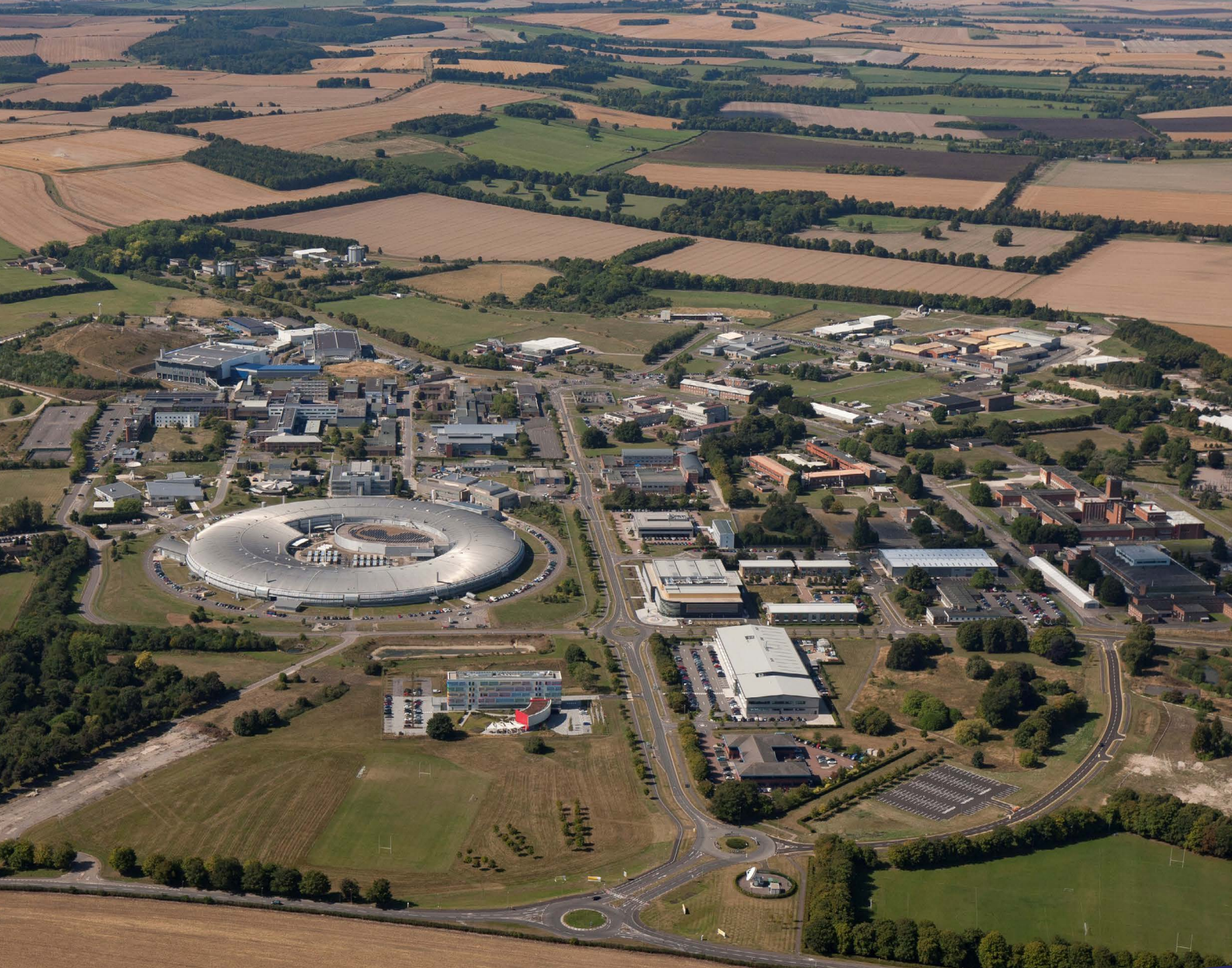
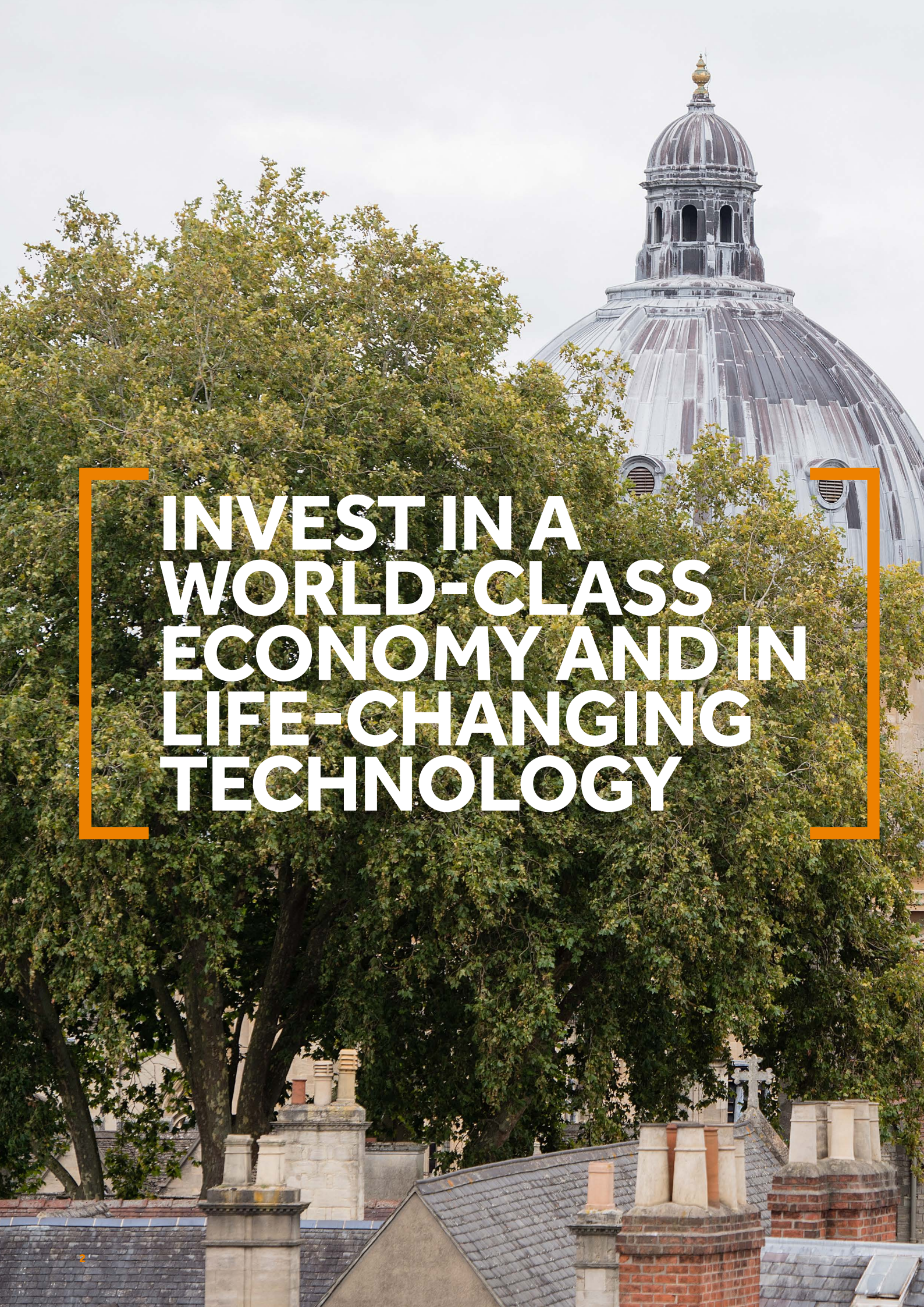


