



Australian Government



AUSTRALIA'S  
ECONOMIC  
ACCELERATOR

# Annual Investment Plan

| June 2025

Australia's Economic Accelerator  
(AEA) Advisory Board



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The document must be attributed as the *AEA Annual Investment Plan 2025-26*.

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## > Foreword

Australia's Economic Accelerator (AEA) Advisory Board is pleased to release the 2025-26 Investment Plan. This plan builds on our experience over 2024-25, AEA's first year of operation under the newly appointed AEA Board. Over the course of last year, AEA successfully delivered the first rounds of Ignite and Innovate funding streams, with a total of \$153 million in funding awarded.

It is very encouraging to see the wide range of outstanding research coming from Australia's universities. From more efficient solar panels, direct carbon capture, safe alternatives to PFAS and applying AI to a range of challenging problems, the AEA is bridging the gap between scientific discovery and new business opportunities that deliver life changing technologies.

The AEA aligns with broader Government economic priorities such as the *Future Made in Australia* agenda and the National Reconstruction Fund. Through this Investment Plan, the AEA Advisory Board has considered the constantly evolving needs of industry and the community, and the technology opportunities available to best position Australia for growth, security and wellbeing.

In this Investment Plan, the Board has determined to broaden its priorities to include space technologies and renewable energy, as well as broadening digital agriculture to encompass agriculture and food technology.

These focus areas have been identified through extensive analysis of technology and market conditions. The members of the AEA Advisory Board are confident that the identified focus areas represent the best opportunities for further establishing leading edge capabilities in Australia, consistent with stated Australian Government investment priorities.

The AEA Advisory Board looks forward to working with industry and researchers in the coming year to build new linkages and deepen collaboration, to increase the dividend to the community from Australia's outstanding science and research.

**Mr Jeff Connolly**

Chair of the AEA Advisory Board

## > Introduction

Australia's Economic Accelerator (AEA) was established in 2022 as a research funding program designed to shift the dial on Australian research, by supporting the translation and commercialisation of our world leading research in the university sector. The program supports a culture shift to improve collaboration between universities and industry, to commercialise university research in areas where Australia has strong competitive advantage and that solves domestic and global market needs.

The AEA is one of a suite of programs that helps create a research ecosystem where our world-class research is translated into innovations to serve real world market needs and deliver productivity and economic gains. The objectives of the AEA, the Trailblazer Universities Program and the National Industry PhD program align with the Australian Government's Future Made in Australia agenda.

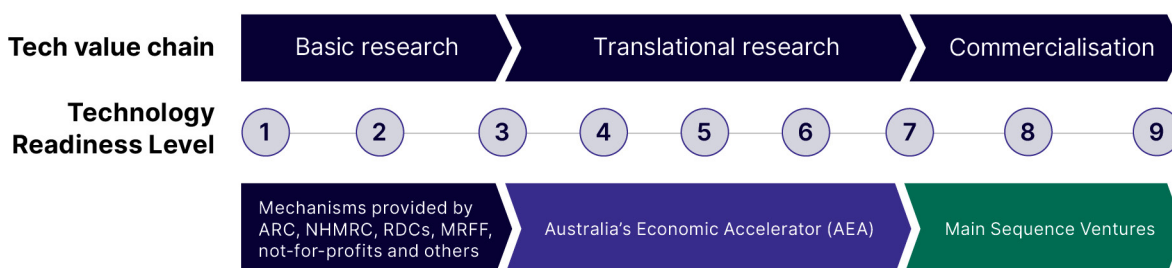
As a priority-driven grant program, AEA supports projects aligned with national research priorities with high commercial opportunity. Funding is available to universities, and applicants are required to partner with industry.

The AEA is designed to attract projects at a proof-of-concept or proof-of-scale level of commercial readiness that have high commercial potential (Figure 1). Projects can come into the program at any stage, or progress through the program based on continued success and achievement of milestones that validate the commercial potential and path to commercial product. To reflect the increasing costs associated with later-stage development, the amount of AEA funding increases as projects mature towards at-scale commercialisation.

The [Main Sequence Ventures fund](#) provides a high-value opportunity for projects that successfully progress through the AEA. Other Australian Government funding sources include the Clean Energy Finance Corporation and the National Reconstruction Fund (NRF). Strategic business partners and venture capital investment are also important sources of private follow-on funding for AEA grantees.

Industry participation is critical to the success of the program. Examples of industry involvement include embedded industry experts, in-kind support, formal collaborations or partnerships, and investment.

