sutton Bonington campus, as part of the University of Nottingham. Opened in 2014, it houses state-of-the-art X-ray CT equipment integrated with automated robotics. This enables scientists to explore the internal architecture of biomaterials and support research into environmental sustainability and global food security. A particular focus is rhizosphere research into microscopic root-soil interactions. Rhizosphere is the dynamic zone surrounding plant roots growing in soil and has significant impact on the ability of a plant to capture both water and nutrients.

X-ray CT technology provides high resolution 3D images of the internal structure of a wide variety of objects, materials and environments. Those images are rich sources of information about the scanned samples, showing the structure of and boundaries between different material types. Accurate measurement of sample properties, however, can be challenging. Image processing and analysis tools are required which can recover the required information from large and complex CT images. The development of novel image analysis techniques and software is an active area of research within the Hounsfield facility and has real world value to the agritech sector.



University of Nottingham: vltome|x L and FANUC robotic arm, The Hounsfield Facility.

Research Assets

University based

High-field NMR

- Location: Nottingham DNP MAS NMR Facility, Sir Peter Mansfield Magnetic Resonance Centre, University Park, Nottingham, NG7 2RD
- Key features: Joint project between the School of Physics and Astronomy, the School of Chemistry and the School of Life Sciences. Features include AVANCE NEO 600MHz WB Console, 1.3mm triple resonance DNP DVT Probe, MASSII Pneumatic Unit, and exhaust N2 gas recycling module.
- Opportunity: Apply for instrument time for feasibility studies or full research projects.
- Contact: spmmrc@nottingham.ac.uk

Sir Peter Mansfield Imaging Centre (SPMIC)

- Location: Sir Peter Mansfield Imaging Centre, Building 18, University Park Campus, Nottingham, NG7 2QX
- Key features: Bringing together scientist and clinicians to develop and apply novel imaging technologies in mechanistic experimental medicine studies and for translational clinical research. Includes the GE SPINlab MRI Hyperpolariser, Krypton Hyperpolariser, Xenon Hyperpolariser. Awarded £29.1 million to establish the most powerful MRI scanner in the UK.
- Opportunity: Partner with the Centre to access a range of human imaging facilities and world class research.
- Contact: +44 (0) 115 951 4747

N/LAB

- Location: Nottingham University Business School, Jubilee Campus, Nottingham, NG8 1BB
- Key features: Centre of excellence developing and applying innovative research in AI, machine learning, and human behaviour in projects across health, retail, mobility, energy and communications. Partnerships with business, governments, and NGOs.
- Opportunity: Partner with N/LAB and conduct research on human behaviour relevant for your business.
- Contact: janine.sey@nottingham.ac.uk

Hounsfield Facility: 3D X-Ray Imaging

- Location: Hounsfield Facility, University of Nottingham, Sutton Bonington, Loughborough, LE12 5RD
- Key features: State of the art x-ray CT equipment integrated with automated robotics allows non-destructive, non-invasive imaging for the visualisation and quantification of the interior structure of an object in three dimensions. Used for dynamic research of the Rhizosphere.
- Opportunity: Access imaging facilities and conduct research in world class facilities.
- Contact: craig.sturrock@nottingham.ac.uk

Advanced Bioimaging Research Technology Platform

- Location: School of Life Sciences, University of Warwick, Gibbet Hill Road, Coventry, CV4 7AL
- Key features: Specialises in transmission electron microscopy of biological samples, and supports the investigation of complex biological problems. Equipment includes cryo-electron microscopes and those for room temperature use.
- Opportunity: Receive training on and utilise powerful research tools in the lab and collaborate with researchers.
- Contact: s.bakker@warwick.ac.uk

Training

DTPs Midlands Integrative Biosciences Training Partnership

- Location: Edgbaston, Birmingham, B15 2TT
- Key features: Jointly funded by Aston, Birmingham, Harper Adams, Leicester, and Warwick universities. Vital research areas include sustainable agriculture and food, understanding the rules of life, renewable resources and clean growth, and integrated understanding of health.
- Opportunity: Upskill your workforce or access skilled researchers from the bioeconomy fields.
- Contact: mibtp@warwick.ac.uk

