



Notice is given under section 1 of the Statistics of Trade Act 1947

## Survey of Research and Development Carried Out in the United Kingdom

 Office for  
National Statistics

**Please do not discard this important document - your response is legally required**

00001 62012  
CONTACT NAME  
OFFICE FOR NATIONAL STATISTICS  
GOVERNMENT BUILDINGS  
CARDIFF ROAD  
NEWPORT  
NP10 8XG  
\*\*\*\*\* EXAMPLE PRINT \*\*\*\*\*

Please write any changes to your name and address in the box below, using black ink

**To be completed for:** THE BUSINESS NAMED ABOVE

**Please complete and return by 4 April 2017**

Dear Sir or Madam,

Please find the 2016 questionnaire for the Survey of Research and Development Carried Out in the United Kingdom attached. Please complete for the calendar year 2016. If actual figures are not available, please provide informed estimates. Once complete, the questionnaire can be returned by post or fax using the details in the box below.

The information you supply is used to measure resources devoted to research and development in the UK. These figures are used in analysis and decision making by government, businesses and international organisations, and are collected as part of the UK's international obligations, particularly to the European Union.

We guarantee that while your employment is less than 10, you will receive no more than 1 questionnaire for this ONS business survey. You must complete and return this questionnaire on time, after which you will be excluded from all business surveys for at least 3 years. The Annual Survey of Hours and Earnings is not covered by this guarantee.

**You are required by law to complete this questionnaire.** If you do not complete and return this questionnaire by 4 April 2017, penalties may be incurred (under section 4 of the Statistics of Trade Act 1947). All the information you provide is kept strictly confidential. It is illegal for us to reveal your data or identify your business to unauthorised persons.

Thank you for your co-operation,  
Office for National Statistics

### Questionnaire return details

**To return via fax:** 01633 652707

**To return via post:** Please use the prepaid envelope provided which is addressed to:  
Office for National Statistics, Government Buildings, Cardiff Road, Newport, NP10 8XG

### Contact numbers

Er mwyn gwneud cais am ffurflen Gymraeg (To request a questionnaire in Welsh) 0300 1234 921

If you would like to use our Minicom service for the Deaf 01633 815 044

To complete the questionnaire in Euros 0300 1234 940

For any other queries, please contact the **R&D Survey Team** **0300 1234 940**  
or go to [www.ons.gov.uk/surveys](http://www.ons.gov.uk/surveys)

### When contacting the office you may be asked for the following information

**Survey code:** 002

**Reference number:** 4990 0000 000

**Period:** 201612

- Telephone calls may be recorded for training and quality purposes

002 0001 62012

49900000000 H 00000000 A 002 201612 001

F P G 0 0 2

**R&D SO**



## 2016 Business Enterprise Research and Development

### Purpose of this Survey

The purpose of this survey is to collect expenditure and employment figures relating to Research and Development (R&D) activities. The survey contributes to the measurement of resources devoted to research and development in the United Kingdom. The information is also collected to meet the UK's international obligations, particularly to the European Union.

If your business did not have any R&D please note that you are still required to complete the relevant sections in this questionnaire.

### What is R&D?

R&D covers **three** types of activity:

1. Basic research
2. Applied research
3. Experimental development

R&D comprises creative and systematic work undertaken in order to increase the stock of knowledge, and in order to devise new applications of available knowledge. R&D activity **must** have elements of **all of these five** criteria:

1. **Novel** - To be aimed at new findings
2. **Creative** - To be based on original, not obvious, concepts and hypotheses
3. **Uncertain** - To be uncertain about the final outcome
4. **Systematic** - To be planned and budgeted
5. **Transferable/reproducible** - To lead to results that could possibly be reproduced

Further explanatory notes can be found at the back of this survey.

### Coverage

The UK includes England, Scotland, Wales and Northern Ireland but excludes the Channel Islands and the Isle of Man.

### Tax Credits

Do not include R&D tax credits in any of your figures.

