Oxfordshire future mobility

Invest in the UK's innovation engine for autonomous, connected, electric and shared automotive technologies

ENTERPRISE OXFORDSHIRE
An Oxfordshire County Council-owned company

The University of Oxford is ranked #1 in the world for the past ten years

Times Higher Education 2026

A global hub for mobility solutions

Oxfordshire has some of Europe's most successful clusters in connected and autonomous vehicles, motorsport, and energy storage solutions, each one stimulating innovation through multidisciplinary collaboration.

Home to the University of Oxford and Oxford Brookes University, the region has unrivalled centres of academic research into software, machine learning and AI, robotics, alternative energy sources and advanced engineering.

Some of the sector's fastest-growing companies have grown out of the University of Oxford, including universal autonomy developer Oxa. Incoming businesses can benefit from collaboration with an array of exciting and highly-successful University spinouts. The University's commercialisation arm, Oxford University Innovation, has successfully spun out over 300 companies.

Oxford Science Enterprises has encouraged investment worth £1.4 billion in university spinouts, helping Oxford's outstanding scientists build and grow great businesses that can improve the world. Investors have provided seed and follow-on funding ranging from £100,000 to £10 million.

Oxford Brookes University runs highly-regarded courses in automotive and motorsport engineering and technology, and carries out research into cognitive robotics and artificial intelligence, as well as configuring the urban environment for sustainable mobility.

The Oxford Martin School is researching the economic, social and business impact of autonomous transport systems. The Said Business School has an acknowledged programme to help the business community understand AI and its true potential.

Companies involved in future mobility in Oxfordshire:

BMW, Oxa, Atlassian Williams F1 Team, Fortescue ZERO, Bold, Mahindra, O2, Tesla, aws, prodrive, TGR Haas F1 Team, Airbus, Rimac, UK Space Agency, GKN, Forseven, Lockheed Martin, Evolito, esa, London Oxford Airport, YASA, BWT Alpine Formula One™ Team, Skyports Infrastructure, Darwin

Testing facilities

The CAV Pit Lane at Culham Campus enables vehicle developers to improve and test advanced driver assistance systems (ADAS) and autonomous systems. Over 80 R&D projects have used the facility since it opened in 2019.

Culham's RACE facility operates jointly with Millbrook in nearby Bedfordshire as a proving ground for the development of CAV technologies. Together, the two sites offer controlled and real-world testing of urban environments over 90km of roads on secure sites, along with 5G, data storage, digital modelling, vehicles and simulation, and purpose-built workspaces with integrated accommodation.

Harwell's Space Cluster, which encompasses major assets of national and international significance such as the European Space Agency, provides a range of test facilities. The brand new Catesby Tunnel aerodynamic testing and vehicle development facility is located nearby to Banbury.

Banbury, located next to the M40 with access to motorway connections in all directions, has been developing at an exciting rate in recent years to become a prime distribution centre and manufacturing hub, attracting companies such as Prodrive and Mahindra Racing.

Bicester Motion is a globally recognised centre of excellence where like-minded automotive and aviation brands can thrive and deliver the mobility solutions that society needs for tomorrow, offering new accommodation for international technology businesses.

Electric motor development at Yasa

Leading advances in...

Connected and autonomous vehicles

By 2035, the UK market for connected and automated mobility solutions (CAM) technologies will be worth £6.4 billion, part of a £100 billion global market.

Oxfordshire is a global centre for CAV development. The CAV Pit Lane at Culham Campus, which opened in 2019, has enabled vehicle manufacturers and self-driving vehicle developers to improve and test advanced driver assistance systems (ADAS) and autonomous systems in over 80 R&D projects.

Enterprise Oxfordshire secured £2.3 million-worth of investment for the CAV Pit Lane via the Government's Local Growth Fund. Oxa, spun out in 2014, is a global leader in self-driving technology for vehicles in industrial and goods-handling spaces.

Five AI, having created a self-driving system on public roads in London, was acquired by Bosch in 2022.

