

Statistical bulletin

Business enterprise research and development, UK: 2024

Spending and numbers employed on research and development by businesses in the UK, including data on sources of funds and regional spread.

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To be announced

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1 . Main points

- In current prices, expenditure on research and development (R&D) performed by UK businesses was £55.6 billion in 2024, an increase of £2.4 billion compared with 2023 (4.5%).
- The software development product group made the largest contribution to the total of business R&D performed in 2024, with £10.3 billion (18.5% of total R&D performed by UK businesses).
- London had the largest value of business R&D performed in 2024, which was £13.3 billion (24.0%), followed by the East of England at £10.3 billion (18.5%) and the South East at £9.2 billion (16.6%).
- When measuring the value of R&D performed by industry rather than product group, the scientific research and development industry performed the most R&D in 2024 at £13.0 billion (23.5%), followed by the computer programming, consultancy and related activities industry at £7.5 billion (13.4%).
- Estimates in this release have been compiled based on the new sampling and results methods that were introduced for the 2022 period; estimates for 2024 are comparable with those from 2022 but are not directly comparable with previous years, with the exception of the UK totals.

2 . Data on business enterprise research and development, UK

[Business enterprise research and development, UK \(designated as accredited official statistics\)](#)

Dataset | Published 28 November 2025

UK estimates of annual research and development (R&D) spending by UK businesses.

[Business enterprise research and development, UK \(designated as official statistics\)](#)

Dataset | Published 28 November 2025

Annual research and development (R&D) spending by UK businesses, designated as official statistics.

[Business enterprise research and development, quality measures, UK](#)

Dataset | Published 28 November 2025

Quality measures for annual expenditure on research and development, as measured by the Business Enterprise Research and Development survey.

3 . Glossary

Research and development (R&D)

Defined as creative and systematic work undertaken to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge.

Organisation for Economic Co-operation and Development (OECD)

An international organisation of governments that exists to find solutions to social, economic and environmental challenges. Please visit the [OECD website](#) for more information.

Frascati Manual

The OECD's internationally recognised [Frascati Manual 2015](#), which sets out methodology for collecting and using R&D statistics. It includes definitions of basic concepts, data collection guidelines, and classifications for compiling R&D statistics.

Inter-departmental Business Register (IDBR)

A database of businesses in the UK that is used as the sampling frame for Office for National Statistics (ONS) business surveys.

Product group

A category that relates to the type of R&D work performed by a business, which may or may not relate to the business's main activity.

Standard Industrial Classification (SIC)

The [industrial classification](#) applied to the collection and publication of a wide range of economic statistics.

4 . Data sources and quality

Methodological developments

In previously published business enterprise research and development (BERD) statistics there was undercoverage, particularly of small-to-medium-sized businesses, as set out in our [article published in September 2022](#).

To address this, the way in which BERD statistics are collected and compiled has been redeveloped.

New sample design and survey methodology were introduced for the 2022 reference period and all statistics in this release from 2022 are based on this new methodology.

The change to the sample design now means that the BERD sample is drawn from the whole of the Inter-Departmental Business Register (IDBR) and survey returns are weighted to represent the whole population of businesses on the IDBR. Previously the survey results only represented businesses in a pre-established reference list rather than the whole of the business sector in the UK.

Northern Ireland R&D statistics

BERD statistics for Northern Ireland are compiled by the [Northern Ireland Statistics Research Agency \(NISRA\)](#). Regional estimates for Northern Ireland in this release can be slightly higher than the separate estimates published by NISRA. This is because a small proportion of research and development (R&D) is performed in Northern Ireland by businesses registered in Great Britain (GB). These businesses are in scope for the GB BERD survey and are excluded from the results published by NISRA. We have worked closely with NISRA to ensure no duplication exists as a result.

Survey questions

A summary of the survey questions is available on our [Questions for Business enterprise research and development 2023 survey web page](#). The questions for the 2024 survey were the same as for 2023.

