

2022–23 Federal Budget Analysis

29 March 2022

Research funding

Research commercialisation package

Department of Education, Skills and Employment

The Budget confirms the University Research Commercialisation package funding announced by the Government in February 2022.

It allocates \$998.2 million over 5 years from 2021–22 with \$325.1 million a year ongoing. This funds:

- **Australia’s Economic Accelerator** – \$505.2 over 5 years (and then \$182.3 million a year ongoing) to support university–industry collaboration and research commercialisation, in the form of grants to support proof-of-concept and proof-of-scale projects through to commercialisation. Projects must align with the National Manufacturing Priorities.
- **Trailblazer Universities** – \$243 million over five years to support research commercialisation projects at selected universities.
- **ARC Industry Fellowships and Industry PhDs** – \$296 million over 10 years to build an industry-savvy research workforce with industry-oriented research fellowships and PhDs.
- **Boost to CSIRO Main Sequence Ventures** – \$150 million (in two payments) to boost CSIRO’s venture capital program which supports start-ups and research commercialisation.
- **CSIRO Research Translation Start program (ON Program)** – \$37.4 million to provide training to researchers to improve capacity to engage with industry – this announcement was **new in the Budget**, all other measures were previously announced.

Table 1: University Research Commercialisation Package –Education, Skills and Employment 2022–23 Portfolio Budget Statement

	2021-22 \$'000	2022-23 \$'000	2023-24 \$'000	2024-25 \$'000	2025-26 \$'000
Launch Australia’s Economic Accelerator ^a	12,000	49,160	99,444	149,498	154,601
Increase Workforce Mobility ^a (Industry PhDs)		5,660	9,647	15,183	20,964
Trailblazer Universities Program ^a		81,760	53,044	54,371	55,729
ARC – Investing in Australia’s Research Commercialisation ^b	0.5	22,100	44,300	67,700	83,500
CSIRO – Research Translation Start Program (ON Program) ^c		9,255	9,250	9,389	9,520

^aDESE PBS p63

^bDESE PBS p145 – Note: These figures are included as 'a decision taken but not announced in the 2021–22 MYEFO, and do not provide a specific breakdown of the allocations e.g. how much will be allocated to ARC costs, and how much to the ARC Industry Fellowships program.

^cDISER PBS p243

Australian Research Council

Department of Education, Skills and Employment

No major changes to funding reported in the Budget papers. Both the Discovery and Linkage Programs show small increases in allocations over the forward estimates. The Budget papers mention planned reforms to the Linkages program from 2026-27. STA's understanding is that this refers to the matters in Acting Education Minister Stuart Robert's Letter of Expectations to the ARC CEO of December 2021.

Table 2: Australian Research Council Discovery and Linkage Program funding – Education, Skills and Employment 2022–23 Portfolio Budget Statement

	2021-22 Estimated actual \$'000	2022-23 Budget \$'000	2023-24 Forward estimate \$'000	2024-25 Forward estimate \$'000	2025-26 Forward estimate \$'000
Program 1.1: Discovery - Research and Research Training					
Administered expenses					
Ordinary annual services (Appropriation Bill No. 1)	1,195	1,240	1,270	1,302	1,333
Special appropriations					
<i>Australian Research Council Act 2001</i>	489,188	511,074	535,915	562,406	585,206
Total expenses for program 1.1	490,383	512,314	537,185	563,708	586,539
Program 1.2: Linkage - Cross Sector Research Partnerships					
Administered expenses					
Ordinary annual services (Appropriation Bill No. 1)	1,555	1,847	1,896	1,943	1,990
Special appropriations					
<i>Australian Research Council Act 2001</i>	325,454	340,820	357,704	375,595	390,950
Total expenses for program 1.2	327,009	342,667	359,600	377,538	392,940

(DESE PBS, p147)

National Health and Medical Research Council

Department of Health

No major changes reported in the Budget papers. Payments to the Medical Research Endowment Fund increase slightly over the forward estimates.

