

Minister's Approval for Industrial Transformation Training Centres for Funding Commencing in 2022 Schedule

Approved Organisation, Leader of Approved Research Program (Columns 1 and 2)	Approved Research Program (Column 3)	Estimated and Approved Expenditure (\$)				Indicative Funding (\$)		Total (\$)	Strategic Research Priority Area (Column 11)	Industrial Transformation Priorities (Column 12)	International Collaboration (Column 13)	Partner Organisation(s) (Column 14)
		2021-22 (Column 4)	2022-23 (Column 5)	2023-24 (Column 6)	2024-25 (Column 7)	2025-26* (Column 8)	2026-27* (Column 9)	(Column 10)				

New South Wales

The University of New South Wales

IC220100030	ARC Training Centre for Next-Gen Architectural Manufacturing	498,380.50	997,742.50	996,844.00	994,815.00	994,254.50	496,921.50	4,978,958.00	Advanced Manufacturing	Denmark, England, Spain, Germany	ARCHITECTUS AUSTRALIA PTY LTD, BOLLINGERGROHMANN ENGINEERS PTY. LTD., COX ARCHITECTURE PTY LIMITED, GRIMSHAW ARCHITECTS PTY LTD, MOTT MACDONALD AUSTRALIA PTY LIMITED, TZANNES ASSOCIATES PTY LIMITED, AUSTRALIAN INSTITUTE OF ARCHITECTS, ASSOCIATION OF CONSULTING ARCHITECTS AUSTRALIA, ARCHITECTS ACCREDITATION COUNCIL OF AUSTRALIA, THE CHARTERED INSTITUTE OF ARCHITECTURAL TECHNOLOGISTS
Haeusler, A/Prof Matthias H	The Centre will generate specialised workforce capacity within Australia's architectural sector. Leveraging advanced architectural computing discoveries will connect architectural design with the opportunities afforded by advanced manufacturing systems. The Centre will triangulate world-leading researchers, visionary partners, and talented graduates, integrating research into practice through digital business strategies, augmented intelligence, and computing domains of expertise. The Centre's program of industry-embedded PhD's, national/international placements, short courses, and post-doctoral projects will co-develop the change agents needed to transform the architectural profession to meet our nation's immediate strategic needs.										

National Interest Test Statement

The centre will connect architectural design with advanced manufacturing systems by automating workflows, optimising design processes, developing ways to harness big data in design, and providing the business case for the digitisation of the architectural industry. This will promote innovative ways of working, lift socio-technical barriers, assist with the manufacturing of intermediate goods, drive growth and improve competitiveness by leveraging and applying Artificial Intelligence. The research will train the next generation of leaders in architectural technology, growing high-value jobs, products, and services capable of export to global markets while supporting Australia's transition to a knowledge-based economy. The centre will train a highly skilled, world-leading, Australian workforce for the architecture sector, harnessing data and computation to increase productivity, quality and sustainability for an industry responsible for 8% of GDP. This new workforce will become change agents for the design and procurement of infrastructure vital to supporting and sustaining economic growth and liveability.

The University of New South Wales 498,380.50 997,742.50 996,844.00 994,815.00 994,254.50 496,921.50 4,978,958.00

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University of Wollongong

IC220100028	ARC Training Centre for Innovative Composites for the Future of Sustainable Mining Equipment	496,412.50	994,467.50	997,863.00	999,116.50	990,525.50	491,217.00	4,969,602.00	Advanced Manufacturing, Mining Equipment, Resources Technology and Services, Critical Minerals Processing	China (excludes SARs and Taiwan)	ROOBUCK PTY LTD, BISALLOY STEELS PTY. LTD., SNS UNICORP PTY LTD, HBIS GROUP CO., LTD., BAOSTEEL COMPANY, KOMATSU AUSTRALIA PTY LTD, TOP IRON PTY LTD, AUSTRALIA L&Y MINE EQUIPMENT MANUFACTURING PTY LTD
Jiang, Prof Zheng Y	The Centre aims to train industry-focused researchers in advanced manufacturing of new-generation mining equipment and sustainable mining technology, through close collaborations among key universities and mining and manufacturing companies. The Centre will cultivate a team of world-class academic researchers and industry leaders to deliver an innovative program on research of innovative composites coupled with work-integrated learning, to not only produce a workforce that meets future skills demand but also develop sustainable and cost-effective mining equipment and high-efficiency mining technologies, benefiting the nation's manufacturing and mining sectors and significantly enhancing the competitiveness of the Australian mining industry.										