WELCOME TO OXFORDSHIRE, UNITED KINGDOM

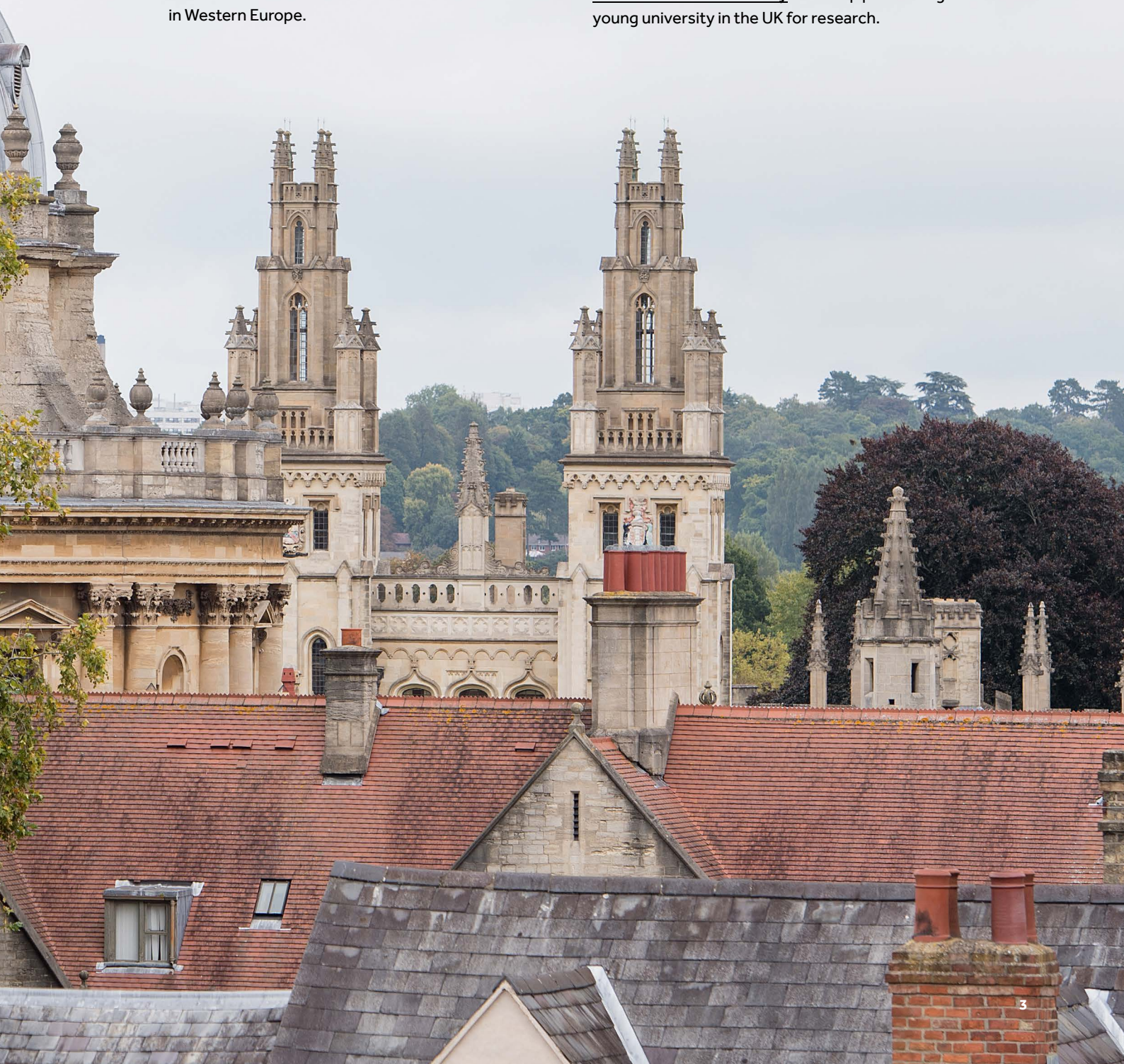
OxLEP
driving economic growth



INVEST IN A WORLD-CLASS ECONOMY AND IN LIFE-CHANGING TECHNOLOGY

OXFORDSHIRE'S ECONOMY

- One of three net contributors to the UK government, generating £23 billion GVA p.a.
- Foreign direct investment projects in Oxfordshire rose by 181% in 2017/18, with Oxfordshire responsible for 9% of all investment into England.
- 50,000 new private sector jobs created since 2011.
- 30 million visitors p.a., many from overseas.
- Highest concentration of science research facilities in Western Europe.
- Centre for automotive innovation and advanced manufacturing.
- Home to 1,500 high-tech companies and success at growing unicorn businesses - those with a market value of over $1 billion.
- The **University of Oxford** is the 2020 Times Higher Education #1 ranked university in the world - the fourth year it has held this title.
- **Oxford Brookes University** is the top performing young university in the UK for research.



OXFORDSHIRE'S BREAKTHROUGH SECTORS: AN OVERVIEW

The Oxford to Cambridge Arc links the two cities as intensive places for innovation, enhancing transport connectivity, and maximising growth and productivity in the region.

Oxfordshire's capacity for innovation and focus on transformative technologies has resulted in a government-backed strategy to position the region as a top three global innovation ecosystem by 2040.

The strategy builds on Oxfordshire's world-leading science and technology clusters, and its ability to pioneer emerging transformative technologies and sectors, as part of the wider Oxford to Cambridge Arc.

LIFE SCIENCES:

Oxford has one of the strongest life sciences clusters in Europe and is a global hub for entrepreneurship and business. National assets include:

- The Rosalind Franklin Institute at Harwell to improve health through physical science innovation
- The Structural Genomics Consortium
- The University of Oxford, ranked top in the world for medicine (Times Higher World Rankings). Its Medical Sciences Division is one of the largest biomedical research centres in Europe.

QUANTUM COMPUTING:

The University of Oxford is leading a consortium of nine UK universities to build the first Q20:20 Quantum Computer Demonstrator by 2020.

CRYOGENICS:

Cryogenics technology underpins around 17% of the UK economy and includes growth sectors such as space, life sciences, energy and quantum computing.

ROBOTICS AND AUTONOMOUS SYSTEMS (RAS):

Oxfordshire is at the forefront of Connected and Autonomous Vehicles (CAV):

- Oxford-based Oxbotica is leading a consortium to launch fleets of driverless vehicles
- Culham Science Centre's RACE is a UK centre of excellence and one of four national CAV testbeds

SPACE-LED DATA APPLICATIONS:

Harwell Science and Innovation Campus is home to the largest space cluster in Europe with over 90 organisations. Highlights in the sector include:

- The Satellite Applications Catapult
- The European Space Agency's European Centre for Space Applications and Telecommunications (ESCAT) is located at Harwell
- By 2021, Oxfordshire will be home to the UK National Satellite Test Facility.

ENERGY:

Oxfordshire has a wealth of energy businesses including the Culham Centre for Fusion Energy (CCFE) and the Faraday Institution at Harwell, which is home to 30 industry, academic and public organisations.

DIGITAL & CREATIVE:

Over 3,000 digital and creative businesses are based in Oxfordshire generating £1.4 billion for the UK economy each year.

MOTORSPORT:

Oxfordshire is home to a number of world-renowned motorsport names including Williams F1, Renault Sport F1, Prodrive and Roborace, as well as global supply chain companies such as SS Tube Technology, Lentus Composites, and the BMW MINI manufacturing plant. The county is also home to an emerging Formula E cluster, including Andretti, DS TECHEETAH, Mahindra Racing and NIO.

WELCOME TO OXFORDSHIRE, UNITED KINGDOM: HOME OF TRANSFORMATIVE TECHNOLOGIES

Oxfordshire is located in the south-east of England and is supremely well-connected; the city of Oxford is an hour from London and 45 minutes from London Heathrow, the UK's largest airport.

The population of Oxfordshire is just 682,000, yet the county has a GVA of £23 billion p.a. and is one of only three net contributors to the UK government.

