Australian Bureau of Statistics

Survey of Research and Experimental Development Government and Private Non-Profit Organisations 2018-19

RDPS

In correspondence, please quote this number ▼

Australian Business Number

Please correct any errors

Purpose of Collection
The Research and Experimental Development (R&D) survey provides comprehensive data on Australia's R&D effort. This information is used by government and advisers to government, international organisations such as the Organisation for Economic Co-operation and Development, businesses, economists and others. The information is used for purposes such as policy formulation, allocation of funds and the determination of priorities for research and development.

Collection Authority
The information asked for is collected under the authority of the *Census and Statistics Act 1905*. Your cooperation is sought in completing and returning this form by the due date. The Act provides me with the power, if needed, to direct you to provide the information sought.

Confidentiality
Your completed form and personal information remain confidential to the Australian Bureau of Statistics.

Due Date
Please complete this form and return it in the reply paid envelope to the Australian Bureau of Statistics by

Help Available
If you have problems in completing this form, or feel that you may have difficulties meeting the due date, please contact the Australian Bureau of Statistics by:

Telephone
1800 089 494
Freecall (excluding mobile phones)

Mail
Australian Bureau of Statistics
Reply Paid 91903
Dandenong VIC 3175

Australian Statistician

Person we should contact if any queries arise regarding this form

Name		Date	/ /
Signature		Telephone	
Email			

Please read this first

- **Important:** This form will be read using electronic equipment.
- Use **only black ball point pen** when completing this form.
- Keep each number, letter or tick within the data entry boxes provided, for example

  ,285 **or** ✓

- Leave answer boxes blank where you have no response or data to enter.
- Do not use 'nil', 'n/a' or draw a line in the data entry boxes.
- If a mistake is made, cross out the incorrect answer and either write the answer in the remaining boxes, for example

  Expenditure … … … … $ 73, ~~86~~, 000

  or if not enough space is left, write next to the relevant item, for example

  Expenditure … … … … 3142 $ ~~3,642~~, 000

- Information reported on this form should comply with the Australian equivalents to International Financial Reporting Standards (AIFRS).
- Report all expense items **exclusive of Goods and Services Tax (GST)** where this is recoverable as an input tax credit.
- If exact figures are not available, please provide careful estimates.
- Please report all monetary values in ***thousands of Australian dollars (A$'000)***. For example, report $20,000 as 20. Where the value in the accounts of this organisation is not expressed in thousands of dollars, round the value to the nearest thousand dollars.
- The items listed under ***Including*** and ***Excluding*** are examples and should not be taken as a complete list of items to be included or excluded.
- You will need to report an estimate of time taken when you have completed this form.

Part A – General information

1 Period covered by financial data on this form

Note
- This form is for the financial year ended 30 June 2019.
- If this organisation has a different financial year, please report for a 12 month period which ends between 1 October 2018 and 30 September 2019 (e.g. a financial year ending 31 December 2018).

Tick one box

1 July 2018 - 30 June 2019 … … … … … … ☐

1 January 2018 - 31 December 2018 … … … ☐

Other (please specify) … … … … … … … … ☐

From / / To / /

If the period covered by this form is not 12 months, please explain below
(Please use BLOCK letters)

2 Number of persons working for this organisation during the last pay period ending in June 2019

Including
- Persons paid a retainer, wage or salary
- Full-time and part-time employees
- Permanent, temporary and casual employees
- Managerial and executive employees
- Employees absent on paid or prepaid leave
- Employees on workers compensation who continue to be paid through the payroll

Excluding
- Employees paid solely under the Australian Government's Paid Parental Leave Scheme
- Contractors paid on invoice
- Persons paid by commission only (i.e. a retainer/wage/salary is **not** paid)
- Non-salaried directors
- Self-employed persons such as subcontractors or consultants who are not employees, working proprietors or partners of this business/organisation
- Volunteers

Number

… … … ,

Definition of Research and Experimental Development (R&D)

What is R&D?

Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge.

For an activity to be considered R&D, the activity must be:

- **novel** (aimed at new findings)
- **creative** (based on original, not obvious, concepts and hypotheses)
- **uncertain** (uncertain about the final outcome)
- **systematic** (planned and budgeted)
- **transferable and/or reproducible** (lead to results that could be possibly reproduced)

All five criteria are to be met, at least in principle, every time an R&D activity is undertaken.

R&D performed by government and private not-for-profit organisations is investigative work that has actual or potential use in the development of new or enhanced materials, products, devices, processes, systems or services.