National Interest Test Statement

The Composites & Mining Training Centre aims to improve the global competitiveness of Australia's mining industry by deploying innovative materials in equipment used in challenging, harsh mining environments. The Centre links world-leading Australian and global mining equipment manufacturers, steel producers and mining companies to develop advanced manufacturing processes and fit-for-purpose composite materials with significantly higher resistance in corrosive and high-wear conditions, extending the life of key components, thus increasing sustainability in the sector. The Centre also enables holistic digital approaches to maintenance centred around safety, maintainability and reliability of equipment in Australian mining operations, reducing costly maintenance and downtime in mines. The diverse cohort of researchers, engineers and technology leaders trained by The Centre will build a talented workforce that sustainably grows Australian mining equipment manufacturing, while the application of innovative composite materials can extend to other industries including shipbuilding, construction and transport.

University of Wollongong 496,412.50 994,467.50 997,863.00 999,116.50 990,525.50 491,217.00 4,969,602.00

New South Wales 994,793.00 1,992,210.00 1,994,707.00 1,993,931.50 1,984,780.00 988,138.50 9,948,560.00

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Queensland

Queensland University of Technology

IC220100012	ARC Training Centre for Advanced Building Systems Against Airborne Infection Transmission	499,698.50	999,697.00	999,435.00	999,435.50	970,609.50	470,610.50	4,939,486.00		Advanced Manufacturing	United States of America, Italy, Finland, China (excludes SARs and Taiwan), Netherlands, Sweden	AEROSOL DEVICES INC., AIR CONDITIONING AND REFRIGERATION EQUIPMENT MANUFACTURERS ASSOCIATION OF AUSTRALIA INCORPORATED, ASPEN MEDICAL PTY LIMITED, THE AUSTRALIAN INSTITUTE OF REFRIGERATION; AIR CONDITIONING AND HEATING (INCORPORATED), BULCS HOLDINGS PTY LTD, INDOOR AIR QUALITY , MYCOTEC PTY LTD, PHILIPS DOMESTIC APPLIANCES, QED ENVIRONMENTAL SERVICES PTY LTD, SAMSUNG ELECTRONICS AUSTRALIA PTY LTD, TRANE TECHNOLOGIES
Morawska, Prof Lidia	The aim of the Centre is to engineer building systems whose elements work together to reduce airborne infection transmission by improving indoor air quality while maintaining comfort and efficiency. The significance is in establishing clean indoor air as the norm, with Australian industry being the forerunner in this process. The outcomes include new intelligent building systems, improved building technologies, quantitative methods for building control, evidence for policymaking and recommendations for operational guidelines. Wide-ranging benefits include reducing the health and economic burden of inadequate indoor air and increasing the competitiveness of Australian industry in the face of increasing demand for next-level building systems.											

National Interest Test Statement

Australians spend more than 90% of time indoors, working, studying, enjoying entertainment, undergoing medical care, and in fact living. The full scale of the burden of inadequate indoor air quality is only beginning to emerge, and is due to inhalation of infectious pathogens, such as SARS-CoV-2, smoke from bushfires, vehicle emissions entering buildings and other contaminants. The goal is to prevent this, and to significantly reduce the burden by creating healthy shared indoor air environments. This goal is achieved by bringing together, for the first time, a body of academic experts and industries representing all elements of the building system and connecting them to operate as an efficient and effective system. Widespread adoption of this innovative work, advanced building systems—coupled hardware and software solutions implemented through new building designs or retrofits, and new operational guidelines reduces our national vulnerability to airborne infections and through improved indoor air quality, improves health, reduces absenteeism, increases productivity, and results in massive economic benefits.