Biosciences

Research Assets

University based

Centre for Formulation Engineering

- Location: Edgbaston, Birmingham, B15 2TT
- Key features: Developing solutions to problems facing the food, pharmaceutical, biotechnological, fast moving consumer goods and specialty products sectors. Specialises in bioengineering; food, nutrition, and microstructure engineering; sustainability and reprocessing; and particle and multiphase process.
- Opportunity: Access world class research on the principles that control the quality of essential products.
- Contact: p.j.fryer@bham.ac.uk

European Infrastructure for Multiscale Plant Phenotyping and Simulation (EMPHASIS) for Food Security in a Changing Climate

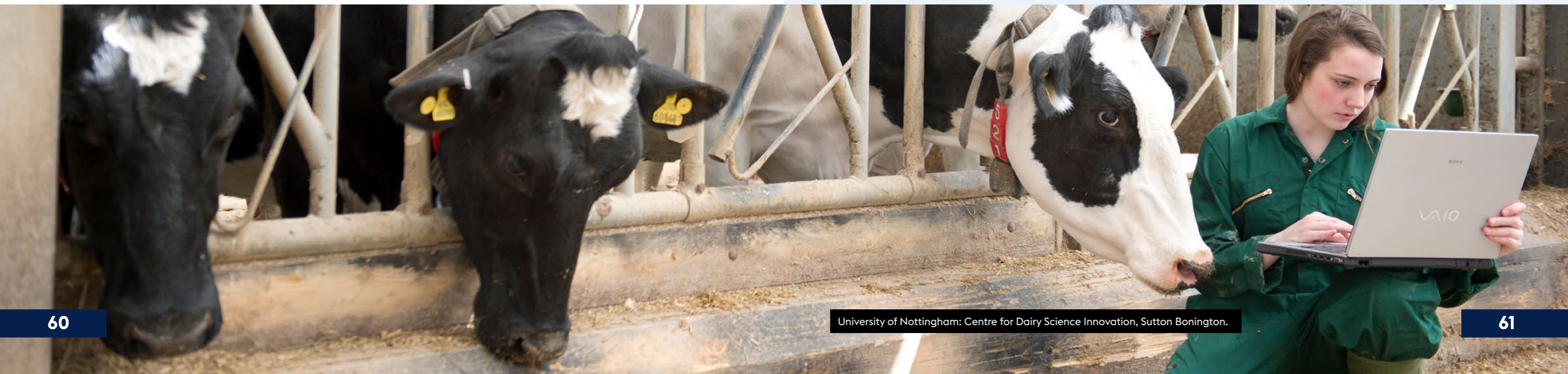
- Location: University of Nottingham, University Park, Nottingham, NG7 2RD
- Key features: Collaboration between the School of Biosciences and the Computer Vision Lab to provide researchers with tools and methods for plant phenotyping. Creates links with both national and international networks.
- Opportunity: Access research on plant phenotyping and state-of-the-art facilities to conduct research.
- Contact: +44 (0) 115 951 5151

Centre for Formulation Engineering

The Centre for Formulation Engineering is developing solutions to problems facing industries in the pharmaceutical, biotechnological, food, fast moving consumer goods and speciality products sectors. This is vital to many issues affecting the quality of life; such as better economical processes to reduce the environmental burden, and longer lasting food due to the right combination of chemistry, ingredients and processes.

Formulation Engineering concerns the design, manufacture and use of products which are structured to create desirable effects when they are consumed or used. Examples are foods, pharmaceuticals, fast-moving consumer goods such as cleaners, and speciality products such as paints, catalysts, detergents and agrochemicals.

At the Centre for Formulation Engineering, the research focuses on the principles which control the quality of many personal products such as cosmetics and detergents, foods such as chocolate and low-fat spreads, as well as fuel cells and catalysts. These products are all structured on a micro-scale - their microstructure controls their behaviour, for example, the texture of food as it breaks down in the mouth, the release of detergent or a drug as a tablet breaks down in the washing machine or in the stomach.