Table 3: NHMRC funding 2022–23 Health Portfolio Budget Statement

	2021-22 Estimated actual \$'000	2022-23 Budget \$'000	2023-24 Forward estimate \$'000	2024-25 Forward estimate \$'000	2025-26 Forward estimate \$'000
Program 1.1: Health and Medical Research					
Administered expenses					
Ordinary annual services ^(a) to Medical Research Endowment Account	878,460 (863,266)	893,049 (877,952)	903,951 (891,094)	918,415 (905,355)	932,192 (918,985)

(DoH PBS, p356)

Medical Research Future Fund

Department of Health

AAMRI's analysis suggests the capital balance in the Medical Research Future Fund is listed as \$1 billion more than the estimate in last year's Budget – reaching \$22 billion this year.

In line with last year's Budget estimates, expenditure disbursed from the MRFF will rise to \$650 million each year over the next four years (unchanged from last year's Budget projections).

The Budget outlined previously-announced initiatives support by the MRFF including:

- \$2.1 billion over 10 years from 2022–23 for medical research translation
- \$1.5 billion over 10 years from 2022–23 to support medical researchers tackle challenges through investment, leadership and collaboration
- \$1.4 billion over 10 years from 2022–23 to fund innovative treatments, clinical trials, deliver advanced health care and medical technology
- \$1.3 billion over 10 years from 2022– 3 for discovery medical research in Australia

(Budget Paper 2, p103)

National Collaborative Research Infrastructure

Department of Education, Skills and Employment

No major changes were reported in the Budget papers. NCRIS allocations show small increases over the forward estimates. There is no mention in the Budget Papers of the NCRIS Investment Plan scheduled for announcement this year.

Table 4: NCRIS funding – Education, Skills and Employment 2022–23 Portfolio Budget Statement

	2021-22 Estimated actual \$'000	2022-23 Budget \$'000	2023-24 Forward estimate \$'000	2024-25 Forward estimate \$'000	2025-26 Forward estimate \$'000
Annual administered expenses:					
Ordinary annual services (Appropriation Bill No. 1)					
National Collaborative Research Infrastructure Strategy	273,567	286,043	396,826	496,739	454,441

(DESE PBS, p63)

University funding

Department of Education, Skills and Employment

Block grant funding

No major changes are reported in the Budget papers. Both the Research Support Program and Research Training Program show small increases in allocations over the forward estimates.

Table 5 – Research block grant funding – Education, Skills and Employment 2022–23 Portfolio Budget Statement

	2021-22 Estimated actual \$'000	2022-23 Budget \$'000	2023-24 Forward estimate \$'000	2024-25 Forward estimate \$'000	2025-26 Forward estimate \$'000
Special appropriations:					
<i>Higher Education Support Act 2003</i>					
Research Support Program	930,659	951,188	978,674	1,002,668	1,028,230
Research Training Program	1,069,182	1,092,766	1,124,344	1,151,909	1,181,153
Total program expenses	1,999,841	2,043,954	2,103,018	2,154,577	2,209,383

(DESE PBS, p61)

Higher Education Support funding

No major changes are reported in the Budget papers. National Priorities and Industry Linkages Fund, Indigenous, Regional and Low SES Attainment Fund and the Disability Support Program all show small increases in allocations over the forward estimates.

Table 6: Higher Education Support funding – Education, Skills and Employment 2022–23 Portfolio Budget Statement

	2021-22 Estimated actual \$'000	2022-23 Budget \$'000	2023-24 Forward estimate \$'000	2024-25 Forward estimate \$'000	2025-26 Forward estimate \$'000
Disability Support Program	8,023	8,132	8,367	8,572	8,791
Higher Education and Offshore Microcredentials	-	9,036	6,131	4,696	6,888
Improved Support for Regional Universities	14,021	10,862	12,561	14,640	14,522
Indigenous, Regional and Low SES Attainment Fund	267,749	265,033	272,725	278,928	286,018
Jobs and Growth in Tasmania	65,000	25,000	12,000	-	-
National Institutes	233,895	239,055	245,962	251,993	258,417
National Priorities and Industry Linkage Fund	226,264	231,255	237,938	243,771	249,986

(DESE PBS, p57)

National Institutes Grants

No major changes are reported in the Budget papers. National Institutes Grants show small increases in allocations over the forward estimates.