Examples of R&D

- Health and medical research, including clinical trial phases I, II and III
- Development of new survey methods, sampling methodologies, etc.
- Data collection, processing and interpretation which is conducted solely or primarily as part of an R&D project
- Research into and original development (or substantial modification) of computer software, such as new programming languages and new operating systems
- 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

Where 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 R&D.

Specific R&D excludes

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

- **Clinical trial phases I, II and III which are part of a bigger R&D project managed by another business or organisation**
- Clinical trial phase IV
- Scientific and technical information services
- Policy related studies, management studies, efficiency studies and programme evaluations
- Consumer surveys, advertising, market research
- Routine quality control, testing and standardisation
- 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)
- Purely R&D financing activities including management and distribution of grants

Part B – R&D carried out by this organisation

3 Did this organisation carry out any R&D during the year ended 30 June 2019 or the equivalent financial period?

Definition

- **R&D carried out by this organisation** refers to any:
  - R&D activities performed by this organisation for this organisation
  - R&D projects, in their entirety, performed by this organisation on behalf of others (i.e. this organisation had full management of the projects and could control how they were undertaken)
  - R&D activities outsourced to others, that were part of a bigger R&D project managed by this organisation

Including

- Outsourced engineering, analytical work or other specialised services undertaken as part of R&D carried out by **this organisation**
- R&D performed as a **participant** in an unincorporated joint venture, including unincorporated Cooperative Research Centres (CRCs)

Excluding

- R&D projects funded by this organisation, but **not** performed by this organisation (i.e. the project, in its entirety, was outsourced and this organisation had no control over how the project was undertaken or managed)
- R&D activities performed by this organisation that were part of a bigger R&D project managed by **another business or organisation**

No ☐ ▶ Go to **Part I**. Please provide reasons for nil R&D activity in Question 12.

Yes ☐

4 Please provide a description of the R&D project(s) carried out by this organisation

Please use BLOCK letters

Part C – Human resources devoted to R&D

5 For the following categories, please report the effort (in person years) devoted by this organisation to R&D during the year ended 30 June 2019 or the equivalent financial period

Note
- Only report the R&D effort of **employees** who were paid a retainer, wage or salary by this organisation.
- The following equation can be used to calculate person years of effort on R&D for **employees**: (Full-time equivalent) x (Portion of the employee's job spent on R&D) x (Portion of the year the employee spent on R&D) = Person years of effort.
- For example: a full-time employee spent 40% of their time on R&D for half the year. 1 person x 0.4 x 0.5 years = 0.2 person years of effort

Including
- Effort of employees who were involved in, or **directly** supported, R&D

Excluding
- Effort of contractors and self-employed persons such as consultants who are **not** employees of this organisation
- Effort of employees whose work **indirectly** supported R&D (e.g. executives and directors concerned primarily with budgets and human resources rather than project content; personnel officers)

(a) Researchers

Definition
- Researchers are professionals engaged in the conception or creation of new knowledge. They conduct research and improve or develop concepts, theories, models, techniques, instrumentation, software or operational methods.

Note
- Software developers or programmers; and executives and directors involved in the planning or management of scientific and technical aspects of R&D projects are also classified as researchers.

Person years (round to one decimal place)

, .

(b) Technicians directly supporting R&D

Definition
- Technicians and equivalent staff are persons whose main tasks require technical knowledge and experience in one or more fields of engineering, physical and life sciences, or social sciences, humanities and the arts. They participate in R&D by performing scientific and technical tasks involving the application of concepts, operational methods and use of research equipment, normally under the supervision of researchers.

Note
- Typical tasks of technicians may include: preparation and conduct of experiments or tests; carrying out bibliographic searches; recording measurements, making calculations and preparing charts and graphs.

Person years (round to one decimal place)

, .

(c) Other staff directly supporting R&D

Definition
- Other supporting staff includes skilled and unskilled craftsmen, and administrative, secretarial and clerical staff participating in R&D projects or directly associated with such projects.

Note
- Other supporting staff may include: secretarial and clerical staff working on, or directly associated with R&D activity; plant and machine operators.

Person years (round to one decimal place)

, .

(d) Total (sum of Questions 5(a), 5(b) and 5(c)) … … … … … … … … …

, .

Part D – Type of R&D expenditure

6 For the following categories, please report the amount this organisation spent on R&D during the year ended 30 June 2019 or the equivalent financial period

(a) Labour costs

Note
- Report wages, salaries and associated labour costs for the total person years of effort reported in Question 5(d).

