



Location: Western Europe **Population**: 68,138,484 (2023 est.)

(% of total population: England 84.3%, Scotland 8.2%, Wales 4.6%, Northern Ireland 2.8%)

Area: Total: 243,610 sq km (land: 241,930 sq km & water: 1,680 sq km)

(% area breakdown: England 53%, Scotland 32%, Wales 9%, and Northern Ireland 6%)

Capital: London

(also Belfast: N. Ireland, Edinburgh: Scotland, Cardiff:

Wales)

Languages: English (other recognised regional languages: Scots, Scottish Gaelic, Welsh, Irish, Cornish)

Currency: Pound sterling (£/GBP)

GDP: 2.274 trillion GBP (world's 6th largest economy)

Unemployment rate: 3.9%

Industries: Machine tools, electric power equipment, automation equipment, railroad equipment, shipbuilding, aircraft, motor vehicles and parts, electronics and communications equipment, metals, chemicals, coal, petroleum, paper and paper products, food processing, textiles, clothing, other consumer goods.

UK Country Profile

The United Kingdom (UK) is made up of four countries: England, Northern Ireland, Scotland, and Wales. The iconic <u>Union Jack</u> flag is made up of the flags of England, Northern Ireland and Scotland. The UK government is based in Westminster, London. Northern Ireland, Scotland and Wales are devolved countries and each have their own parliament, which make many of the decisions for their own country. Each devolved country has its own science strategy, while also being part of the overall UK strategy.

The UK is home to some of the world's leading scientific research, taking place in numerous universities, institutions, and companies. The UK holds the fourth place in the <u>Global Innovation Index 2023 rankings</u>.

Universities

There are over 160 universities in the UK, two of which are in the top three of the <u>2024 worldwide university rankings</u>, with four in the top ten. Some 17 are in the top 100 universities.

The UK is the second most popular destination for international students; 45.4% of all postgraduates came from abroad, according to <u>Migration Observatory Oxford</u>. There are several universities in London and Edinburgh, two of the world's top 100 cities.

Research in the higher education sector in the UK is funded primarily by the government, with additional support from charities, international sources, and the private sector. It is a dual funding system with two primary streams. The first stream is quality related (QR) funding, block grants which are based on universities' performance. The second stream is grant funding, where specific projects compete for grants. Public funding comes from a range of government departments with research budgets at their disposal, but much of it comes from the Department for Science, Innovation and Technology (DSIT) through UK Research and Innovation (UKRI) (see more below). The devolved administrations also support equivalent funding bodies in other parts of the UK.

QR funding is linked to the Research Excellence Framework (REF) report. This report was published in 2022 by the four higher education funding bodies for England, Scotland, Wales, and Northern Ireland. Research Excellent Framework (REF) 2021 rated 41% of UK university research submitted as world leading and 47% as internationally excellent.

The UK is ranked <u>fourth worldwide</u> for published scientific research, with over 205,000 citable publications in 2022 alone. Many of the most cited journals internationally are <u>based in the UK</u>. Although it represents just 0.9% of the global population, the UK produces <u>13%</u> of the world's most highly cited scientific research. The UK also excels in international research collaboration. Over <u>61%</u> of the UK's publications were co-authored with at least one non-UK researcher, currently the highest among peer countries. The government has produced guidelines on <u>Trusted Research</u> to facilitate working with global partners in specific areas of research.

UK Strategy

The UK government has stated that its future success will depend on the ability to build on current strengths in science, technology, finance and innovation. It intends to make the UK a "science and technology superpower" by 2030, according to the UK Science and Technology Framework 2023.



The Framework focuses on: identifying critical technologies, signalling the UK's strengths and ambitions, investment in R&D, talent and skills, financing innovative science and technology companies, procurement, international opportunities, access to physical and digital infrastructure, regulation and standards, and promoting an innovative public sector.

The government has set a series of ambitious targets in relation to this superpower goal, including a target to spend 2.4% of UK GDP on research and development (R&D) by 2027. DSIT was formed in February 2023 to support its strategy. DSIT brings together the five technologies of tomorrow under one department — quantum, AI, engineering biology, semiconductors, future telecoms, together with life sciences, space and green technologies.

University spin-out companies are very important for the UK economy, with investment increasing almost five-fold from 2014 to 2023. The government has recently committed to making the UK the best place in the world to start a spin-out company. As well as investing £500 million investment in artificial intelligence (AI), to make the UK the best place to begin an AI start-up.

The UK has the largest technology ecosystem in Europe, is home to the greatest number of quantum companies in Europe, and has the third-largest Al market in the world, according to Superpower Campaign.