Commonwealth Grant Scheme

There are no major changes in the 2022 Budget to funding for Commonwealth Supported Grant places for universities. The Commonwealth Grant Scheme funding decreases in 2023–24 compared to 2022–23 as the transition funding under the Job Ready Graduates package winds down.

A review of the Job Ready Graduates legislation was promised for mid-2022 when the legislation passed the Senate. No further details on the review have been announced yet and no separate Budget item was included to resource a review. The STEM sector will seek opportunities to advise the Government about the impact of the JRG legislation changes on STEM degrees.

The Budget included funding of \$11.3 million over 4 years for an extra 80 places for rural health students at universities with existing medical schools to deliver medical programs in new or existing rural locations.

Table 7: Commonwealth Grant Scheme funding – Education, Skills and Employment 2022–23 Portfolio Budget Statement

	2021-22 Estimated actual \$'000	2022-23 Budget \$'000	2023-24 Forward estimate \$'000	2024-25 Forward estimate \$'000	2025-26 Forward estimate \$'000
Special appropriations: <i>Higher Education Support Act 2003</i>					
Cluster Fund and Place Loadings	7,206,905	7,198,709	7,172,847	7,362,284	7,678,388
Transition Fund Loading	348,420	154,245	48,946	-	-
Total program expenses	7,555,325	7,352,954	7,221,793	7,362,284	7,678,388

(DESE PBS, p19; Budget Paper 2, p98)

Patent Box – now extended to agriculture tech and low emissions technologies

Australian Taxation Office; Department of Industry, Science, Energy and Resources

The Patent Box initiative announced in the 2021–22 Budget will grant a concessional tax rate to companies who manufacture in Australia their future patented innovations in medtech and biotech.

As strongly advocated by STA, the 2022 Budget extended this patent box tax rate to low-emissions technologies. It will apply to the 140 technology categories in Australia’s Low Emissions Technologies Roadmap. Patents granted after 29 March 2022 and for income years starting on or after 1 July 2023 will be eligible. Treasury intends to consult sector stakeholders on the design of this measure.

The 2022 Budget also extends the patent box to agtech and agricultural innovations in agricultural and veterinary chemical products listed by the Australian Pesticides and Veterinary Medicines Authority, the Public Chemicals Registration Information System register, or eligible Plant Breeder’s Rights. It will apply to patents granted after 29 March 2022 and for income years starting on or after 1 July 2023.

In February, the Government announced medtech and biotech patents *granted* after 11 May 2021 would be eligible (a change from constraining eligibility to only those were applications for patents were made after that same date). More details are [here](#).

(Budget Paper 2, p22)

Government science agencies

CSIRO

Department of Industry, Science, Energy and Resources

In the University Research Commercialisation Package, CSIRO gets a \$150 million funding boost to Main Sequence Ventures and \$37.4 million over four years for the Research Translation Start program (a revival of the CSIRO ON Program).

(DISER PBS, p243)

Australian Institute of Marine Science

Department of Agriculture, Water and Environment

This Budget includes an extra \$26.5 million over 4 years to support remediation of the AIMS Cape Cleveland Wharf and ongoing maintenance.

(Budget Paper 2, p123)

Great Barrier Reef

Department of Agriculture, Water and Environment

The Great Barrier Reef Marine Park Authority will get an extra \$1 billion over 9 years, including:

- \$579.9 million over 9 years to work with land managers to improve water quality, including reducing nutrient and pesticide run-off to the Reef and land remediation
- \$252.9 million over 9 years to support sustainable management and protection of reef ecosystems
- \$95.6 million over 9 years to enhance leadership and research to develop resilience and adaptation strategies for the Reef
- \$74.4 million over 9 years to strengthen partnerships with Traditional Owners on on-ground projects and data validation of high-priority fishing areas

These measures had already been announced.