Including
- Gross earnings before taxation and other deductions
- Overtime earnings, penalty payments and shift allowances
- Employer contributions into superannuation (including salary sacrifice)
- Fringe benefits tax and payroll tax
- Payments to contract staff **on the payroll** of this organisation
- Severances, terminations and redundancies
- Workers compensation premiums or costs
- Provisions for employee entitlements
- Salaries and fees of directors and executives
- Retainers and commissions of persons who received a retainer
- Bonuses
- Annual and other types of leave

Excluding
- Payments to **contractors** and self-employed persons such as consultants (include in Question 6(b))
- Cost of labour for those employees who **indirectly** supported R&D (include in Question 6(b))

Report in (A$'000)

$,000

(b) Other current expenses

Note
- Please include an appropriate portion of:
  – labour costs for employees who **indirectly** supported R&D
  – costs for services which **indirectly** supported R&D (e.g. security, repair and maintenance)
  – organisation **overhead** costs (e.g. insurance, telecommunications, rent, electricity)

Including
- Cost of materials, supplies and equipment to support R&D (e.g. fuels, journals, chemicals)
- Leasing and hiring expenses
- Payments to **contractors**, consultants and other businesses or organisations for services (e.g. analytical work, engineering) required as part of R&D carried out by this organisation
- R&D portion of commissions for those persons who were **not** paid a retainer

Excluding
- Contract payments related to R&D projects **not** carried out by this organisation
- Depreciation provisions
- Interest charges
- Payments for patent searches
- Costs for patents applied for after the completion of the R&D project

Report in (A$'000)

$,000

Part D – Type of R&D expenditure – *(continued)*

6 For the following categories, please report the amount this organisation spent on R&D during the year ended 30 June 2019 or the equivalent financial period – *(continued)*

(c) Capital expenditure (R&D related portion only)

Note
- If the asset has or will be used for more than one activity (e.g. R&D and commercial production), only include a portion of the expenditure that reflects use for R&D.
- The R&D portion of expenditure can be estimated in a number of ways, including: number of R&D personnel using the facility, compared to total personnel; or a certain proportion of floor space or time assigned to R&D.
- For example, if a new building is expected to be in use for 20 years, with the first two years dedicated to R&D and the remaining years used for non-R&D activities, the R&D portion would be estimated as 2/20ths (or one tenth) of expenditure for the building.

Excluding
- Depreciation provisions
- Repair and maintenance expenses (include in Question 6(b))

(i) Land, buildings and other structures

Including
- Expenditure on fixed assets used in the R&D projects of this organisation

Report in (A$'000)

$,,000

(ii) All other capital expenditure

Including
- Purchase of vehicles, plant, machinery and equipment
- Acquisition of computer software and/or licences expected to be used for more than one year (i.e. capitalised computer software)
- Purchase of computer databases expected to be used for more than one year
- Acquisition of patents and long-term licences for R&D purposes to be used for more than one year

Excluding
- Software for own account produced as part of R&D (include where relevant, in Question 6(a) or 6(b))
- Capitalised wages and salaries (include where relevant, in Question 6(a) or 6(b))
- Capitalised costs for patents applied for after the completion of the R&D project
- Depreciation provisions

Report in (A$'000)

$,,000

(d) Total R&D expenditure (sum of Questions 6(a), 6(b), 6(c)(i) and 6(c)(ii)) …

$,,000

Part E – Location of R&D expenditure

7 Please provide a breakdown of total R&D expenditure reported in Question 6(d) by the location(s) in which this organisation carried out R&D

Report in (A$'000)

(a) New South Wales … $, ,000

(b) Victoria … $, ,000

(c) Queensland … $, ,000

(d) South Australia … $, ,000

(e) Western Australia … … … … … … … … … … … … … … … … … … … $, ,000

(f) Tasmania … $, ,000

(g) Northern Territory … … … … … … … … … … … … … … … … … … … $, ,000

(h) Australian Capital Territory … … … … … … … … … … … … … … … $, ,000

(i) Overseas … $, ,000

(j) Total (equals the total in Question 6(d)) … … … … … … … … … … $, ,000

Part F – Source of R&D funds

8 Please provide a breakdown of total R&D expenditure reported in Question 6(d) by the following source(s) of funds

Note
- Funding **not specifically sourced for R&D** activity should be reported in Question 8(a) (i.e. own funds).
- Sources of funds for R&D may not be the same as income source. For example, bank interest is considered to be this organisation's own funds, not funding from a financial institution.