### Information Required

This questionnaire is divided into five sections:

**Section A** - asks for the reporting period.

**Section B** - asks for information on in-house R&D.

**Section C** - asks for information on the purchase of R&D outside of this business.

**Section D** - asks for the number of employees working on R&D.

**Section E** - asks for comments and contact details.

### How to complete the questionnaire

- Complete in black ink
- Ensure letters and numbers are PRINTED and centred within each box
- Do not cross sevens  or zeros
- Please leave question blank if not applicable

**Please complete this questionnaire for the business named on the front of the questionnaire**



## Section A - Reporting Period

1. Are you able to report for the calendar year, 1 January 2016 to 31 December 2016?

Yes  → Go to Q3

No  → Go to Q2

2. What are the dates of the 12-month period that you will be reporting for?

Your return should relate to a business year that ends between 6 April 2016 and 5 April 2017

From:      Day      Month      Year      To:      Day      Month      Year  
                               















**Section B - In-house R&D**

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate

**In-house R&D: Capital Expenditure**

£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>
---	----------------------	---	----------------------	---	----------------------	---	----------------------

£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>
---	----------------------	---	----------------------	---	----------------------	---	----------------------

£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>
---	----------------------	---	----------------------	---	----------------------	---	----------------------

£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>
---	----------------------	---	----------------------	---	----------------------	---	----------------------

£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>
---	----------------------	---	----------------------	---	----------------------	---	----------------------

£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>	£	<input type="text"/>
---	----------------------	---	----------------------	---	----------------------	---	----------------------



**Section B - In-house R&D**

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate



Please write your codes as they appear on the previous page. . .

**Funding for Expenditure on In-house R&D**

Include contracts, grants or donations in the form of money or other resources. Estimates are acceptable.

**12. Of your in-house expenditure for R&D, how much was originally funded by:**

**(a) own funds from within the UK?**

Include funding from your parent company or other subsidiary companies operating within the UK. . . . .

£           ,000 £           ,000

**(b) the UK Government?**

Include funding from, or originating within, UK government departments, their agencies and non-departmental public bodies (for example, NHS, Ministry of Defence, Department of Health, Department for Business, Energy and Industrial Strategy, the Scottish / Welsh Governments) . . . . .

£           ,000 £           ,000

**(c) other UK business enterprises?**

Include private non-profit organisations serving businesses . . . . .

£           ,000 £           ,000

**(d) UK non-profit organisations?**

Include trade unions and private non-profit organisations serving households . . . . .

£           ,000 £           ,000

**(e) UK higher education establishments? . . . . .**

£           ,000 £           ,000

**(f) business enterprises within your group outside the UK?**

Include funding from your parent company or other subsidiary companies operating outside the UK . . . . .

£           ,000 £           ,000

**(g) other business enterprises outside the UK? . . . . .**

£           ,000 £           ,000

**(h) other Governments outside the UK? . . . . .**

£           ,000 £           ,000

**(i) higher education establishments outside the UK? . . . . .**

£           ,000 £           ,000

**(j) non-profit organisations outside the UK? . . . . .**

£           ,000 £           ,000

**(k) the Commission of the European Union?**

Do not include funding for R&D for defence codes . . . . .

£           ,000 £           ,000

**(l) international organisations?**

For example, World Trade Organisation, NATO . . . . .

£           ,000 £           ,000

**(m) any other organisations outside the UK? . . . . .**

£           ,000 £           ,000

**13. What was your total R&D funding for in-house expenditure?**

This is the sum of questions 12a to 12m. This should equal question 11. . . . .

£           ,000 £           ,000



**Section B - In-house R&D**

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate

**Funding for Expenditure on In-house R&D**

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000

£            ,000    £            ,000    £            ,000    £            ,000



**Section B - In-house R&D**

14. Question 14 on Ownership of R&D Assets has been withdrawn for this period. Please continue to Question 15.



**Section B - In-house R&D**

15. Question 15 on Life Length of R&D Assets has been withdrawn for this period. Please continue to Question 16.



**Section C - Purchase of R&D Conducted Outside this Business**

Exclude

- any expenditure reported as in-house expenditure in Section B

**16. During the 12 month reporting period, did you purchase any R&D conducted outside this business?**

Include parent companies or other subsidiary companies within the group operating in the UK.

Yes  → Go to Q17

No  → Go to Q22

**17. Please select the codes that best describes the sector for which R&D was purchased, outside of this business during the 12 month period.**

The full list of codes can be found at the back of the questionnaire.



If more than six codes are applicable to your business please telephone 0300 1234 940

- Defence R&D is all R&D carried out primarily for defence or military reasons, even if civil use is made of it at a later date. . . . .