Oxfordshire is a globally-renowned region with one of the strongest economies in the UK, and a successful record in securing investment to promote growth. For example, Tencent and FosunPharma are investors in Oxford Sciences Innovation, a £600 million fund designed to help Oxford's outstanding scientists build and grow great businesses that can improve the world, providing seed and follow-on funding, ranging from £100,000 to £10 million.

'Living Laboratories', a concept used to design, explore and experience solutions in real-life environments in order to assess their impact prior to implementation, have firmly taken root. Partners work closely with local communities to bring solutions to market through establishing Living Laboratories across clean growth, data and mobility, and health and well-being.

Oxfordshire has exciting opportunities for foreign inward investment and welcomes investors that seek to build a long-term relationship with Oxfordshire and the wider Oxford to Cambridge Arc region for both investment and international trade.

Oxford is 60 minutes by road to London

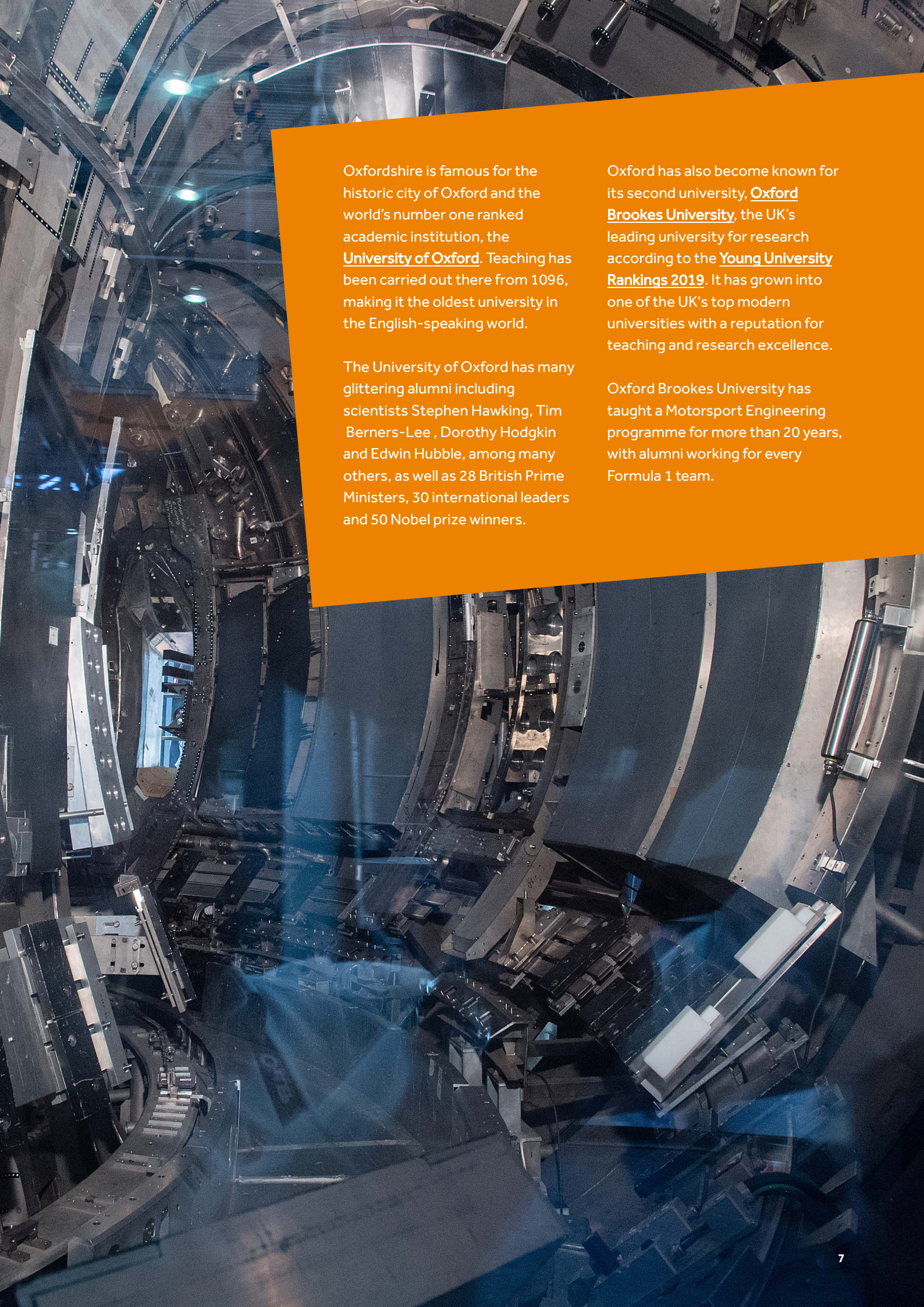
Oxford is 60 minutes by road to LHR

LHR is 75 minutes to CDG

LHR is 8 hours 15 minutes to JFK

LHR is 9 hours 40 minutes to BJSA

Oxford is 160 minutes by road to the port of Dover

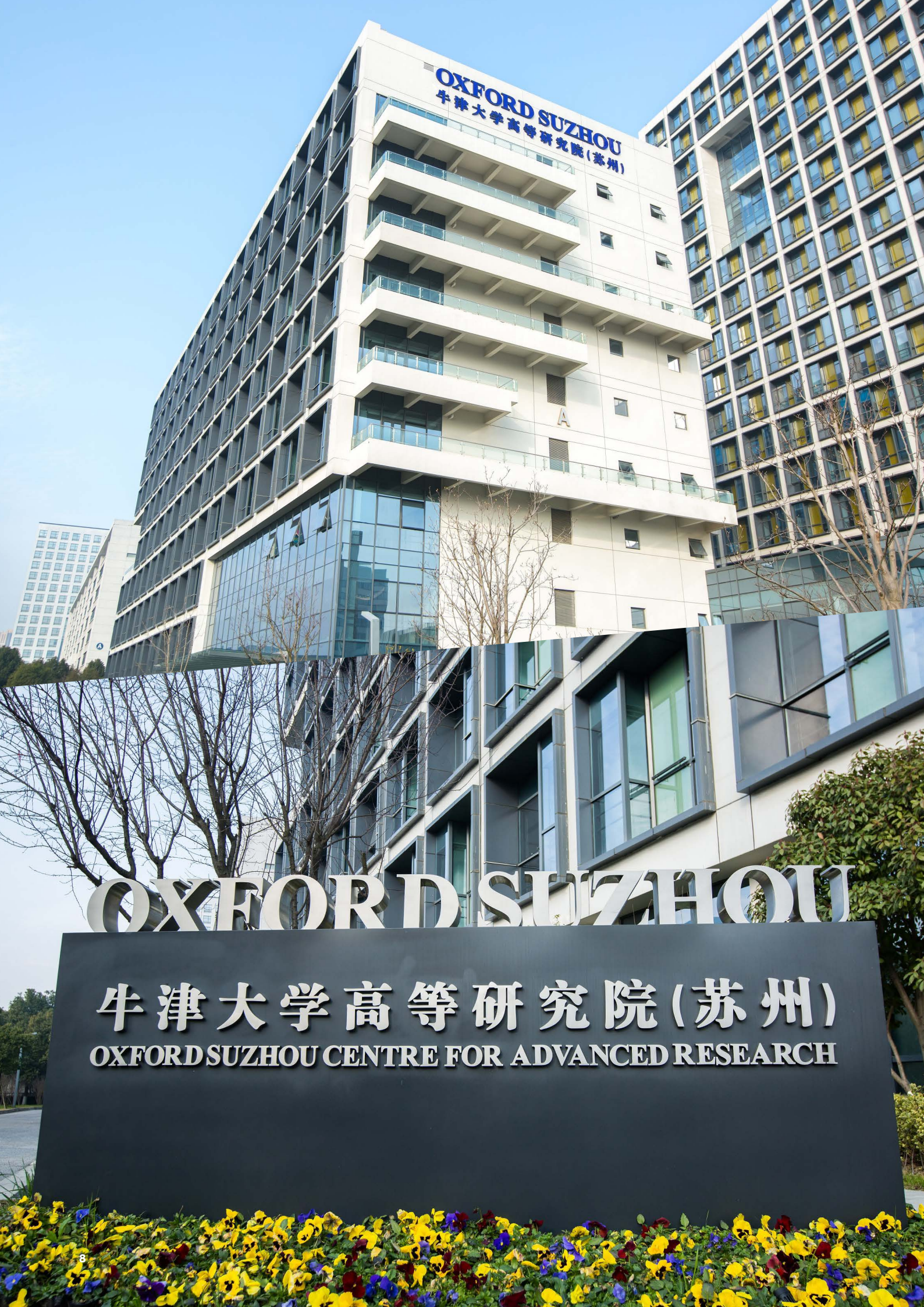


Oxfordshire is famous for the historic city of Oxford and the world's number one ranked academic institution, the University of Oxford. Teaching has been carried out there from 1096, making it the oldest university in the English-speaking world.

