

Oxfordshire: leading the way to a quantum future

**At the heart of the
next tech revolution**

- One of the world's largest centres for quantum science
- Home of the National Quantum Computing Centre
- Growing Quantum Cluster
- More than £1 billion in funding
- One of five national quantum hubs



**ENTERPRISE
OXFORDSHIRE**

An Oxfordshire County Council-owned company

Oxfordshire's quantum landscape

Quantum in the UK

The UK's £2.5 billion national [quantum strategy](#) is funding new frontiers of quantum research, and support and develop the growing quantum sector until 2033. The aim is to make this country the home for cutting-edge scientific breakthroughs, and the best place in the world to start and grow a quantum business.

In a market estimated to be worth \$1.3 billion globally by 2035:

- Oxford is one of the world's largest centres for quantum science, putting it on a par with other emerging ecosystems such as Quantum Valley in Canada, Munich Quantum Valley, Quantum Delft, and Chicago Quantum Exchange.
- The quantum sector in the UK has a turnover of £10.7 billion.
- The University of Oxford leads one of five national hubs for Quantum Computing, Integrated and Interconnected

Implementations ([QCi3](#)). The hub is working closely with industry partners to identify and develop real-world applications of quantum computing, including the design of new materials, chemicals, fluid simulation techniques and machine learning.

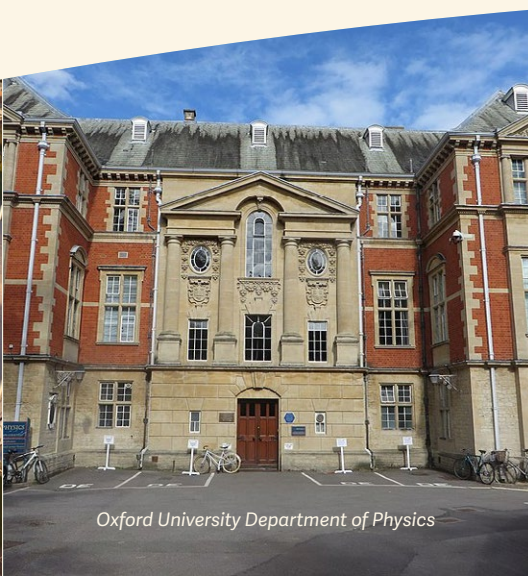
- The UK's quantum industry has been supported for over a decade by the National Quantum Technologies Programme (NQTP) which has received over a \$1 billion in funding.

UK National Quantum Computing Centre

The UK National Quantum Computing Centre ([NQCC](#)) at [Harwell Campus](#) is a £93 million project to create a flagship facility for harnessing the exciting potential of this technology.

Opened in 2024, the Centre provides space for over 120 researchers from academia, industry, government, quantum partner organisations and start-ups.

Diamond Light Source at Harwell Campus



Oxford University Department of Physics



UK National Quantum Computing Centre, Harwell

The NQCC is investing £30 million to commission the development of quantum computing testbeds (prototype quantum computers) in the UK, partnering with Innovate UK. There are 12 quantum computers in development at the NQCC, eight led by private companies.

Oxford

Oxford University has a distinguished history in the field of quantum technology and quantum computing. There are more than 60 [groups](#) involved in quantum science and technology across the University, making it one of the most diverse and significant groupings in the UK. They carry out work on fundamentals, materials and quantum technology, as well as initial work on applications of quantum computing to areas such as climate change, quantum chemistry and computational biology.

Harwell Campus

Harwell's [Quantum Cluster](#) is a unique hub for investors in the transformative power of quantum technology. The campus is the UK's top location for cultivating quantum-related enterprises with key organisations such as at [RAL Space](#), [STFC Cryogenics](#) and the [Central Laser Facility](#).

Quantum companies

There have already been several exciting spinouts from the University of Oxford:



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[OQC](#) has delivered the UK's most advanced quantum computer. In 2023 it raised \$100 million Series B investment, the largest Series B investment so far achieved in the UK for a quantum company.

In 2023 [Quantum Dice](#), a spinout from the University of Oxford's quantum optics laboratory, unveiled the world's fastest PCIe Quantum Random Number Generator. It also secured £2.09 million Innovate UK project funding to accelerate its development. It is based at the Oxford Centre for Innovation.



[Oxford Ionics](#) aims to create the most powerful, accurate and reliable quantum computers that will transform the world of medicine, finance and much more. In 2023 it raised £30 million in a Series A funding. In 2024 it won a £6 million contract to supply a quantum computer to the NQCC and won part of a £35 million contract, alongside Infineon, to build a state-of-the-art portable quantum computer for Cyberagentur, an organisation founded by the German Federal Government that aims to research cybersecurity. Oxford Ionics' portable quantum computer, Minlon, will be used for application development in national security and defence.

[ORCA Computing](#) spun out from the University of Oxford in 2019. Now with offices in Toronto, Krakow and Seattle, it develops full-stack photonic quantum computing systems for scientific and economic applications. It received a record £11.6 million Quantum Data Centre of the Future grant from the UK government.

A number of international quantum companies have an Oxford base:

[Infleqtion](#), a US firm, is bringing quantum closer to the user, enabling smaller, scalable devices. It recently announced a key milestone in the Scalable Quantum Atomic Lattice computing testbed (SQALE) project, demonstrating the largest neutral atom array in the UK, paving the way for scalable, fault-tolerant quantum computing. Its Oxfordshire base is at the [Oxford Technology Park](#) which is also the home of [Quantum Solutions](#) and [Oxford Ionics](#). Infleqtion was the first company to deploy hardware under the NQCC's quantum computing testbed programme, with the installation of a cutting-edge neutral atom quantum computer.

[Quantum Motion Technologies](#) is leveraging silicon to deliver scalable quantum computing. Based in Oxford and London, it raised £42 million in equity funding in 2023 from investors including Bosch Ventures and Porsche.

[Rigetti Computing](#) chose Abingdon as its base to build a UK-based quantum computer. The company's Novera QPU, a 9-qubit QPU, gives users unprecedented access to quantum technology. In April 2024 Rigetti confirmed it would deliver a 24-qubit quantum computing system to the NQCC, based on its Ankaa™-class chip architecture.

Quantum's potential

The new generation of quantum computers could transform complex tasks and dramatically increase capabilities in fields from drug development to autonomous vehicles, space, robotics and climate change.

Quantum in numbers

\$2 trillion*

Gain that four sectors—chemicals, life sciences, finance, and mobility—are likely to see by 2035.

\$1.71 billion*

Amount invested in quantum start-ups globally in 2023.

\$24.4 billion**

Total public investment committed BY 2022 by the US, the EU and China.

*Source: McKinsey

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“By making its facilities available to users from industry and academia, the National Quantum Computing Centre will help them solve some of the biggest challenges we face, whether delivering advances in healthcare, enhancing energy efficiency, tackling climate change, or inventing new materials.”

Lord Vallance, Minister of Science, Research and Innovation, October 2024

Investor support

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

- Identifying commercial premises and co-ordinating property viewings.
- Introductions to the University of Oxford and Oxford Brookes University and to Oxfordshire's science and research facilities.
- Connecting with professional service providers and sector specific networks.
- Assistance with graduate recruitment and training.
- Aftercare support.
- Promoting investment opportunities to a global audience.
- Maximising investment into our Enterprise Zones.
- Supporting businesses to trade internationally.



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