**Code**  
Civil / Defence  
Delete as appropriate

**Code**  
Civil / Defence  
Delete as appropriate



**18. During the 12 month reporting period, how much did you spend on R&D work commissioned within the UK?**

Include

- parent companies or other subsidiary companies within the group operating in the UK
- subscriptions to industrial research associations

Exclude VAT. . . . . £

 ,000

 ,000

**19. During the 12 month reporting period, how much did you spend on R&D work carried out outside the UK which was originally funded by the UK Government?**

Include

- parent companies and other businesses overseas
- subscriptions to industrial research associations

Exclude VAT. . . . . £

 ,000

 ,000

**20. During the 12 month reporting period, how much did you spend on all other R&D work carried out outside the UK?**

Include

- parent companies and other businesses overseas
- subscriptions to industrial research associations

Exclude

- expenditure reported in question 19
- VAT. . . . . £

 ,000

 ,000

**21. During the 12 month reporting period, what was the total R&D work purchased by this business?**

This is the sum of questions 18, 19 and 20 . . . . . £

 ,000

 ,000




## Section D - Number of Employees - Headcount and Full Time Equivalent (FTE)

An employee is anyone aged 16 or over that your organisation directly pays from its payroll(s), in return for carrying out a full-time or part-time job or being on a training scheme. Each employee should have a contract of employment.

### Include

- all workers paid directly from this business' payroll(s)
- those temporarily absent but still being paid (for example on maternity leave)

### Exclude

- agency workers/contractors paid directly from the agency payroll/contractor company
- voluntary workers
- self employed workers
- former employees only receiving a pension
- working owners who are not paid directly from this business' payroll(s)

### 22. On 1 December 2016, how many employees working on R&D were:

#### (a) researchers?

Engaged in the conception or creation of new knowledge, products, methods and systems. For example, PhD students, graduates and scientists. . . . .

Male

Female

    
    

#### (b) technicians?

Perform scientific and technical tasks normally under the supervision of researchers. . . . .

    
    

#### (c) others?

Support staff including skilled and unskilled craftsmen, secretarial and clerical staff participating in R&D projects. . . . .

    
    

### 23. On 1 December 2016, what was your total headcount number for R&D. . . . .

    
    

### 24. During the 12 month reporting period, how many full-time equivalents (FTEs) working on R&D were: One FTE may be thought of as one person-year. For example, a person who normally spends 30% of their time on R&D and the rest on other activities should be considered as 0.3 FTE. Similarly, if a full-time R&D worker is employed at an R&D unit for only six months, this results in the FTE of 0.5.

#### (a) researchers?

Engaged in the conception or creation of new knowledge, products, methods and systems. For example, PhD students, graduates and scientists . . . . .

Civil

Defence

     . 
     . 

#### (b) technicians?

Perform scientific and technical tasks normally under the supervision of researchers. . . . .

     . 
     . 

#### (c) others?

Support staff including skilled and unskilled craftsmen, secretarial and clerical staff participating in R&D projects. . . . .

     . 
     . 

### 25. During the 12 month reporting period, what was your total number of FTEs working on R&D? . . . . .

     . 
     . 




**Section E - Workplace Information**

**26. Please list the postcodes of all workplaces within this business where in-house R&D is performed and the percentage of this business' R&D carried out at each workplace.**  
 Include the workplace given on the front page if R&D is performed at this address.

Workplace postcode	Percentage (%) of total R&D
	<b>Total = 100%</b>

**27. Have there been any significant changes in the data since the last reporting period?**

Yes  → Go to Q28

No  → Go to Q29

**28. Please provide any comments below**

**29. Contact details**

Please provide details of the person we should contact if we have any queries regarding the information returned on this questionnaire:

Contact name

Telephone number

Position in business

E-mail address



## R&D Codes

Please choose the appropriate code from the list below to complete section B and section C on the questionnaire.

<b>Code</b>	<b>Description</b>
<b>1</b>	Agriculture, hunting and forestry; fishing
<b>2</b>	Mining and quarrying (including solids, liquids and gases)
<b>3</b>	Food products and beverages
<b>4</b>	Tobacco
<b>5</b>	Textiles
<b>6</b>	Wearing apparel (including fur and leather)
<b>7</b>	Leather and related products
<b>8</b>	Wood, cork and straw products (excluding furniture)
<b>9</b>	Paper and paper products
<b>10</b>	Printing and reproduction of recorded media
<b>11</b>	Coke and refined petroleum products (including mineral oil)
<b>12</b>	Chemicals and chemical products (excluding pharmaceuticals)
<b>13</b>	Pharmaceutical products and preparations
<b>14</b>	Rubber and plastic products
<b>15</b>	Other non-metallic mineral products
<b>16</b>	Basic metals, iron and steel
<b>17</b>	Basic metals, non-ferrous and processing of nuclear fuel
<b>18</b>	Fabricated metal products (excluding machinery and equipment)
<b>19</b>	Weapons and ammunition
<b>20</b>	Electronic components and boards
<b>21</b>	Computers and peripheral equipment
<b>22</b>	Communication equipment
<b>23</b>	Consumer electronics
<b>24</b>	Instruments and appliances for measuring, testing and navigation; watches and clocks