The University of Oxford has many glittering alumni including scientists Stephen Hawking, Tim Berners-Lee , Dorothy Hodgkin and Edwin Hubble, among many others, as well as 28 British Prime Ministers, 30 international leaders and 50 Nobel prize winners.

Oxford has also become known for its second university, Oxford Brookes University, the UK's leading university for research according to the Young University Rankings 2019. It has grown into one of the UK's top modern universities with a reputation for teaching and research excellence.

Oxford Brookes University has taught a Motorsport Engineering programme for more than 20 years, with alumni working for every Formula 1 team.


OXFORD SUZHOU
牛津大学高等研究院(苏州)
OXFORD SUZHOU
牛津大学高等研究院(苏州)
OXFORD SUZHOU CENTRE FOR ADVANCED RESEARCH

OXFORDSHIRE HAS DEEP AND ENDURING TIES WITH CHINA

THE UNIVERSITY OF OXFORD CHINA CENTRE

For more than 400 years Oxford has engaged with China. Today The University of Oxford remains one of Europe's most important centres for the study of China, and a hub of collaboration with Chinese institutions. The custom-built Dickson Poon China Centre employs around 50 academics dedicated to the study of the history and culture of China.

CAMS - UNIVERSITY OF OXFORD INTERNATIONAL CENTRE FOR TRANSLATIONAL IMMUNOLOGY

Founded in 2013, the CAMS-Oxford International Centre for Translational Immunology is a joint venture between the Chinese Academy of Medical Sciences, China Centre for Disease Control, Beijing's You'an Hospital, the University of Oxford's Human Immunology Unit, and the Nuffield Department of Medicine.