The UK is also the eighth-largest manufacturing economy. In November 2023, the Business and Trade Secretary launched the UK's <u>Advanced Manufacturing Plan</u> backed by £4.5bn in the Autumn Statement on finance. Over £2bn has been allocated to the automotive industry, including batteries, and £975m for aerospace.

<u>Catapult Centres</u> act as a network for world-leading technology and innovation centres, helping businesses transform great ideas into valuable products and services. The network is comprised of nine Catapults with a national presence spanning over 50 locations. Sectors known to benefit under the scheme include:

- Cell and gene therapy
- · Compound semiconductor applications
- Connected Places
- Digital
- Energy Systems
- High value manufacturing
- Medicines discovery
- Offshore renewable energy
- Satellite applications

"Catapults are physical centres with cutting-edge R&D infrastructures including hubs, laboratories, testbeds, factories and offices, as well as technical experts that prove and adopt breakthrough products, processes, services and technologies." (The Innovation Launchpad Network +)

Where to find funding

Since 1 January 2024, the UK is pleased to become an associated country under the EU's <u>Horizon Europe</u> research and innovation programme (see <u>UKRI information on</u> Horizon Europe or find your National Contact Point from the government website).

There are many different ways to obtain funding for your research in the UK, including specialised councils operating in the UK that offer grants and fellowships.



Big Ben. London, England, UK



UCL, University College London, England, UK



Wales Millennium Centre, Cardiff, Wales, UK



The University of Edinburgh, Scotland, UK

Source:

https://www.britishcouncil.be/



Research Councils – These are the main public investors in fundamental research in the UK, with interests ranging from arts and humanities to particle physics. The seven Research Councils work together through UKRI and funded by DSIT. They invest £8bn each year into research and innovation, in areas including biodiversity conservation, quantum computing, space telescopes, and innovative health care. UKRI activities include funding projects, developing researchers' skills, strengthening research infrastructure, supporting commercialisation of research, and engaging with the public on science.

UKRI has information about international funding opportunities (ranging from travel to long-term collaborative grants) from the Research Councils, plus Research England and Innovate UK:

- Arts & Humanities Research Council (AHRC)
- Biotechnology & Biological Sciences Research Council (BBSRC)
- Engineering & Physical Sciences Research Council (EPSRC)
- Economic & Social Research Council (ESRC
- Innovate UK
- Medical Research Council (MRC)
- Natural Environment Research Council (NERC)
- Research England
- Science and Technology Facilities Council (STFC)

UKRI also hosts the <u>Gateway to Research</u>, an extensive record of publicly funded research in the UK.

Other funding opportunities in the UK – Other research and science funding avenues include learned societies, charitable organisations, and professional bodies.

Learned Societies and Academies – These organisations promote research in specific subject areas through academic publications, funding opportunities, conferences, and membership. Some also act as professional bodies by offering accreditation (further information on Funding sources).

More Reasons to Choose the UK

Gender equality is an important feature of the UK R&I landscape with notable improvements according to the latest UK and European data (<u>Gender Statistics Database</u>, <u>EIGE</u>, 2023). For example, women are well represented (48.4%) in national academies of science. For EU countries as a whole, the equivalent female representation in these high-level academies is 27.9% (numbers vary greatly between countries). For research funding organisations (presidents and members of the highest decision-making body) 46.2% are female, while the equivalent in Europe is 43.1% female.

International talent plays an important role in UK universities. Among academic staff with known nationality, 37,585 or 16% are EU nationals, and 40,195 or 17% have a non-EU nationality (<u>HESA</u>). The subject areas with the highest proportion of international academic staff are engineering and technology (47.9%) and biological, mathematical and physical sciences (39.8%) (Universities UK)

Teams at the 28 <u>EURAXESS Service Centres</u> in the UK can provide advice and tips on moving to the UK for work or study, as well as offer information about their region, and the local area.





Some testimonies and notable quotes about the UK from international researchers highlighted in the 'Meet the Researchers' series from EURAXESS UK:

"The UK offers a modern, multicultural environment. People here welcome new and different ideas, show mutual respect, and maintain a friendly atmosphere."

(Dr Minh Ngoc Nguyen, Research Fellow at Aston University)

"[Moving to the UK allowed me to leverage] the advanced research facilities and collaborative opportunities available in the UK." (<u>Dr Temitope Odedeyi</u>, Royal Academy of Engineering Research Fellow at University College London)

"The University of Liverpool has amazing staff and students, and the potential is enormous." (Professor Sonia Rocha, Executive Dean at the Institute of Systems, Molecular and Integrative Biology at the University of Liverpool)