An additional **new announcement** of \$12.4 million for the Great Barrier Reef Marine Park Authority to extend fee relief for tourism businesses was allocated in this budget.

(Budget Paper 2, p56)

Geoscience Australia

Department of Industry, Science, Energy and Resources

Geoscience Australia will receive around \$9.2 million under the Critical Minerals Strategy, as well as an unpublished amount under the Support for the Australian Space Industry measure.

(DISER PBS, p272)

ANSTO

Department of Industry, Science, Energy and Resources

ANSTO will receive around \$4.9 million under the Critical Minerals Strategy.

(DISER PBS, p114; Budget Paper 2, p124)

Bureau of Meteorology

Department of Agriculture, Water and Environment

BOM will receive a boost of around \$3 million in funding for the National Flood Observations Warning Network, to undertake critical maintenance.

(DAWE PBS, p182)

Specific science and technology funding

STA Superstars of STEM

Department of Industry, Science, Energy and Resources

Among DISER's **Advancing Science, Technology, Engineering and Maths** initiatives, STA will get \$2 million in funding to continue the Superstars of STEM program for an additional four years.

This is part of a total \$45.4 million over 5 years from 2021-22 to support science, technology, engineering and maths and also includes:

- \$33.4 million over 2 years from 2021–22 to the National Measurement Institute
- \$5.3 million over 2 years from 2021–22 to improve the National Science and Technology Council's provision of science and technology advice to the Government and to continue support of the Prime Minister's Prizes for Science event
- \$4.7 million over 4 years from 2022–23 to continue support for the Women in STEM Ambassador initiative and the Future You national digital awareness-raising initiative

(Budget Paper 2, p122)

mRNA vaccine production

Department of Health

The Australian Government has finalised a 10-year strategic partnership with Moderna and the Victorian Government that will enable production of mRNA vaccines in Australia. It is expected that up to 100 million vaccine doses will be produced annually.

All budget allocations for this measure are commercial in confidence and marked 'not for publication'.

(Budget Paper 2, p104)

Recycling Modernisation Fund

Department of Agriculture, Water and the Environment; Department of Treasury

\$60.4 million over 4 years from 2022–23 has been allocated in the Recycling Modernisation Fund, targeted at advanced plastic recycling technology.

(Budget Paper 2, p51)

Indigenous Rangers

National Indigenous Australians Agency

\$636.5 million over 6 years to fund 1089 new rangers in the Indigenous Rangers Program by 2026–27, including incentives for women and youth rangers. Funding will also support establishment of a professional Indigenous Land and Water Management body that will bring Indigenous knowledge into land and water management and provide expertise to ranger organisations.

(Budget Paper 2, p161)

Critical Minerals Strategy

Department of Industry, Science, Energy and Resources; CSIRO, Geoscience Australia; Australian Nuclear Science and Technology Organisation

\$250.5 million over 5 years from 2022–23 to support critical minerals projects:

- \$200 million over 5 years for the Critical Minerals Accelerator Initiative – grants to support Australian critical minerals producers
- \$50.5 million over 3 years to establish a virtual Critical Minerals Research and Development Centre to build Australian IP in critical minerals processing, drawing together expertise from CSIRO, Geoscience Australia, and the Australian Nuclear Science and Technology Organisation.

Table 8: Critical Minerals Strategy funding – Budget Measures: Budget Paper 2 2022–23

	2021-22	2022-23	2023-24	2024-25	2025-26
Department of Industry, Science, Energy and Resources	-	60.9	48.2	48.2	39.0
Geoscience Australia	-	3.5	3.4	2.3	-
Commonwealth Scientific and Industrial Research Organisation	-	2.6	2.6	3.4	-
Australian Nuclear Science and Technology Organisation	-	1.6	1.9	1.4	-
Total – Payments	-	68.7	56.1	55.3	39.0

(Budget Paper 2, p124)

Antarctic capabilities

Department of Agriculture, Water and Environment; Department of Foreign Affairs and Trade