Food Innovation Centre

- Location: Division of Food Sciences, Bioenergy and Brewing Science building, University of Nottingham, Sutton Bonington Campus, LE12 5RD
- Key features: Provide leading scientific and technical advice to food and drink manufacturing businesses to support the development of new products and processes. Offers access to facilities and technicians, academic expertise and student project placements, workshops, and a network of contacts.
- Opportunity: Contract the Centre's team to help you address the needs of your business and grow.
- Contact: sb-foodinnovcentre@exmail.nottingham.ac.uk

Centre for Applied Bioethics

- Location: Centre for Applied Bioethics, School of Veterinary Medicine and Science, Sutton Bonington Campus, Leicestershire, LE12 5RD
- Key features: Spans the School of Biosciences and the School of Veterinary Medicine and Science, acting as the main point of contact for applied bioethics at local, national, and international level. Extensive international experience in four key areas: animals and humans in the laboratory; agri-food and energy production; animals and society; and ethical tools including the Ethical Matrix.
- Opportunity: Answer any questions about bioethics with the Centre's world leading research and researchers.
- Contact: +44 (0) 115 951 6116

PluriCells

- Location: Future Food, Plant Sciences Building, University of Nottingham, Sutton Bonington, Leicestershire LE12 5RD
- Key features: Supplies high-quality, traceable and stable pluripotent stem cell lines from sheep, pigs, and cattle. Developed to drive efficiency and consistency in cultured meat production to support this emerging industry at scale.
- Opportunity: Buy for commercial or research purposes for cultured meat production.
- Contact: tto@nottingham.ac.uk

Training

Biotechnology and Biological Sciences DTP

- Location: Biotechnology and Biological Sciences Doctoral Training Programme, The University of Nottingham, University Park, Nottingham, NG7 2RD
- Key features: Four-year doctoral training programme that will provide you with world-class training in biotechnology and bioscience.
- Opportunity: Partner with the DTP for industry linked studentships and accessing world class talent.
- Contact: bbdtp@nottingham.ac.uk



Sustainability

Investment opportunity – Sustainable farming systems in Telford and Wrekin

Sustainable farming is playing a key role in improving the efficiency of crop growing and livestock raising. Telford and Wrekin has the infrastructure and capabilities to develop new agritech solutions to enable sustainable food production across the globe.

The use of precision agriculture technologies will allow future farmers to make more efficient and informed decisions on crop, animal husbandry, and farm management. This is underpinned by breakthroughs in: nutrition, genetics, informatics and big data, remote sensing engineering, robotics, meteorology, and other technologies.

Many companies can benefit from these opportunities, especially those involved in markets such as: soil and nutrient mapping, automation of field operations like drilling, spraying, harvesting, and yield prediction.

Telford and Wrekin provides a gateway opportunity for the design, build, testing and operation of agritechnologies. With 10% of England's farmland area and a high agricultural gross value added (GVA), it's an ideal place to test technology in a farm environment.

The West Midlands is part of an end-to-end food supply chain, with farmers supplying to 350 food and 120 beverage manufacturing firms in the region. The region has a vibrant cluster of innovative SMEs and national food production firms including Kuhn, Cargill, Saputa, and Agricultural Magnetics.

Birmingham Institute of Forest Research

One of the key challenges BIFoR addresses is the impact of climate and environmental change on woodlands.

Carbon Dioxide (CO₂) levels in our air are rising, mostly due to our use of fossil fuels. As CO₂ rises, so does the world's temperature. Trees and the soil around them help us capture some of this CO₂. In a giant experiment in a Staffordshire woodland, we are pumping CO₂ around trees to simulate the atmosphere we're predicted to have in 2050. This helps us see how the woodland responds – do the trees grow faster, locking away more carbon, or will changes in the soil and insect life cause problems? Learning about the effects of increased CO₂ helps us plant woodland most likely to survive and thrive in the future.

The experiments takes place in a research facility called the BIFoR Free Air Carbon Dioxide Enrichment facility or BIFoR FACE for short. It is located on private land in Staffordshire (about a 1-hour drive from the main University).