CONFUCIUS INSTITUTE AT OXFORD BROOKES UNIVERSITY

The Confucius Institute is a non-profit collaboration, which aims to provide Chinese language and cultural teaching resources and services worldwide, supports local Chinese teaching internationally, and facilitates cultural exchanges.

OXFORD SUZHOU CENTRE FOR ADVANCED RESEARCH (OSCAR)

OSCAR is the University of Oxford's first overseas centre for advanced physical and engineering science research, primarily expanding on activities from across the University's Mathematical, Physical and Life Sciences Division. OSCAR is located within the Suzhou Industrial Park, in the historic city of Suzhou, approximately 60km west of Shanghai.

PEKING UNIVERSITY HSBC BUSINESS SCHOOL

A campus has been opened in Oxford, establishing Peking University HSBC Business School as the first Chinese university and business school to maintain an independent international campus beyond the Mainland China border.

北京大学 汇丰商学院 Peking University HSBC Business School

DISRUPTIVE SCIENCE, INNOVATION AND ENTERPRISE

TWO INTERNATIONALLY IMPORTANT SCIENCE CAMPUSES

Oxfordshire has long been known for science and innovation excellence and it is now home to two of the UK's leading big-science research centres; **Culham** and **Harwell**.

Culham Science Centre is home to world-class publicly funded fusion power research, a test centre for autonomous vehicles, commercial technology organisations and the Culham Innovation Centre.

Harwell Campus is one of the leading science and innovation campuses in Europe and is steeped in world firsts: from the discovery of the world's largest prime number, to the building of Europe's first energy producing fission reactor and the launch of the transistorised computer.

Diamond Light Source, one of the world's most advanced scientific facilities and the UK's national synchrotron is based at Harwell. Over 7,000 researchers use the facility to study everything from fossils to viruses. In 2020, Harwell will also welcome the new hub of the Rosalind Franklin Institute, which will house world-leading spaces for microscopy, spectrometry and biochemistry.

A recently commissioned Science & Innovation Audit stated that Oxfordshire can become a global leader in digital health, space-led data applications, autonomous vehicles and technologies underpinning quantum computing. The financial impact of this could be worth in the region of £180 billion to the UK economy by 2030 and around 6% of the global economy in these technologies.

£14 MILLION INVESTMENT TO SUPPORT CLEAN WATER, SUSTAINABLE ENERGY AND LOW CARBON

In October 2018, a £14 million investment into the UK's Catalysis Hub to support a nationwide research programme was announced by the Engineering and Physical Sciences Research Council (EPSRC), which is part of UK Research and Innovation (UKRI).

Centred at the Research Complex at the **Harwell Campus** in Oxfordshire, the Hub will co-ordinate a collaborative research programme across the UK.

FOUR TRANSFORMATIVE TECHNOLOGIES

1. FOCUS ON: CONNECTED AND AUTONOMOUS VEHICLES

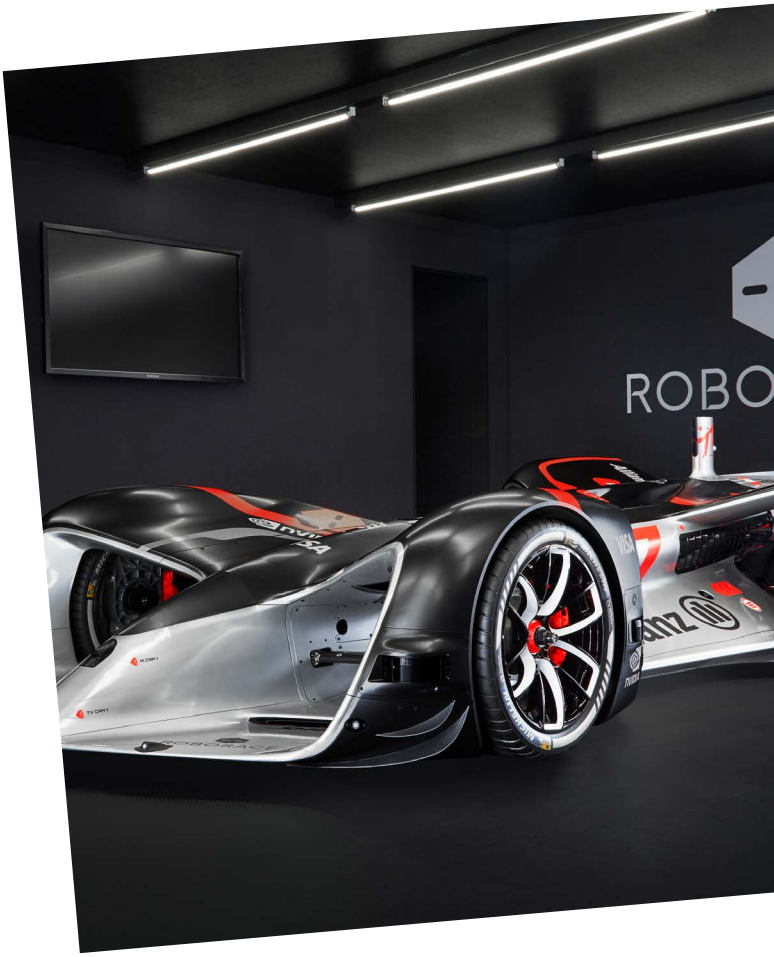
Oxfordshire is a near perfect test bed for real-world testing of connected and autonomous vehicles (CAV). By retaining the UK's strong global position in autonomous vehicle development, it is expected to generate at least £51 billion revenue for the UK economy by 2030, with 320,000 new jobs, 5,000 serious accidents avoided, and 2,500 lives saved.[1]

The county is an ideal test location, being geographically close to design, communications, navigations, and analytics facilities and workforces.

