Advanced manufacturing in Oxfordshire

Expertise and innovation

ENTERPRISE OXFORDSHIRE
An Oxfordshire County Council-owned company

What is advanced manufacturing?

Advanced manufacturing integrates technology-based systems and processes in the production of products.

It encompasses high value-added products and processes and is associated with having the highest level of quality and compliance to standards.

Advanced manufacturing is key in the push to decarbonise.

Why choose Oxfordshire for advanced manufacturing?

Oxfordshire is the county surrounding Oxford, the city that for centuries has been a global centre of learning and innovation.

Today the region continues its pioneering work in sectors that are vital for the world's future health and sustainability. It is a powerhouse for the study and application of lifechanging technology in health, energy, space, future mobility and quantum. The region is also known for its technology innovation, from the UK's centre for fusion energy at Culham to the thriving quantum computing cluster around the £93 million National Quantum Computing Centre at Harwell.

Smaller towns in the region, including Bicester and Banbury, have reinvented themselves as leading centres of advanced manufacturing.

Oxford Instruments designs and manufactures equipment that can fabricate, analyse and manipulate matter at the atomic and molecular level. Formed in 1959, it was the first commercial spinout from Oxford University.

The UK and manufacturing

Manufacturing directly contributes over £200 billion every year to the UK economy, and indirectly, over 20% of UK GDP. It has an export value of £350 billion and represents 8.5% of total Gross Value Added (GVA).

10 reasons why advanced manufacturers choose Oxfordshire

1. Opportunities to collaborate as part of Oxfordshire's innovative ecosystem with exciting spinouts from the University of Oxford.
2. Manufacturing, distribution facilities and Grade A office space, with opportunities to scale up.
3. Highly educated population and technically skilled workforce in engineering, physics and computing.
4. Thriving mobility and energy ecosystems, facilitating knowledge exchange.
5. Part of the UK's flourishing low carbon energy sector, generating around £77 billion a year. (source: ONS)
6. Within the UK's Testbed region for developing future mobility.
7. Excellent connectivity to London, the Midlands and south coast ports by rail and road, plus easy access to major airports.
8. Global hub for investors. Oxfordshire has seen over £3.5 billion in foreign direct investment since 2017.
9. Clusters in energy, life sciences, future mobility, space, robotics.
10. Central location favoured for supply chain and logistics sites near to the M40 motorway.

Advanced manufacturing sectors in Oxfordshire

Active sectors for advanced manufacturing within Oxfordshire include:

- advanced materials
- aerospace
- analytics machinery and equipment
- autonomous vehicles
- batteries
- electric vehicles
- in-space manufacturing
- life sciences
- renewable energy
- robotics

Companies in key sectors

Companies which have expanded or established advanced manufacturing operations in Oxfordshire include:

Energy

First Light Fusion*
Developing commercially viable fusion energy using inertial fusion energy. Kidlington.

Fortescue*
Investing in battery plants and green hydrogen. Kidlington.

Johnson Matthey*
Sustainable technology systems for the energy and automotive industries. Culham.

Rimac Energy*
Designs and manufactures stationary battery energy storage systems. Witney.

Tokamak Energy*
Focused on achieving commercial fusion energy. Milton Park.

Engineering

Alloyed*
Advanced alloy manufacture. Abingdon.

AW Clarke Engineering
Sheet metal and machined components. Oxford.

Blackmore Precision Engineering
Machine tools and software for lean manufacturing. Kidlington.

Element Six
Global leader in synthetic diamond and supermaterials manufacturing. Didcot.

Frostechnic
Designs and builds control panels. Banbury.

Laser Lines
Manufacturer of 3D printers and additives. Banbury.

LTI Metaltech
Precision fabrication and welding using robotics and semi-automation, specialising in cryogenic pressure vessels. Abingdon

Norbar*
Precision manufacture of torque control equipment. Banbury.

Oxford Instruments
Designs and manufactures analytical equipment.

SRD Engineering
Precision engineering for aerospace, F1, and manufacturers. Bicester.

Tibbetts
Highly-engineered products and components. Banbury.

** = foreign-owned or with overseas investors.*

Future mobility

Alpine
The Formula 1 team moved to its current base in Enstone in 1992, which it uses as its primary design, engineering, and manufacturing hub.

Atlassian Williams
The Atlassian Williams F1 team has called Oxfordshire home since its inaugural 1977 campaign. Its headquarters in Grove is its centre for car design, build and logistics.

Haas, Banbury
Banbury is the UK base for the Haas F1 team. From here it handles race team logistics, electrical engineering, control systems, and vehicle performance.

Mahindra Racing*
Develops electric vehicle technology and competes in Formula E racing. Banbury.

Oxa*
Automated vehicle software company. Oxford Business Park.

Prodrive
Motorsport and advanced engineering. Banbury.

Yasa*
Develops and manufactures axial flux electric motors and controllers. Kidlington/Bicester.