Research Assets

University based

Birmingham Institute of Forest Research Free Air Carbon Enrichment Facility (BIFoR FACE)

- Location: Mill Haft, Norbury Junction, Birmingham, Stafford ST20 0FJ
- Key features: A 'second generation' forest FACE site for upscaled experiments in mature, complex forest ecosystems. Three 30-metre-wide plots of mature oak forest have been immersed in an atmosphere with elevated CO₂ concentration, topped up from current values of just above 400 ppm (parts per million) to 550 ppm.
- Opportunity: Conduct research and utilise the FACE site to answer questions about the impact of CO₂.
- Contact: d.brett@bham.ac.uk

Centre for Sustainable Cooling

- Location: Edgbaston, Birmingham, B15 2TT
- Key features: Hub for academics, technical experts, policy makers, INGOs, local communities, and industry experts to address challenges with sustainable cooling and cold chain solutions. Focuses on post harvest practices, storage and distribution of food and other cold chain goods.
- Opportunity: Collaborate on and commercialise research into technology and solutions for renewable and sustainable cooling practices.
- Contact: info@sustainablecooling.org



**Work
with us**



Our universities

Location

From the Midlands, 90% of the UK's population and businesses are less than a four-hour drive away; 45% of heavy rail freight and 33% of heavy road freight comes from, goes to, or passes through the Midlands and, with the advent of HS2, London will be less than an hour away. By air, the Midlands is home to two international airports – Paris is just a 90 minute flight away – with access to the seaports of the Humber. The Midlands are home to 11 million people, 15% of the UK's GVA, and the only inland freeport. This is critical to dispersing the output of the Midlands and accessing the potential markets of not only the wider UK, but Europe and international buyers. The region is constantly growing with new development sites and spaces for bespoke builds, including labs, test spaces, and offices.

Joint research and knowledge exchange

The Midlands universities all have dedicated teams ready to assist with knowledge exchange and set up joint research teams between their world-leading academics and investors. These partnerships have in the past led to some of the critical innovations driving both current and future zero carbon technology.

Directory of contacts across the Midlands

University offices

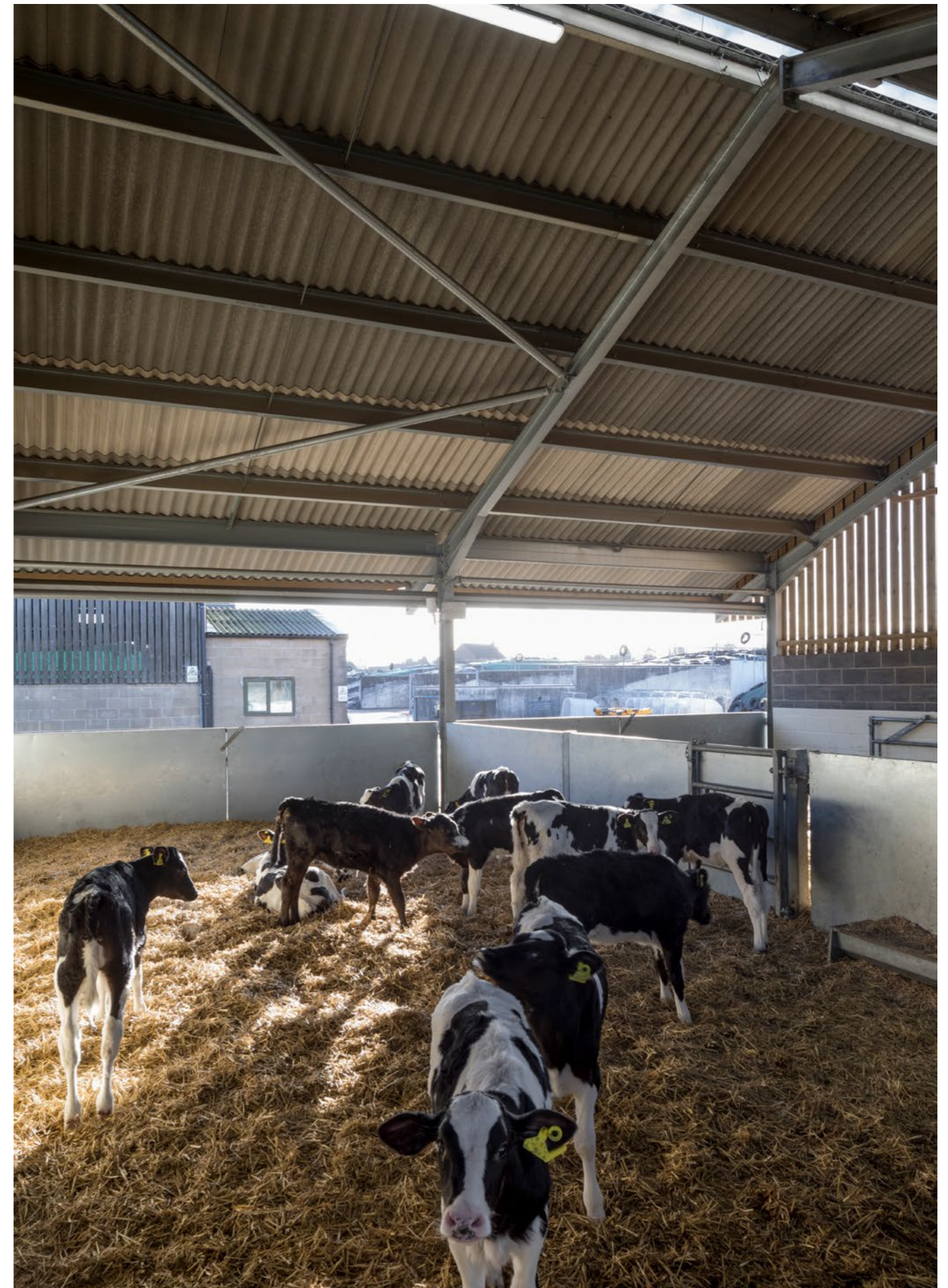
Each university has a team of experts who can provide advice on all aspects of research and development, including locating on a science park, joint research and knowledge exchange, commercialisation and equity investment, and accessing a skilled talent and innovation pool.