The Oxford Robotics Institute kick-started the UK's autonomous cars programme in 2010. Oxbotica was created in 2014 as a spin-out of the University of Oxford, and now leads the UK consortium to develop and launch a fleet of driverless vehicles on public roads.

The research and development continues in conjunction with RACE (Remote Applications in Challenging Environments) at Culham, which provides testing conditions ready for rollout to public highways.

StreetDrone, also based in Oxford, was founded in 2017 and aims to develop self-driving technology that everybody can access. Its products and systems can be implemented across a wide range of vehicles and it has partnerships with companies like Renault, Millbrook and NVIDIA.



*Imagine ten electric race cars on a track. Five charge clockwise around the circuit, the remainder surge off in the opposite direction. Halfway around they meet, but instead of crashing, they dodge each other by millimetres. Such self-driving race cars are already being developed by world-leading mechanical and electronic engineers in Banbury, the heart of the UK's 'motorsport valley', by a company called **Roborace**. More importantly, they have already been proven in public.*

[1] *Connected and Autonomous Vehicles: The UK Economic Opportunity, KPMG*

***Sensyne Health** is supported by **Oxford Academic Health Science Network** (AHSN) to develop better care for women with diabetes in pregnancy. GDm-Health is its remote monitoring system for women who develop diabetes during pregnancy.*

2. FOCUS ON: QUANTUM COMPUTING

Quantum technologies will profoundly change the world and our lives by 2030, with new and diverse products that have astounding capabilities. A multi-billion-pound future industry for the UK is envisioned with new industries and supply chains emerging to service them. The UK has a strong, global position in the race to develop a quantum computing capability.

The NQIT (Networked Quantum Information Technologies) Hub, is the largest of the four hubs in the UK National Quantum Technology Programme, a £270 million investment by the UK government. Backed with further investment, this programme is establishing a quantum technology industry in the UK. It involves nine UK universities and over 30 companies all working together to develop a quantum computer demonstrator; the Q20:20 engine, which will demonstrate a networked, hybrid light-matter approach to quantum information processing.

Establishing a 'Quantum Valley' in Oxfordshire to build the computer will create 10,000 UK jobs across the supply chain. Local companies are engaged, for example Oxford Instruments, which is providing the cooling technology for superconductors being used in one version of the new computers.

One of Europe's largest cryogenics clusters also resides in Oxfordshire and is a particular strength of the region. Over the last 60 years, the University of Oxford, Harwell Campus and Oxford Instruments have provided a strong cryogenic academic and business community.

3. FOCUS ON: DIGITAL HEALTH

Digital technologies can transform healthcare, from prevention through diagnosis and intervention, to ongoing monitoring. The UK market for digital health is expected to grow to £4 billion by 2022, driven primarily by high growth in cloud-based services and delivery models.[2]

Oxfordshire and the neighbouring region has over 160 digital health companies and 430 stakeholders across industry, academia, the National Health Service (NHS) and the third sector[3]. This region is a potential major growth cluster for developing and demonstrating high income, technology-based healthcare solutions.[4]

Creating a closed loop of data and testing along the entire care pathway will vastly smooth the existing pinch points to market. Developers with an end-to-end patient pathway and test-bed system can speed innovation, demonstration and rollout, and better evidence health benefits and cost systems. This can create 300,000 new jobs (33,000 in Oxfordshire) by 2030 and yield £1.8 billion p.a. in savings[5] to the NHS.

[2] https://www.digitalhealth.net/2018/05/digital-health-intelligence-forecast-nhs-it-4bn-2022/

[3] https://www.healthandwealthoxford.org/wp-content/uploads/2016/11/Digital-Health-in-Oxford-Wider-Region.pdf

[4] https://www.healthandwealthoxford.org/wp-content/uploads/2016/11/Digital-Health-in-Oxford-Wider-Region.pdf

[5] http://www.ukspace.org/wp-content/uploads/2017/04/Industrial-Strategy-Consultation-UKspace-and-SGP-response-FINAL-120417.pdf

4. FOCUS ON: SPACE-LED DATA APPLICATIONS

The UK space industry's target is to capture 10% of the global space market by 2030. This should mean £40 billion p.a. and 100,000 jobs for the UK. Space data includes earth observation, satellite positioning and communications. To develop products and services, space data is applied with other data sources to create real-world solutions.

Oxfordshire has over 90 space-related organisations based at Harwell, Europe's largest Space Cluster, the Satellite Applications Catapult, European Centre for Space Applications and Telecommunications (ESCAT), world-class research, a rich innovation ecosystem, and international influence.

To maintain the UK's global position – and add value in conjunction with CAV and digital health's use of location data, and communication – proposed interventions include a data analytics hub to develop applications, work with Living Laboratories as demonstrators for data products, and boost the value proposition for inward investment in UK Space.

