

Delivering Innovation and Science Excellence

CSIRO relies on excellent science to deliver impact to industry, society and the environment. Each year CSIRO conducts a 'science health check'. The most recent results are available in the 'CSIRO Science Health and Excellence Report 2017-18'.

The performance of the organisation's research outputs continues to be very strong, both domestically and internationally. Highlights from the 2017-18 assessment include:

CSIRO plays a crucial role in the **Australian Innovation System**

- CSIRO is a major contributor to Australian research in some key research fields, including Agriculture Sciences, Environment/Ecology, Geosciences, Plant & Animal Science, Space Sciences, Materials Sciences and Chemistry.
- Intellectual property (IP) is an indicator of potential translation of research to industry. CSIRO is the largest filer of provisional patents in Australia and holds the most complete applications among leading Australian research organisations.
- CSIRO plays a key role in providing research relevant to the Australian Industry Growth Centres. CSIRO is the largest producer of research publications in two centres (Food & Agribusiness; Mining Equipment, Technology & Services), the 2nd largest in Oil, Gas & Energy Resources, the 4th largest in Advanced Manufacturing and the 6th largest for Cybersecurity.
- Based on 42 externally-validated case studies, it can be extrapolated that the total annual benefits from CSIRO's research would exceed \$9 billion per year. This suggests that the full CSIRO research portfolio is providing a return on investment of over 6:1.

CSIRO's research outputs have high national and international standing

CSIRO's publication performance continues to be strong, as assessed by a range of indicators. CSIRO articles are 50% more cited than the global average and the level of CSIRO publications in the top 1% of most cited is nearly three times the global average.

- CSIRO is among the best Australian research institutions. CSIRO's research publications are of a similar high standard in science excellence to those from leading Australian Universities.
- Of all the IP family assets that CSIRO maintains, 49% are either subject to a research right, arose as a result of collaborative activity, were used as background IP, or have been the subject of a commercial licence. There are currently 459 licences in force, of which 237 have active revenue generating clauses with over 200 unique licensees.
- Internationally, CSIRO was ranked the 15th largest PCT patent application filer amongst government and research institutes worldwide in 2017.

CSIRO collaborates with Australian and international partners

- CSIRO's collaboration level with Australian partners is 69%, with the Group of Eight Universities being the most frequent collaborators.
- CSIRO's international collaboration level is 63%, with the USA being the most frequent national partner, followed by China.
- 37% of CSIRO's active patent families listed a coassignee. The majority of partners are international companies, followed by Australian Government bodies.
- CSIRO worked with 2,060 customers in 2017-18, of which 1,170 were Australian SMEs. This represents 56% of our customers and 73% of our Australian industry customers. Work with SMEs contribute on average \$51 million in revenue each year.

Other topics examined in the report include the realworld impact of CSIRO's research, staffing and resourcing, domestic and international collaborators, benchmarking of CSIRO's publication and IP against other institutions, and detailed analyses of CSIRO's patents and publications.