University	Business engagement and Technology Transfer	Careers service
Aston University	rke@aston.ac.uk	employerteam@aston.ac.uk
University of Birmingham	info@enterprise.bham.ac.uk	recruiters@contacts.bham.ac.uk
Coventry University	ei@coventry.ac.uk	talentteam@coventry.ac.uk
Cranfield University	business@cranfield.ac.uk	cranfieldcareers@cranfield.ac.uk
De Montfort University	businessservices@dmu.ac.uk	employerliaison@dmu.ac.uk
University of Derby	businessgateway@derby.ac.uk	employerteam@derby.ac.uk
Harper Adams University	reception@harper-adams.ac.uk	careers@harper-adams.ac.uk
Keele University	gateway@keele.ac.uk	gateway@keele.ac.uk
University of Leicester	redenterprise@le.ac.uk	employer.services@le.ac.uk
University of Lincoln	enterprise@lincoln.ac.uk	careers@lincoln.ac.uk
Loughborough University	innovation@mailbox.lboro.ac.uk	employer.services@lboro.ac.uk
University of Nottingham	workwithus@nottingham.ac.uk	recruiterservices@nottingham.ac.uk
Nottingham Trent University	workingwithyou@ntu.ac.uk	talent@ntu.ac.uk
University of Warwick	ventures@warwick.ac.uk	employerconnect@warwick.ac.uk
University of Wolverhampton	engage@wlv.ac.uk	theworkplace@wlv.ac.uk
University of Worcester	researchforbusiness@wor.ac.uk	careers@worc.ac.uk

Science Park Contacts

The Midlands is home to a thriving network of science parks, which offer businesses access to a skilled workforce, cutting-edge research facilities, and a supportive ecosystem. If you're looking to grow your business, a science park in the Midlands is the perfect place to do it.