\$839.9 million - \$364.5 million over 5 years from 2021–22 and \$92.3 million per year ongoing to support Antarctic capabilities. This includes

- \$136.6 million over 5 years from 2021–22 (and \$50.6 million per year ongoing) to support Australia’s inland traverse capabilities, critical charting activities, mobile stations, environmental protection and other core activities
- \$109.2 million over 5 years from 2021–22 (and \$30.3 million per year ongoing) to increase Australia’s aerial and inland capabilities
- \$44.2 million over 5 years from 2021–22 (and \$3.9 million per year ongoing) to boost the maritime capability and longevity of RSV Nuyina
- \$32 million in 2021–22 to support critical resupply missions to Australian Antarctic stations for the 2021–22 season
- \$17.4 million over 5 years from 2021–22 (and \$4.8 million per year ongoing) for marine science and state-of-the-art research facilities to strengthen Australia’s leadership in scientific exploration in Antarctica
- \$14.3 million over 5 years from 2021–22 (and \$0.9 million per year ongoing) to support Australian environmental management in Antarctica, including removal of legacy waste and establishing a geographical information system to support environmental management
- \$7.4 million over 5 years from 2021–22 (and \$1.7 million per year ongoing) to support Antarctic climate resilience and adaptation research
- \$3.5 million over 5 years from 2021–22 to enhance Australia’s international engagement in the Antarctic Treaty System and promote Australia’s leadership in Antarctic affairs, with costs to be met from within the existing resources of the Department of Foreign Affairs and Trade.

(Budget Paper 2, p55–6)

Comprehensive Strategic Partnership with India

Department of Industry, Science, Energy and Resources; CSIRO; Austrade, DFAT, Australian Public Service Commission; Department of Defence

\$280 million to support research collaboration initiatives with India, which includes:

- \$17.2 million for the Australia-India Strategic Research Fund
- \$35.7 million for a Green Steel Partnership, a Critical Minerals Research Partnership, and a contribution to the International Energy Agency to support cooperation on research, production and commercialisation of clean technologies, critical minerals and energy.
- \$25.2 million to expand the Australian Space Agency’s International Space Investment initiative to deepen space cooperation with India.

Funding for these initiatives largely seems to be ‘decisions taken but not announced in the 2021–22 MYEFO’, with notes indicating funding allocations for DISER and CSIRO as per the table below. Austrade, DFAT, the Australian Public Service Commission and the Department of Defence also have funding allocations under this initiative as well.

Table 9: DISER and CSIRO funding under the Comprehensive Strategic Partnership with India

	2021-22 \$'000	2022-23 \$'000	2023-24 \$'000	2024-25 \$'000	2025-26 \$'000
DISER	7.3	13.1	13.1	15.4	13.9
CSIRO	1.6	7.4	11.1	16.5	6.7

(DISER PBS, p27; 243; Budget Paper 2, p82)

Support for the Australian Space Industry

Department of Finance; Department of Defence; Geoscience Australia; Department of Industry, Science, Energy and Resources

The Australian Government will invest a total of \$1.3 billion through to 2038–39 and then \$38.8 million a year ongoing to grow Australia's space industry. Many of the specific measures are commercial in confidence and marked 'not for publication', but some funding announcements have been made.

The major **new measure** in the 2022–23 Budget is to establish a National Space Mission for Earth Observation. The Government will partner with leading international space agencies to guarantee Australia's access to Earth Observation data and improve our resilience to natural disasters. The National Mission will build Australia's sovereign capability and enter agreements with global partners, including procuring and operating Australian Satellite Cross-Collaboration Radiometer satellites.

Other funding includes:

- Fast tracking access to space for Australian space businesses and researchers, and setting the conditions to launch from Australia through a \$65.7 million investment
- Undertaking Australia's first Space Strategic Update (\$9.5 million over two years from 2021–22), to identify where future investment is best placed to grow the sector and help fulfil sovereign need
- \$3.0 million in 2022–23 to extend the International Space Investment initiative and continue building relationships with international space agencies

(Budget Paper 2, p127)