Life sciences

Abbott Diabetes Care*
Medical devices manufacture. Witney.

Moderna
Manufactures mRNA vaccine at its development and manufacturing facility and clinical biomarker laboratory. Harwell.

Native Antigen
Develops and manufactures premium quality antigens and antibodies, with services to the diagnostic and biopharmaceutical industries. Kidlington.

Owen Mumford
Makes self-injection and blood sampling devices. Woodstock and Witney.

Penlon*
Anaesthesia and other medical devices. Abingdon.

Precipart*
High precision, machined and 3D printed parts for surgical robotic tools. Oxford Science Park.

Siemens Healthineers*
Designs and manufactures superconducting magnets for MRI scanners. Eynsham/Bicester.

Space, defence and deep technology

Airbus*
Key supplier to the Royal Air Force and leader in space satellite technology. Oxford Airport.

Astroscale*
Satellite life extension and space debris removal. Harwell.

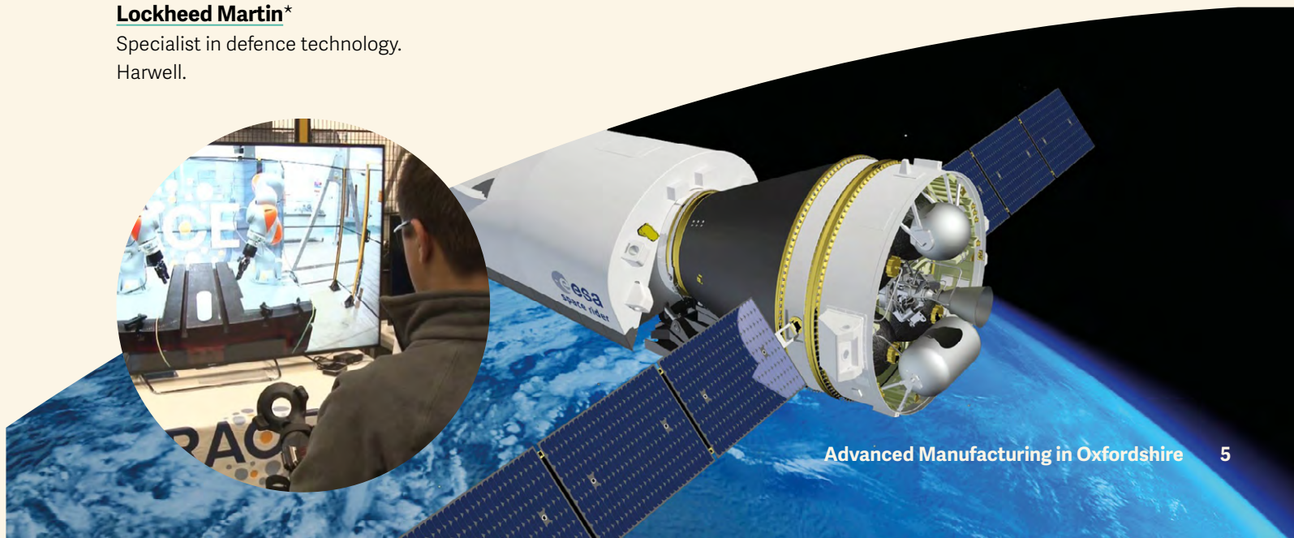
Lockheed Martin*
Specialist in defence technology. Harwell.

Open Cosmos
Designs, builds and operates advanced satellites. Harwell.

Oxford Dynamics
Disruptive AI and novel robotic platforms for security and defence. Harwell.

Oxford Space Systems
Satellite hardware manufacturer, making deployable antennas. Harwell.

Thales Alenia*
Designs, operates and delivers satellite-based systems. Harwell.



Alloyed

Alloyed's mission is to make metal components lighter, stronger, and more precise. It specialises in designing and manufacturing advanced alloys and focuses on automated design and manufacturing through additive manufacturing. Applications span a wide range of industries – including aerospace, jewellery, and wearables. Its customers include Boeing, Microsoft, Anglo American and BMW.

Alloyed is headquartered in Abingdon, where it operates one of Europe's largest fleets of Additive Manufacturing machines. It also has facilities in Seattle, USA.

A spinout from Oxford University in 2017, Alloyed's recent Series B round, led by Japanese investors SPARX and the Development Bank of Japan, was oversubscribed and truly international. Other participants were Aviva Investors and German-based Future Industry Ventures, adding to existing investors JX Advanced Metals, and Anglo American plc, and Oxford Science Enterprises.

Rimac

Croatian company Rimac Technology chose Witney as a base for its rapidly-growing Rimac Energy division. A pioneer in advanced battery energy storage systems, it specialises in advancing Battery Energy Storage Systems (BESS) technology and delivering high-efficiency solutions.

It describes its activities as: 'bytes to bolts: a technology powerhouse that designs, engineers and builds the world's most advanced automotive technology and hypercars.'