University	Science or Technology Park
Barclays Eagle Lab Farm	lisa.bagley@barclays.com
Birmingham Health Innovation Campus	hello.scitech@bruntwood.co.uk
Birmingham Innovation Quarter, Birmingham	hello.scitech@bruntwood.co.uk
Birmingham Science Park Aston, Birmingham	info@astonsciencepark.co.uk
Birmingham Research Park, Birmingham	brpl@bham.ac.uk
Charnwood Campus Science, Innovation, and Technology Park	lucy.alexander@charnwoodcampus.com
Coventry University Technology Park, Coventry	+44 (0) 2476236000
Cranfield University Technology Park, Bedfordshire	joshua.parello@kirkbydiamond.co.uk
INFINITY Park, Derby	ssalloway@salloway.com
Keele University Science and Innovation Park, Staffordshire	gateway@keele.ac.uk
Lincoln Science and Innovation Park	enquiry@lincolnsceincepark.co.uk
Loughborough University Science and Enterprise Park	lusep@lboro.ac.uk
Nottingham Science Park	regeneration@nottinghamcity.gov.uk
Skylon Park, Herefordshire	info@skylonpark.co.uk
Space Park, Leicester	enquiries@space-park.co.uk
The Innovation Centre, Leicester	innovationcentre@dmu.ac.uk
University of Derby Science Park	+44 (0) 1332 742 800
University of Nottingham Innovation Park, Nottingham	reception@unip.nottingham.ac.uk
University of Warwick Science Park, Coventry	more-info@uwsp.co.uk
University of Wolverhampton Science Park, Wolverhampton	joinus@wolverhamptonsp.co.uk



University of Nottingham: Centre for Dairy Science Innovation, Sutton Bonington.

Investment support across the Midlands

The [West Midlands Growth Company](#) offers investors support to find the right networks, receive advice on locations, secure sector specific market research, identify funding support, and generate publicity. The West Midlands Growth Company has a number of sector specialists to offer bespoke support to help you achieve your goals. As a single point of contact, they can put together a team from recruitment agencies, universities, public agencies, and property agents to assist companies investing in or moving to the West Midlands. For international companies, there are fully funded market entry support packages on offer through the West Midlands Global Growth Programme. Packages can cover market entry, commercial space and business accelerator support. You can get in touch at invest@wmgrowth.com, or by calling +44 (0) 121 202 5022.

A new £107 million support service has also just been launched by the West Midlands Combined Authority. Business Growth West Midlands provides business advice and funding to businesses looking to expand. Contact them online or by calling +44 (0) 345 646 1352.

The UK Government is committed to supporting investors that are seeking to expand into the Midlands. [Officials from the Department Business and Trade](#) can assist with contacts, identifying funding sources, sourcing opportunities, and to navigate the investment environment. DBT provides advice directly to investors about the business environment in the UK, including tax, access to finance, banking, research and development (R&D), visas and skills. Department for Business and Trade (DBT) specialists provide international trade and investment support to businesses seeking to locate in the East Midlands. They can be reached on +44 (0) 20 4566 5302. Other relevant government contacts include the Science and Innovation Network (SIN) hosted at UK embassies, and the Department for Science, Innovation, and Technology (DSIT), which works to build the UK's capabilities in these areas.

Place focused inward investment support

Inward investment is supported by dedicated organisations in other parts of the Midlands, as detailed below.

- **[Destination Chesterfield](#)**
+44 (0) 1246 207207
- **[Invest Coventry and Warwickshire](#)**
contact@investcw.co.uk
- **[Marketing Derby](#)**
invest@marketingderby.co.uk
- **[Invest in Leicester](#)**
enquiries@investinleicester.com
- **[Invest in Nottingham](#)**
enquiries@investinnottingham.co.uk
- **[Invest Telford](#)**
Invest@telford.gov.uk
- **[Invest Shropshire](#)**
invest@shropshire.gov.uk
- **[Invest Stoke-on-Trent](#)**
enquiries@investstoke.co.uk
- **[Invest Staffordshire](#)**
hello@wearestaffordshire.co.uk
- **[Invest in West Midlands](#)**
invest@wmgrowth.com
- **[Invest Wolverhampton](#)**
invest@wolverhampton.gov.uk
- **[Invest in Worcestershire](#)**
+44 (0) 1905 677888
- **[Team Lincolnshire](#)**
investment@lincolnshire.gov.uk

UK Investment Support

The UK's ability to develop new ideas is one of our great strengths, from the jet engine and the bagless vacuum cleaner to MRI scanners and the world wide web. The UK's talent pool, funding and incentives and business infrastructure all help create an environment of business innovation. Our commitment to world-leading research and development will help your business reach its full potential. We are one of the most innovative countries in the world - ranked in the top 5 countries in the Global Innovation Index 2019. For companies such as Ford, Pfizer, Eli Lilly, Nokia and Eisai, the UK's business environment is the natural choice for investment in innovation.