(a) Own funds

Including
- Equity, borrowings and retained earnings
- Funding from budget appropriations

Report in (A$'000)

$, ,000

(b) Other private not-for-profit organisations … … … … … … … … … … … … $, ,000

(c) Commonwealth government … … … … … … … … … … … … … … … … … $, ,000

(d) State and local government … … … … … … … … … … … … … … … … … $, ,000

(e) Joint business and government (i.e. only funds provided by levies) … … $, ,000

(f) Business … $, ,000

(g) Overseas sources (please specify in BLOCK letters)

$, ,000

$, ,000

(h) Other sources … $, ,000

Please specify, in BLOCK letters, the largest items and amounts included in 'Other sources'

$, ,000

$, ,000

$, ,000

$, ,000

(i) Total (equals the total in Question 6(d)) … … … … … … … … … … … … $, ,000

Part G – Type of R&D activity

9 Please allocate the relevant percentage of total R&D expenditure reported in Question 6(d) to the following type(s) of R&D activity

(a) Pure basic research

Definition
- Pure basic research is the experimental and theoretical work undertaken to acquire new knowledge without looking for long term benefits other than the advancement of knowledge.
- For example, research into the migratory patterns of birds or the identification of new species to increase humankind's stock of knowledge, which will not necessarily result in a financial benefit.

… … … %

(b) Strategic basic research

Definition
- Strategic basic research is experimental and theoretical work undertaken to acquire new knowledge directed into specified broad areas in the expectation of practical discoveries. It provides the broad base of knowledge necessary for the solution of recognised practical problems.
- For example, research into next generation technology such as nanotechnology.

… … … %

(c) Applied research

Definition
- Applied research is original work undertaken primarily to acquire new knowledge with a specific application in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new ways of achieving some specific and predetermined objectives.
- For example, research which turns ideas into operational forms, such as R&D into the application of energy efficient knowledge advancements in the design of a new processing plant.

… … … %

(d) Experimental development

Definition
- Experimental development is systematic work, using existing knowledge gained from research or practical experience, which is directed to: producing new materials, products, devices, policies, behaviours or outlooks; installing new processes, systems and services, or improving substantially those already installed.
- For example, the testing phase of a newly designed and constructed pilot plant, or substantial modification of existing hardware and software infrastructure.

… … … %

(e) Total (sum of percentages reported in Question 9(a), 9(b), 9(c) and 9(d)) … … **1 0 0** %

Part H – Classification of R&D

10 Please allocate the relevant percentage of total R&D expenditure reported in Question 6(d) to each of the following Fields of Research (FOR) Divisions

Definition
- Fields of Research (FOR) is an R&D specific classification which forms part of the Australian and New Zealand Standard Research Classification (ANZSRC).
- FOR reflects the area of knowledge discovery, rather than the activity of the organisation performing the R&D.

Note
- More than one FOR Division may be relevant in cases of multiple, large or complex projects.
- If you require additional information to assist in classifying R&D projects to FOR Divisions, please refer to the enclosed booklet, or the complete classification, ANZSRC 2008 (cat. no. 1297.0), which is free to download from the ABS website **www.abs.gov.au**

FOR code	FOR Division	
01	Mathematical Sciences	%
02	Physical Sciences	%
03	Chemical Sciences	%
04	Earth Sciences	%
05	Environmental Sciences	%
06	Biological Sciences	%
07	Agricultural and Veterinary Sciences	%
08	Information and Computing Sciences	%
09	Engineering	%

Note
- Projects that include routine geological studies in regard to mining, mineral processing and metallurgy should be classified to Division 09 (Engineering) and **not** Division 04 (Earth Sciences).

Note
- Biological or life sciences associated with human health and medicine should be classified to Division 11 (Medical and Health Sciences) and **not** Division 06 (Biological Sciences).

Note
- Computer software development should be classified according to the area of knowledge discovery. For example, the creation of new software for use in automotive engineering is Division 08 (Information and Computing Sciences) and **not** Division 09 (Engineering).

Part H – Classification of R&D – *(continued)*

10 Please allocate the relevant percentage of total R&D expenditure reported in Question 6(d) to each of the following Fields of Research (FOR) Divisions – *(continued)*

FOR code	FOR Division	
10	Technology …	%
11	Medical and Health Sciences … … … … … … … … … … … … … … …	%
12	Built Environment and Design	

Note
- Civil engineering, such as construction materials and transport engineering, should be classified to Division 09 (Engineering) and **not** Division 12 (Built Environment and Design).