YASA

YASA can produce up to 100,000 compact, lightweight, efficient and powerful electric motors every year at its manufacturing site in Kidlington. 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 now has its own spinout, Evolito, which is developing electric motor technology and IP in aerospace. In January 2026 it will relocate its headquarters to the Innovation Quarter at Bicester Motion, where it is investing £200 million in 90,000 sq ft low carbon buildings. Yasa is a spinout from Oxford University.

Siemens Healthineers

Siemens Healthineers has been committed to the Oxfordshire region for several decades. Its Eynsham factory, which employs 600 people, designs and manufactures superconducting magnets for MRI scanners.

It is investing £250 million in a new facility for MRI technology near Bicester. When it opens in 2030, it will be the UK's first major production site for its new, sustainable DryCool technology which drastically reduces the amount of helium required in an MRI scanner.

The new carbon-neutral factory will support more than 1,300 skilled jobs, including physicists, engineers, technicians and specialised support staff.

Training and skills

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

Around 23,000 people are employed in manufacturing in Oxfordshire, and over 9,000 work in the low carbon economy. Sixty per cent of the working age population is qualified to degree level or above.

The region's two universities provide trained and skilled minds ready to take on the challenges of advanced manufacturing. The University of Oxford is ranked #4 for engineering and technology (2025 Times Higher Education). Its Oxford Robotics Institute develops skills in machine learning, fabrication, and systems engineering.

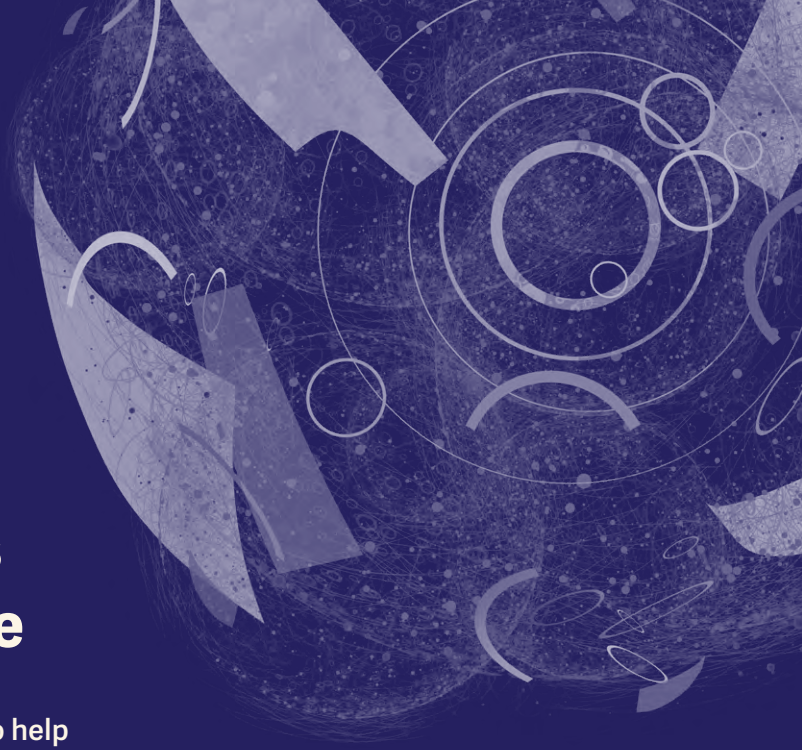
Oxford Brookes University runs highly-regarded courses in automotive and motorsport engineering and technology.

There are also highly-regarded technical colleges and apprenticeship schemes:

University Technical College Oxfordshire caters for students aged 14-19. It specialises in science and engineering and is backed by leading companies in these industries.

Abingdon & Witney College's Advanced Skills Centre is a high-tech higher education hub dedicated to science and engineering training.

Culham Campus takes part in a national apprenticeship scheme for advanced manufacturing. Oxfordshire Advanced Skills, located on the Campus, offers high quality training for apprentice engineers and technicians working in Oxfordshire's technology businesses. It runs a unique engineering manufacturing technician apprenticeship.



Support for businesses investing in Oxfordshire

We provide comprehensive tailored assistance to help companies from across the world establish their new operation in the area.

Our Inward Investment team offers a range of support including:

- Identifying commercial premises and co-ordinating property viewings.
- Facilitating introductions to the University of Oxford and Oxford Brookes University.
- Making introductions to Oxfordshire's science and research facilities.
- Connecting businesses with professional service providers, business support organisations and sector specific networks.
- Offering assistance with graduate recruitment and training support including apprenticeships.
- Providing ongoing aftercare support to Oxfordshire-based companies.
- Promoting investment opportunities in key sectors, clusters and capabilities to a global audience.
- Maximising investment into our Enterprise Zones.
- Supporting businesses to trade internationally, working with the UK Government Department of Business and Trade's international trade advisory service.

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