The Darwin CAV at Harwell, backed by the UK and European Space Agencies, is the first space in the UK designed for testing driverless car technology. The Darwin Autonomous Shuttle service runs at Harwell and has been trialled on the streets of Oxford.

Defence and deep technology

Oxfordshire is home to several innovative and cutting-edge defence & space companies, specialising in developing and manufacturing advanced technologies for defence, aerospace, and space exploration and providing solutions for a range of requirements such as communication systems, surveillance technologies, navigation systems, and more. As well as the UK Space Agency, notable companies working in this sphere include as Thales, Open Cosmos, Airbus, and Oxa.

The Oxfordshire, Buckinghamshire and Chilterns Regional Defence and Security Cluster (OBC RDSC) is one of a growing network of regional clusters. Members include STFC-UKRI and Harwell Campus.

Electric vehicles

Oxfordshire companies are contributing to a $996 billion – and growing – global market in electric vehicles.*

YASA can produce up to 100,000 compact, lightweight, efficient and powerful electric motors every year. The motors have applications in automotive, industrial, marine and aerospace. YASA raised more than £46 million from investors after being spun out from the University of Oxford in 2009. In 2021 it was acquired by Mercedes-Benz. It recently relocated to Bicester Motion where a £50 million multi-building hub is dedicated to future mobility companies.

Prodrive has helped Volta Trucks create the Volta Zero, the world's first purpose-built full-electric 16-tonne commercial vehicle. The project was completed from a clean sheet to a fully running demonstrator vehicle in just 10 months.

A centre of excellence for thermal propulsion, set up by the University of Oxford's engineering department in partnership with Bath University, Siemens and Jaguar Land Rover, is helping to make electric vehicles more efficient and affordable.

Tesla, one of the biggest names in passenger electric vehicles, chose Bicester for its first presence in Oxfordshire, taking a 24,000 sq ft facility in Catalyst Bicester technology cluster.

Wrightbus, the leading zero-emissions bus manufacturer which sells hydrogen and battery-powered buses all over the world, chose Bicester for its latest venture. Its NewPower enterprise replaces older diesel engines in buses with new zero-emission electric powertrains. The first OEM to offer a re-powering service, it can decarbonise 500 buses a year. It was able to tap into the attractive workplace market in Oxfordshire with senior hires from across the automotive world, including people who have worked for Land Rover Special Vehicle Operations, BMW and McLaren, leading a 65-strong team of master technicians.

Flight

Oxford is becoming a lead centre for all-electric flight. Evolito is using YASA's core technology to develop commercially viable electric flight. Airbus is investing $50.5 million in new facilities at London Oxford Airport. At Bicester Motion, Skyports Infrastructure is building the UK's first vertiport testbed which will be used for testing electric vertical take-off and landing (eVTOL) flight operations.

*Source: www.statista.com/outlook

Skills

Oxfordshire has a skilled and experienced workforce and a large pool of talent to tap into.

- Around 4,000 of the 23,000 people employed in manufacturing in Oxfordshire are involved in the automotive sector
- Over 9,000 people are employed in the low carbon economy
- 56% of the working age population is qualified to degree level or above.

The motorsport factor

Motorsport technology has powered many advances that are now deployed in everyday motoring and in other sectors. With close proximity to Silverstone, Oxfordshire's distinguished track record in motorsport is continuing to contribute to smart mobility. There is no other location worldwide that offers so much relevant automotive sports technology.

Oxfordshire's three F1 teams – Alpine, Atlassian Williams, and Haas – are continuously innovating as the sport embraces electric technology and sustainable fuels.

Formula E, the motorsport championship that uses only electric cars, is a testbed for electrification and new technologies that are being transferred into prototype vehicles and road cars and several practitioners have made Oxfordshire their base. Prodrive, one of the world's most successful multi-disciplined motorsport businesses, includes Formula E in its portfolio.