… … % |
13	Education …	%
14	Economics …	%
15	Commerce, Management, Tourism and Services … … … … … … … …	%
16	Studies in Human Society … … … … … … … … … … … … … … … …	%
17	Psychology and Cognitive Sciences … … … … … … … … … … … …	%
18	Law and Legal Studies … … … … … … … … … … … … … … … … …	%
19	Studies in Creative Arts and Writing … … … … … … … … … … …	%
20	Language, Communication and Culture … … … … … … … … … … …	%
21	History and Archaeology … … … … … … … … … … … … … … … …	%
22	Philosophy and Religious Studies … … … … … … … … … … … …	%
Total (sum of percentages reported against FOR codes 01 to 22) … … … … … … … …		**1 0 0** %

Part H – Classification of R&D – *(continued)*

11 Please allocate the relevant percentage of total R&D expenditure reported in Question 6(d) to each of the following Socio-economic Objective (SEO) Divisions

Definition
- Socio-economic Objective (SEO) is an R&D specific classification which forms part of the Australian and New Zealand Standard Research Classification (ANZSRC).
- SEO reflects the intended purpose or outcome of the R&D, and the dominant beneficiary or beneficiaries of the R&D output.

Note
- More than one SEO Division may be relevant in cases of multiple, large or complex projects.
- If you require additional information to assist in classifying R&D projects to SEO Divisions, please refer to the enclosed booklet, or the complete classification, ANZSRC 2008 (cat. no. 1297.0), which is free to download from the ABS website **www.abs.gov.au**

Sector A: Defence

SEO code	SEO Division	
81	Defence ………………………………………………	%

Sector B: Economic Development

SEO code	SEO Division	
82	Plant Production and Plant Primary Products ………………………	%
83	Animal Production and Animal Primary Products ………………………	%
84	Mineral Resources (excluding Energy Resources) ………………………	%
85	Energy ………………………………………………	%
86	Manufacturing ………………………………………………	%
87	Construction………………………………………………	%
88	Transport ………	%

Note
- Manufacture of transport equipment (such as motor vehicles, railway rolling stock, aircraft, boats) and their components should be classified to Division 86 (Manufacturing) and **not** Division 88 (Transport).

Part H – Classification of R&D – *(continued)*

11 Please allocate the relevant percentage of total R&D expenditure reported in Question 6(d) to each of the following Socio-economic Objective (SEO) Divisions – *(continued)*

Sector B: Economic Development – *(continued)*

SEO code	SEO Division	
89	Information and Communication Services	… %

Note
- Computer software development should be classified according to the intended purpose of the software. For example, software specifically developed for a food processing factory should be classified to Division 86 (Manufacturing) and **not** Division 89 (Information and Communication Services).

90	Commercial Services and Tourism … … … … … … … … … … … … … … …	%
91	Economic Framework …	%

Sector C: Society

SEO code	SEO Division	
92	Health	… %

Note
- Pharmaceutical manufacturing should be classified to Division 86 (Manufacturing) and **not** Division 92 (Health).

93	Education and Training … … … … … … … … … … … … … … … … … …	%
94	Law, Politics and Community Services … … … … … … … … … … … …	%
95	Cultural Understanding … … … … … … … … … … … … … … … … … …	%

Sector D: Environment

SEO code	SEO Division	
96	Environment	… %

Note
- Environmental aspects of projects associated with economic activities should be classified to the relevant Division under the Economic Development sector, and **not** Division 96 (Environment).

Sector E: Expanding Knowledge

SEO code	SEO Division	
97	Expanding Knowledge … … … … … … … … … … … … … … … … … … …	%

Total (sum of percentages reported against SEO codes 81 to 97) … … … … … … … … **1 0 0** %

Part I – Comments and time taken

12 Please provide comments

– on any information you have supplied on this form (e.g. related to unusual movements or other factors) (Please use BLOCK letters)

– on any difficulties you had in providing the requested information, or suggested improvements to this form (Please use BLOCK letters)

13 Please provide an estimate of the time taken to complete this form

Including
- The time actually spent reading the instructions, working on the questions and obtaining the information
- The time spent by all employees in collecting and providing this information

hrs mins

Thank you for completing this form