Using administrative data

Part of the BERD survey redevelopment work included investigating the measurement of R&D that is used to support claims for R&D tax credits. As part of this we published an article on the [comparison of BERD with administrative data sources](#) and we now use HM Revenue and Customs' (HMRC's) R&D tax credit data to inform our sample. Using the HMRC data, we identify the top 400 R&D tax credit claimants. These are combined with the top 400 R&D performing businesses, based on expenditure reported on the previous year's BERD survey, to compile a reference list of approximately 800 top R&D performers in Great Britain, which are automatically included in the sample each year. The remainder of the sampled businesses are randomly selected from the IDBR to ensure it includes all business types and that adequate numbers of businesses are sampled by region to produce robust subnational estimates.

Further information about the improvements to our sample design can be found in our [Update on transformation of research and development statistics: November 2023 article](#).

Revisions

In this release, BERD estimates for the 2024 survey period are published for the first time and there are now three years of data available based on consistent methodology.

This has facilitated more in-depth validation of the results since 2022 and, combined with revised and late survey returns, we have been able to revise data in 2022 and 2023 based on this information.

Time series

We are working to produce a comparable time series of BERD statistics that will enable us to publish more granular statistics for periods before 2022. This work has proven to be complex and the ONS is committed to ensuring the data are of the highest quality before publishing. However, NISRA has incorporated revised BERD statistics up to 2017, and we will incorporate these revisions into our time series work when compiling estimates for the UK. This means that until we complete our time series work, the earliest comparable data point for UK estimates of BERD in this release is 2018. We intend to publish the more detailed time series estimates as soon as possible.

Standard errors

Following the suspension of the "Accredited Official Statistics" designation, for BERD statistics below the UK level, the Office for Statistics Regulation (OSR) conducted a [Spotlight on Quality Assessment \(PDF, 210KB\)](#). In this assessment, OSR recommended that when complete, BERD statistics should be reassessed with a view to reaccrediting all data in this release as "Accredited Official Statistics".

One of the recommendations is linked to how we communicate uncertainty around BERD statistics.

In response, we have undertaken work to produce standard errors at product group level. These quality measures have been published as part of this release for the 2023 period onwards and will allow users to make informed decisions about the uncertainty of data resulting from sampling error.

Deflator

The focus of this release is based on current price estimates of business-related R&D expenditure. The total BERD estimate for the UK, however, is also presented in constant prices, and historically the GDP expenditure deflator has been used to create this series. While we acknowledge the GDP deflator was not specifically for R&D, it was the best deflator to use at the time. However, a new R&D deflator has been developed and has recently been used to compile constant price estimates of R&D in the National Accounts. We have incorporated the use of this deflator to calculate the constant prices estimates in this release; the version used is consistent with Blue Book 2025.

Disclosure

Statistical disclosure control processes have been reviewed in this release to ensure that the protection applied is up to date and that it meets the standards for safeguarding confidentiality provided in the Government Analysis Function's [Disclosure control for tables produced from surveys guidance](#).

Accredited Official Statistics status

Of the estimates in this release, only the total UK estimates are designated as "Accredited Official Statistics". All estimates below the UK level are designated as "Official Statistics", which has been the case since the 2022 BERD release. More information about this is available in [OSR's Assessment of BERD letter](#). We continue to work through recommendations made by OSR; once these have been completed, the BERD statistics in this release can be reassessed with a view to classifying all BERD statistics as "Accredited Official Statistics".

More quality and methodology information

More quality and methodology information on strengths, limitations, appropriate uses, and how the data were created is available in our [BERD quality and methodology Information \(QMI\)](#).

5 . Related links

[Gross domestic expenditure on research and development, UK: 2023](#)

Bulletin | Released 15 August 2025

Annual estimates of research and development (R&D) performed and funded by business enterprise, higher education, government, UK Research and Innovation (UKRI), and private non-profit organisations.

[Research and development expenditure by the UK government: 2023](#)

Bulletin | Released 9 April 2025

Research and development and related expenditure by UK government departments and devolved administrations.

6 . Cite this statistical bulletin

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