

# SECURING AUSTRALIA'S SCIENCE PIPELINE

**W**e are chairs of Australia's twenty-two National Committees for Science, representing Australia's scientific disciplines within the Australian Academy of Science.

We express our deep concern about the further contraction of our national scientific capacity as a direct consequence of COVID-19 pandemic-caused economic restrictions.

Australia could emerge from the pandemic with science, research and innovation continuing to underpin our country's health and prosperity. It will take planning to do it well.

We call on government, universities and industry to work together to realise a strategic framework for ensuring the long-term sustainability and security of Australia's scientific capability and research workforce across Australia's universities.

Significantly reduced staff numbers, particularly in universities, and the loss of career paths and opportunities for early- and mid-career researchers, and the significant loss of our most senior scientists and their experience through redundancies and cost savings, combine to diminish Australia's capacity to emerge well from the pandemic. This will affect the education of future researchers in Australia.

Australian science is central to our economic prosperity and security, international reputation and scientific standing. Enabled by decades of sustained research, science and its applications are a critical underpinning of any exit plan towards stability and normality for Australians after the COVID-19 pandemic.

Sadly for the nation, the scientists, researchers and technicians employed at universities across the country—the backbone of Australia's scientific enterprise—are operating in an environment dominated by instability and uncertainty of historic scale.

The shockwaves caused by universities' acute budgetary pressures, catalysed and deepened by the pandemic, continue to reverberate across the sector, driving an exodus of expertise that erodes Australia's scientific capabilities. Furthermore, they risk long-lasting damage to Australia's ability to attract the best researchers from overseas and attract back expatriate Australian scientists, a source that has always complemented, refreshed and strengthened our homegrown scientific capabilities and leadership.

The human capital on which Australia's scientific enterprise is built is founded on the knowledge, experience and insight of dedicated individuals. This capital takes decades to build and can be lost in a handful of years. Only concerted, strategic and wise investment can prevent the loss of what the nation cannot afford to lose.

Prior to 2020, the scientists, researchers and technicians employed in the university sector comprised 47 per cent<sup>1,2,3</sup> of our national research workforce, supplemented by 14,521 at government institutions (for example, the CSIRO and the Australian Antarctic Division) and 77,724 at independent research institutions.

Between 2020 and 2021, Department of Education, Skills and Employment data shows a reduction of 9,000 full time equivalent staff in Australian universities (not including casual staff)—the first reduction since 2000.

The Academy's National Committees for Science, which represent researchers in scientific disciplines around Australia, call on government, universities and industry to work together to realise a framework for ensuring the long-term sustainability and security of Australia's scientific capability and research workforce across Australia's universities. Doing so will allow Australia to emerge from the pandemic with science, research and innovation continuing to underpin our country's health and prosperity.

**Signed by the National Committees for:**

- Agriculture, Fisheries and Food
- Antarctic Research
- Astronomy
- Biomedical Sciences
- Brain and Mind
- Cellular and Developmental Biology
- Chemistry
- Crystallography
- Data in Science
- Earth Sciences
- Earth System Science
- Ecology, Evolution and Conservation
- Geographical Sciences
- History and Philosophy of Science
- Information and Communications Sciences
- Materials Science and Engineering
- Mathematical Sciences
- Mechanical and Engineering Sciences
- Medicine and Public Health
- Nutrition
- Physics
- Space and Radio Science

May 2022

**This statement is supported by:**



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- 1 Research and Experimental Development, Higher Education Organisations, Australia, 2018 | Australian Bureau of Statistics. (20 May 2020). [www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-higher-education-organisations-australia/latest-release](http://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-higher-education-organisations-australia/latest-release)
- 2 Research and Experimental Development, Government and Private Non-Profit Organisations, Australia, 2018-19 financial year | Australian Bureau of Statistics. (19 June 2020). [www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-government-and-private-non-profit-organisations-australia/latest-release](http://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-government-and-private-non-profit-organisations-australia/latest-release)
- 3 Research and Experimental Development, Businesses, Australia, 2017-18 financial year | Australian Bureau of Statistics. (20 September 2019). [www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-businesses-australia/latest-release](http://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-businesses-australia/latest-release)