Queensland University of Technology 499,698.50 999,697.00 999,435.00 999,435.50 970,609.50 470,610.50 4,939,486.00

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The University of Queensland

IC220100050	ARC Training Centre for Environmental and Agricultural Solutions to Antimicrobial Resistance (ARC CEA-StAR)	438,135.00	938,016.00	999,662.00	957,199.00	816,416.00	358,998.00	4,508,426.00				
Blaskovich, A/Prof Mark A	The ARC Training Centre for Environmental and Agricultural Solutions to Antimicrobial Resistance aims to develop industry-led solutions and train a new generation of researchers to combat the impact of antimicrobial resistance (AMR) on agribusiness and the environment. AMR is a global health and economic threat that epitomises the need for a 'One Health' collaborative approach encompassing the interconnection between people, animals, plants, and their shared environment. Expected outcomes of this collaborative program include a cohort of researchers trained in industry-relevant techniques, furnishing solutions to partner-defined AMR challenges, and providing significant benefits by positioning Australia as a global leader in reducing AMR.								Advanced Manufacturing, Food, Beverage and Agribusiness, Recycling and Clean Energy			CLUSTER BIOTECHNOLOGY PTY LTD, NEOCULI PTY LTD, CALIX LTD, EDENVALE PTY LTD, EVOLVE GROUP PTY LTD

National Interest Test Statement

Antimicrobial resistance (AMR) is a global threat with detrimental impact on the Australian economy due to its effects on health, agriculture and the environment, as recognised by the Australian Government's "National Antimicrobial Resistance Strategy – 2020 and Beyond". The ARC CEA-StAR will conduct research that finds solutions to antimicrobial resistance via a 'One-Health' approach bridging human health, agriculture and the environment, leading to clear benefits to a wide range of the Australian community. Successful projects will contribute to cleaner water, reduced use of antibiotics in animals with improved animal health, and new opportunities to develop effective alternatives to the depleted arsenal of existing antibiotics that are essential to modern medicine. Success in any one of these areas will clearly provide commercial benefits to the companies involved, leading to direct economic benefits to Australia through increased company-driven revenue and employment, along with indirect economic benefits due to a reduction in the economic impact of antimicrobial resistance.

The University of Queensland	438,135.00	938,016.00	999,662.00	957,199.00	816,416.00	358,998.00	4,508,426.00
Queensland	937,833.50	1,937,713.00	1,999,097.00	1,956,634.50	1,787,025.50	829,608.50	9,447,912.00

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South Australia

Flinders University

IC220100003	ARC Training Centre for Biofilm Research and Innovation	499,916.50	999,866.50	999,730.50	999,355.50	965,455.50	465,880.50	4,930,205.00		Defence, Advanced Manufacturing	France, United States of America	DEFENCE SCIENCE AND TECHNOLOGY GROUP, ENWARE AUSTRALIA PTY. LIMITED, OSMOFLO PTY LTD, SPARC TECHNOLOGIES LIMITED, ASC SHIPBUILDING PTY LIMITED, BAE SYSTEMS MARITIME AUSTRALIA, SOUTH AUSTRALIAN WATER CORPORATION, FRANMARINE UNDERWATER SERVICES PTY LTD, DMTC LIMITED, MOLINO, ZHANG AND ASSOCIATES PTY LTD, UNIVERSITY OF TOULON, THE OHIO STATE UNIVERSITY, USA, ENVIRONMENT PROTECTION AUTHORITY
Leterme, A/Prof Sophie C	The ARC Training Centre for Biofilm Research and Innovation aims to transform biofouling management strategies for maritime platforms by building on local and international expertise to mentor and train the next generation of interdisciplinary scientists and engineers. Anticipating evolving regulatory stringency, this project expects to establish a dynamic environment for industry partners, students and scientists to collaborate and develop biofilm management strategies. Expected outcomes include new and enhanced collaborations that advance and translate knowledge to better manage biofouling. The significant benefits will include a generation of industry-focused researchers critical for growing Australia's Defence industry.											