## R&D Codes continued

Code	Description
25	Irradiation, electromedical and electrotherapeutic equipment
26	Optical instruments and photographic equipment; magnetic and optical media
27	Electrical equipment (including motors, domestic appliances and other electrical equipment)
28	Other general purpose machinery and equipment
29	Motor vehicles, trailers, semi-trailers and caravans (excluding repairs)
30	Ships and boats (excluding repairs)
31	Railway locomotives and rolling stock
32	Air and spacecraft and related machinery
33	Other transport equipment (including motorcycles and invalid carriages)
34	Furniture
35	Other manufacturing (including jewellery, coins, sports goods, games and toys)
36	Repair and installation of machinery and equipment
37	Electricity, gas, steam, air conditioning
38	Sewerage, waste management and remediation activities; water collection, supply and treatment
39	Construction
40	Wholesale and retail trade; Repair of motor vehicles and motorcycles
41	Transport and storage (including land, air, water transport; warehousing and postal/courier activities)
42	Accommodation and food service activities (including hotels, restaurants, camping, take away)
43	Publishing activities (including books and software publishing). Do <b>not</b> include software development
44	Motion picture, video, TV programme, sound, music publishing; broadcasting activities
45	Telecommunications
46	Please see product group 57 for 'computer programming' and product group 58 for 'software development'
47	Information service activities (including data processing, hosting and web portals)

## R&D Codes continued

<b>Code</b>	<b>Description</b>
<b>48</b>	Financial and insurance activities (including activities of holding companies)
<b>49</b>	Real estate, (including renting and leasing of own real estate)
<b>50</b>	Professional, scientific & technical activities (including legal, accounting & management consulting)
<b>51</b>	Research and development services (excluding software development)
<b>52</b>	Admin and support activities (including employment, travel agency, security and business support)
<b>53</b>	Public administration and defence (including compulsory social security, and education)
<b>54</b>	Human health and social work activities (including residential care)
<b>55</b>	Arts, entertainment and recreation (including libraries, gambling, sports activities)
<b>56</b>	Other service activities (including repairs to household goods and computers)
<b>57</b>	Computer programming, consultancy and related activities, (excluding software development)
<b>58</b>	Software development

## Research and Development (R&D) Explained

We have attempted to provide some basic guidelines below, to help you define and measure R&D for completion of this survey. In some cases you may need to apply an element of judgement when compiling your figures. We accept approximations. Further information can be found in the Frascati Manual, which is the international source of methodology for collecting and using R&D statistics.

### Examples of R&D to be included

- Clinical trials phases I, II and III
- Research into and original development (or substantial modification) of computer software, such as new programming languages and new operating systems
- Design, construction and operation of prototypes where the main objective is technical testing or to make further improvements
- Construction and operation of pilot plants while still in the experimental phase and the primary purpose of operation is non-commercial
- 'Feedback R&D' directed at solving problems occurring beyond the original R&D phase, such as the resolution of technical problems arising in initial production runs
- Research work in the social sciences, arts and humanities

### Examples of R&D to be excluded

Unless used primarily as part of (or for the support of) R&D projects, the following are excluded:

- Clinical trial phase IV
- Scientific and technical information services
- Prospecting, exploring or drilling for minerals, petroleum or natural gas
- Policy related studies, management studies, efficiency studies
- Consumer surveys, advertising, market research
- Routine quality control and testing
- General purpose or routine data collection
- Feasibility studies
- Routine computer programming, systems maintenance or software application
- Commercial, legal and administrative aspects of patenting, copyrighting or licensing activities
- Activities associated with standards compliance
- Specialised routine medical care, e.g. routine pathology services

### At what stage does R&D end?

R&D ends when the work is no longer experimental, for example, when the material, product etc. is substantially developed and the primary objective is to:

- develop markets
- plan for pre-production and undertake pre-production activities (such as demonstration of commercial viability, tooling up and trial production runs)
- get production or control systems working smoothly

If the primary objective is to make further technical improvements, then the work is still defined as R&D.