Government help for your business

The UK government's innovation agency, [Innovate UK](#), helps businesses develop new ideas and turn them into a commercial success.

It can help you:

- access funding
- connect with researchers and other collaborators
- find potential customers

Financial incentives to innovate in the UK

The UK offers generous financial support and tax incentives for innovation in the UK.

These include:

- [UK Research and Innovation \(UKRI\)](#) funding through our Research Councils and Innovate UK
- research-led tax incentives such as Patent Box, R&D Tax Relief and R&D Expenditure Credit

World-class talent

In the UK you'll have access to world-class academic and research talent. You'll also be able to take advantage of a good supply of highly skilled employees. Our many innovation initiatives include our [Grand Challenges](#). These bring together the best minds in science and business to explore opportunities from 21st century global trends.

Regulation to protect your ideas

The UK has a world class intellectual property regime. This protects the names, ideas, products, designs and written word of businesses.

Find out about [UK intellectual property laws](#) after the UK's exit from the EU on the [great.gov.uk](#) website.

Infrastructure that supports innovation

Nationally, the UK invests £6 billion each year in research councils and universities. The UK's network of Catapult Centres help emerging technologies become commercially viable. A range of 'business clusters' up and down the country offers specialist expertise. These include:

- advanced engineering and medical technologies in the Northern Powerhouse
- the UK's answer to Silicon Valley in the Cambridge, Milton Keynes and Oxford corridor
- a thriving life sciences research and renewables scene in Edinburgh

High Potential Opportunities

[The UK Department for Business and Trade](#) identified multiple High Potential Opportunities for investment in the Midlands. The HPOs are supported by the UK government to make them more accessible to foreign investors. To find the full list of HPOs available in the Midlands and how the government can support your business taking advantage of them, contact DBT by calling +44 (0) 20 4551 0011, or using one of the services listed on the next page.

Freeports

The UK Freeports are areas where the normal customs do not apply. At Freeports, imports can enter with a simplified customs documentation and without tariffs. Business operating in the designated zone around the Freeports can manufacture using the imports and export the finished products through the Freeports, all without facing the regular tariffs. The East Midlands Freeport is the only UK Freeport connected to an airport rather than a traditional sea port, and presents a unique opportunity for companies who manufacture and re export. To find out more and how your company can benefit from the East Midlands Freeport, get in contact with the team at info@emfreeport.com.

Investment Zones

The UK government has designated both the East Midlands and the West Midlands as investment zones, a new policy announced in 2023. The zones will receive £80 million support from the government over the next five years for tax incentives and resource spending. Examples of policies include business rates relief, stamp duty relief, capital allowances, and lower employer National Insurance contributions. To find out more, get in contact with one of the investment specialists listed above.

General investment support

- The [Global Entrepreneur Programme](#) provides support for overseas high growth business looking to move to the UK.
- The [Venture Capital Unit](#) connects UK registered growth businesses and start-ups with investors and funders.
- The [UK Investment Support Directory](#) provides connections between overseas businesses wanting to set up in or expand to the UK and those from the private sector in the UK who can assist, whether that be in legal concerns, marketing, HR, or other needs.

Export Support Service

- The [Export Support Service](#) helps those based in the UK looking to export abroad.
- The [UK Export Finance](#) team can help with funding and insurance for UK exports.
- The [East Midlands Freeport](#) team can help you take advantage of the tax incentives and freeport benefits. Reach them at info@emfreeport.com.





Department for Business and Trade

We support growth by backing businesses in the UK and globally, promoting investment and championing free trade.

Disclaimer

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