National Interest Test Statement

Australian marine equipment and accessory manufacturers are globally recognised; and the shipbuilding sector has been significantly strengthened by the Government's long term commitment to continuous building and sustainment of major maritime platforms in Australia. Controlling the biofouling of external and/or internal surfaces in maritime platforms is part of sustainment plans, but current biofouling control measures are not sufficient. The aim of the ARC Training Centre for Biofilm Research and Innovation is to foster close partnerships between academic experts, industry and other end-users to translate research into innovative biofouling control solutions to benefit industries worldwide. This centre will train a new generation of interdisciplinary scientists and engineers and transform the Australian sustainment of maritime platforms into an international leader. It will also foster the relationship between shipbuilding companies and SMEs who can participate in the sustainment chain and/or contribute to knowledge, increasing the Australian capability in Defence manufacturing.

Flinders University 499,916.50 999,866.50 999,730.50 999,355.50 965,455.50 465,880.50 4,930,205.00

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	South Australia	499,916.50	999,866.50	999,730.50	999,355.50	965,455.50	465,880.50	4,930,205.00				

* Note - Indicative funding for approved projects will be made available through a funding variation under section 54 of the ARC Act

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Tasmania

University of Tasmania

IC220100035	ARC Training Centre for Hyphenated Analytical Separation Technologies	499,758.50	999,152.00	999,304.50	999,846.00	980,400.50	480,465.50	4,958,927.00		Advanced Manufacturing, Food, Beverage and Agribusiness	United States of America	TRAJAN SCIENTIFIC AND MEDICAL PTY LTD, AB SCIEX AUSTRALIA PTY LTD, NORSE SKOG PAPER MILLS (AUSTRALIA) LIMITED, QUEENSLAND HEALTH, THERMO FISHER SCIENTIFIC AUSTRALIA PTY LTD, DERWENT ESTUARY PROGRAM, AUSTRALIAN ANTARCTIC DIVISION, ADVANCED MATERIALS TECHNOLOGY, SHIMADZU SCIENTIFIC INSTRUMENTS (OCEANIA) PTY LIMITED
Paull, Prof Brett	The toughest analytical science challenges typically require advanced analytical technologies to acquire the desired solutions. In the field of separation science this inevitably involves hyphenated separation technologies, specifically the combination of chromatography and mass spectrometry. Advancing this technology to its full capability requires the collaborative strength of academic, industry and end-user partnerships, providing the materials and inspiration for young researchers to apply novel hyphenated methods to complex environmental and industrial systems. This Centre will deliver fundamental developments in hyphenated technologies, new analytical capability, and applied outcomes across multiple end-user groups and interests.											

National Interest Test Statement

This Centre addresses both Advanced Manufacturing, and Food, Beverage and Agribusiness national priorities, partnering with Australia's leading scientific instrument manufacturing companies and analytical technology developers, to deliver the next generation of instrumental technology and methodology to address challenging analytical problems across the environmental sciences, and food, chemical and natural products industries. The Centre will undertake innovative, transformational and technologically demanding projects, leading to the development of new analytical capability, and through its commercialisation boost the economy, creating new job opportunities in cutting edge analytical science. The Centre will link technology developments with end-user industry defined problems, delivering state-of-the-art analytical solutions. Our graduate training program, including embedding with our industry partners, will simultaneously address a critical shortage of graduates with the analytical science skills and industry experience, vital to strengthen the analytical science capacity of multiple industrial sectors.

University of Tasmania	499,758.50	999,152.00	999,304.50	999,846.00	980,400.50	480,465.50	4,958,927.00
Tasmania	499,758.50	999,152.00	999,304.50	999,846.00	980,400.50	480,465.50	4,958,927.00

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		2,932,301.50	5,928,941.50	5,992,839.00	5,949,767.50	5,717,661.50	2,764,093.00	29,285,604.00				

* Note - Indicative funding for approved projects will be made available through a funding variation under section 54 of the ARC Act