RAL Space, based at Harwell, carries out world-class space research and technology development with involvement in over 210 space missions, and is at the forefront of UK space research. RAL provides space test and ground-based facilities, designs and builds instruments, analyses and processes data, and operates S and X band ground-station facilities, as well as leading conceptual studies for future missions.

*A UK-China Joint Laboratory was established to deepen collaboration between the two nations in 2005, led by a partnership between the Science and Technology Facilities Council's (STFC) **RAL Space** in Oxfordshire and Beihang University in China. Leading figures from UK and Chinese space research and industry met on 10 December 2018 to discuss how to build on this record of cooperation and pave the way for future innovation.*

SIX SECTOR SNAPSHOTS

1. HEALTH AND LIFE SCIENCES

Oxfordshire is at the heart of one of the largest and most successful life science clusters in Europe and has a track record in establishing and attracting world-leading life science businesses. The Oxfordshire cluster spans drug discovery and development, diagnostics, medical devices, digital health, precision medicine and regenerative medicine.

The county boasts over 10,000 people employed in scientific R&D and healthcare-related manufacturing. The proportion of people in R&D is over four times the national average. It is home to several global players such as Abbott Diabetes Care, Alere, Ipsen and Vertex. Three companies have previously been valued at over $1 billion: Oxford Nanopore Technologies, Immunocore and Adaptimmune.

2. AUTOMOTIVE AND HIGH-PERFORMANCE TECHNOLOGIES

Oxfordshire has over 23,000 people employed in manufacturing and is an ideal location for automotive supply chain companies which benefit from the area's expertise, as well as its proximity to car plants. BMW has its MINI plant in Cowley, where 2.5 million cars have been produced since the new MINI was launched in 2001. In addition to BMW, Jaguar Land Rover's (JLR) assembly plants in Solihull and Birmingham are less than 50 miles away from Oxfordshire.

Formula One started to call Oxfordshire home when March Engineering was started in the late 1960s by former FIA president Max Mosley and engineer Robin Herd. Many more motorsport teams set up premises, and Oxfordshire became part of 'Motorsport Valley'. Resident F1 teams in the county include Williams, Renault and HaasF1.

3. CREATIVE AND DIGITAL

There are an estimated 22,000 people within digital employment in Oxfordshire. Major companies operating in this sector include Rebellion, Sophos, CQR, Nominet and Vicon. Overall, there are around 4,700 creative and digital sector businesses which generate more than £1.4 billion annually.

Oxfordshire has particular strengths in gaming and cyber-security. Sophos is a security software company founded in 1985 that targets mid-market enterprises with encryption, endpoint and antivirus products. Its revenue in 2018 was recorded as $768.6 million.

Rebellion, one of Europe's leading games developers, has distributed hit games such as Sniper Elite and the Alien vs. Predator series. Founded in 1992 by two brothers, the company now has 300 employees and worldwide sales.

***Bicester Village** in Oxfordshire is one of the most popular destinations for Chinese visitors to the UK, second only to Buckingham Palace*

4. VISITOR ECONOMY

The visitor economy is worth £2.17 billion, around 10% of Oxfordshire's overall GVA. Oxford is the seventh most visited city in the UK by international visitors and welcomed nearly 30 million visitors during 2017.

Oxford is famed for its university heritage, and has numerous other attractions (many of which are linked to the university), including the Ashmolean Museum, the world's first university museum, Pitt Rivers Museum, University Museum of Natural History, University Botanic Gardens, Sheldonian Theatre, and Holywell Music Rooms.

Oxford is also the tourism gateway to the rest of Oxfordshire, offering many attractions including UNESCO World Heritage site and birthplace of Sir Winston Churchill Blenheim Palace, Bicester Village and Henley-on-Thames.

5. RETAIL

Bicester Village is just 46 minutes by train from London. This luxury destination is home to more than 160 boutiques of world-famous brands, with savings of up to 60% on the recommended retail price all year round. Together with a selection of restaurants and cafés, the Village offers luxury services that include valet parking, hands-free shopping, the award-winning Bicester Visitor Centre, and an onsite tax refund and money change service.

Oxford's new £500 million Westgate Centre opened in 2017 and has 74,000 m² of retail, restaurant and leisure space. The centre has 100 shops, a five-screen cinema and created more than 3,400 full-time jobs.

6. ENERGY

Oxfordshire is unique in the UK in its specialism in working to develop future energy systems that can work at scale and that have significant overlaps with other sectors, such as transport and electricity. The county's work in battery technology support its place at forefront of the autonomous vehicle revolution.

The Culham Centre for Fusion Energy (CCFE) and the Faraday Institution at Harwell, which is home to 30 industry, academic and public organisations are leading centres of innovation in energy. UKAEA at Culham is a lead participant in the co-ordinated EU fusion programme managed by EUROfusion and operates JET, the largest fusion device in the world. It is also home to Tokamak Energy and First Light Fusion, two of the leading fusion start-up companies in the world.

UNIVERSITY OF OXFORD

OXFORD BROOKES UNIVERSITY

OXFORD CITY COUNCIL

OXFORDSHIRE COUNTY COUNCIL

OxLEP
driving economic growth

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Oxfordshire Local Enterprise Partnership

European Union
European Regional Development Fund

HM Government