Fortescue Zero (formerly WAE) has created ultra-fast battery technology which is at the cutting edge of performance and management for Formula E. Its development work in motors and materials has found commercial applications in electrical vehicles from the Brompton E-bike to mining trucks as well as in solar-powered aircraft. It is also developing hydrogen technology for mobility solutions including the next pioneering evolution of sustainable racing, Extreme H.

Jaguar TCS Racing has set up its new technical headquarters at the Fortescue building in Kidlington.

Mahindra Racing is one of the ten founding teams – and the only Indian team – of the FIA Formula E Championship. Its manufacturing base is in Banbury. Mahindra Group is one of India's largest companies.

US motorsport business Andretti Autosport relocated its UK-based Formula E team operations to Banbury to be at the heart of the motorsport valley and to benefit from the region's skilled workforce.

Chinese automotive manufacturer NIO has based its Formula E performance technology research centre and advanced engineering group at Begbroke Science Park.

Former Mercedes F1 director Paddy Lowe has set up a fossil-free synthetic fuel company at Bicester Motion, with a laboratory and engineering space.

Pursuit Racing in Bicester is focused on preparing cars and drivers for historic racing, and has a racing simulator.

No other location worldwide offers so much relevant motorsport technology

Battery and energy technology

With electric vehicles expected to make up over 40% of the market by 2030, demand for ever-more efficient batteries is growing. Pioneering work in battery technology is putting Oxfordshire in the vanguard of breakthrough electrical storage solutions.

At Harwell's EnergyTech Cluster, 80 organisations and 1,400 people contribute to the UK's research into electrochemical energy storage. The Faraday Battery Challenge, a UK Research and Innovation (UKRI) Challenge Fund programme has been investing £610 million to support the UK's growing battery technology industry. The programme is focused on supporting and drawing together research, business-led innovation and scale-up to accelerate battery technology commercialisation, and solve the challenges for battery technology. It has supported innovators such as Nextrode, a consortium of five university and six industry partners, led by the University of Oxford, a project to revolutionise the way battery electrodes are manufactured and to make EV batteries longer-range and more durable.

Nexeon, based in Milton Park, is a world leader in engineered silicon materials for battery applications. Its Li-ion battery anode technology uses silicon instead of graphite, and enables a dramatic improvement in the performance of EV rechargeable battery technology. It has raised $200 million and has offices in Oxford and Yokohama, Japan, as well as Oxford.

Johnson Matthey chose Culham Campus to support its Hydrogen Business Unit, which is accelerating the scale-up of its growing green hydrogen business and future battery materials technology.

Rimac Energy, a specialist in Battery Energy Storage Systems (BESS) technology and part of Croatian company Rimac Technology, chose Witney as its base.

Spanish company Bold, which develops high-performance batteries to scale electrification technology for aerospace, motorsport and marine applications, chose Heyford Park Innovation Centre for its UK office.

> *"The UK aspires to be a world leader in the development of new battery technologies in both the automotive and other energy storage sectors."*
>
> Ian Ellerington, Head of Technology Transfer, Faraday Institution.

10 reasons to choose Oxfordshire

1. Within the UK's Testbed region for developing future mobility.
2. At the heart of the UK's Motorsport Valley.
3. Opportunities to collaborate with exciting spinouts from the University of Oxford.
4. Deploy testing facilities at world-recognised centres of excellence, including the CAV (connected and autonomous vehicle) Pit Lane facility at RACE.
5. Manufacturing, distribution facilities and Grade A office space for businesses of all sizes, with opportunities to scale up.
6. Proven success in attracting international manufacturing and R&D companies.
7. Highly-educated population and technically-skilled workforce in engineering, physics and motorsport.
8. Thriving mobility and energy ecosystems, facilitating knowledge exchange.
9. Part of the UK's flourishing low carbon energy sector, generating around £69.4 billion a year. (source: ONS)
10. Excellent connectivity to London, the Midlands and south coast ports by rail and road, plus easy access to major airports.

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investservice@enterpriseoxfordshire.com

www.enterpriseoxfordshire.com