**Figure 1. The AEA is designed to bridge the gap between basic research and commercialisation.**



The AEA is governed by an expert Advisory Board (the Board), supported by expert Priority Managers. The Board members have experience and knowledge in research and its translation and commercialisation, and represent government, industry and research sectors. The Priority Managers are highly qualified, experienced, and motivated business and technology specialists. The Priority Managers support successful applicants to foster connections and secure formal collaboration arrangements with industry partners.

Distinct from other funding models in research, the AEA Program will support the translation and commercialisation of the outcomes of university research in collaboration and partnership with industry. AEA fills a gap in the current research commercialisation landscape by funding the university sector to engage in translational research from early-stage research into products that are attractive for industry collaboration and investment and will have impact in major markets, thereby growing Australia's economy.

## > Purpose of the Investment Plan

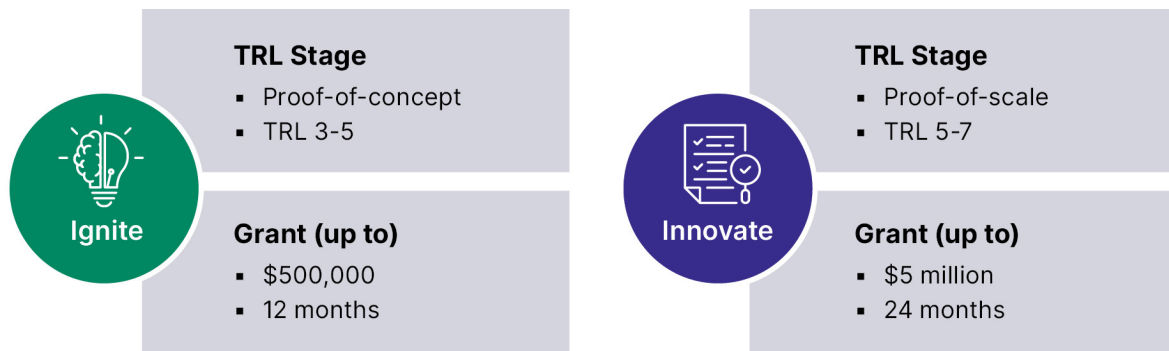
### AEA delivery

The AEA program will be administered by the Department of Education with the assistance of the Board whose members are appointed by the Minister. The Board's functions are stipulated under Section 42-15 of the *Higher Education Support Act 2003* (HESA).

### Stages

AEA grants are delivered through the 2 streams (Figure 2). These distinct streams are targeted at different stages of technology readiness (TRL).

**Figure 2. AEA grants are provided through 2 funding streams targeted at different stages of the technology value chain.**



### Funding available

The AEA will provide up to \$180 million to support existing funded and new AEA Ignite and Innovate projects in 2025-26. Building on experience from 2024-25, the Board anticipates that 2 funding rounds will open in 2025-26 for each of the Ignite and Innovate streams.

For each round, the total funding to be awarded through grants as well as the relative funding against different priority areas will be driven by the quality of applications received. The available funding allocation will only be fully committed where enough applications of sufficient quality, as deemed by expert assessors and the AEA Board, are received.

### Participation

As part of the AEA program's commitment to helping uplift research translation and commercialisation activity on a national scale, AEA grant applicants are asked to address how their project includes researchers from diverse backgrounds. These include and are not limited to female identified entrepreneurs or researchers, First Nations entrepreneurs, and researchers from regionally headquartered institutions.

## > AEA Investment Priorities

### Areas of national priority

The AEA serves a vital role in Australia's research and innovation landscape by providing the support necessary to accelerate research outcomes to a state of investor readiness. Therefore, it is critical that efforts are targeted to areas where Australian research can build scale and have real-world impact.

On this basis, the AEA will:

- aim to deliver innovations that leverage Australia's natural and comparative advantages in areas of strategic importance
- support research translation and commercialisation that is aligned with the government identified priority areas of the economy (outlined in the *National Reconstruction Fund Corporation (Priority Areas) Declaration 2023*):
  - > value-add in resources
  - > value-add in agriculture, forestry and fisheries
  - > transport
  - > medical science
  - > renewables and low emissions technologies
  - > defence capability
  - > enabling capabilities (that have the potential to diversify and transform Australian industry across a number of sectors).
- complement industry targeted initiatives to enhance innovation and expand domestic manufacturing, including the NRF and the Industry Growth Program
- support the overarching National Science and Research Priorities and other key Government policy objectives, such as sovereign capability needs, circular economy and net zero commitments.

### Future Made in Australia

The AEA also supports the objectives of the Government's Future Made in Australia agenda, including research and commercialisation aligned with the priority sectors the Government has identified as part of this agenda, including:

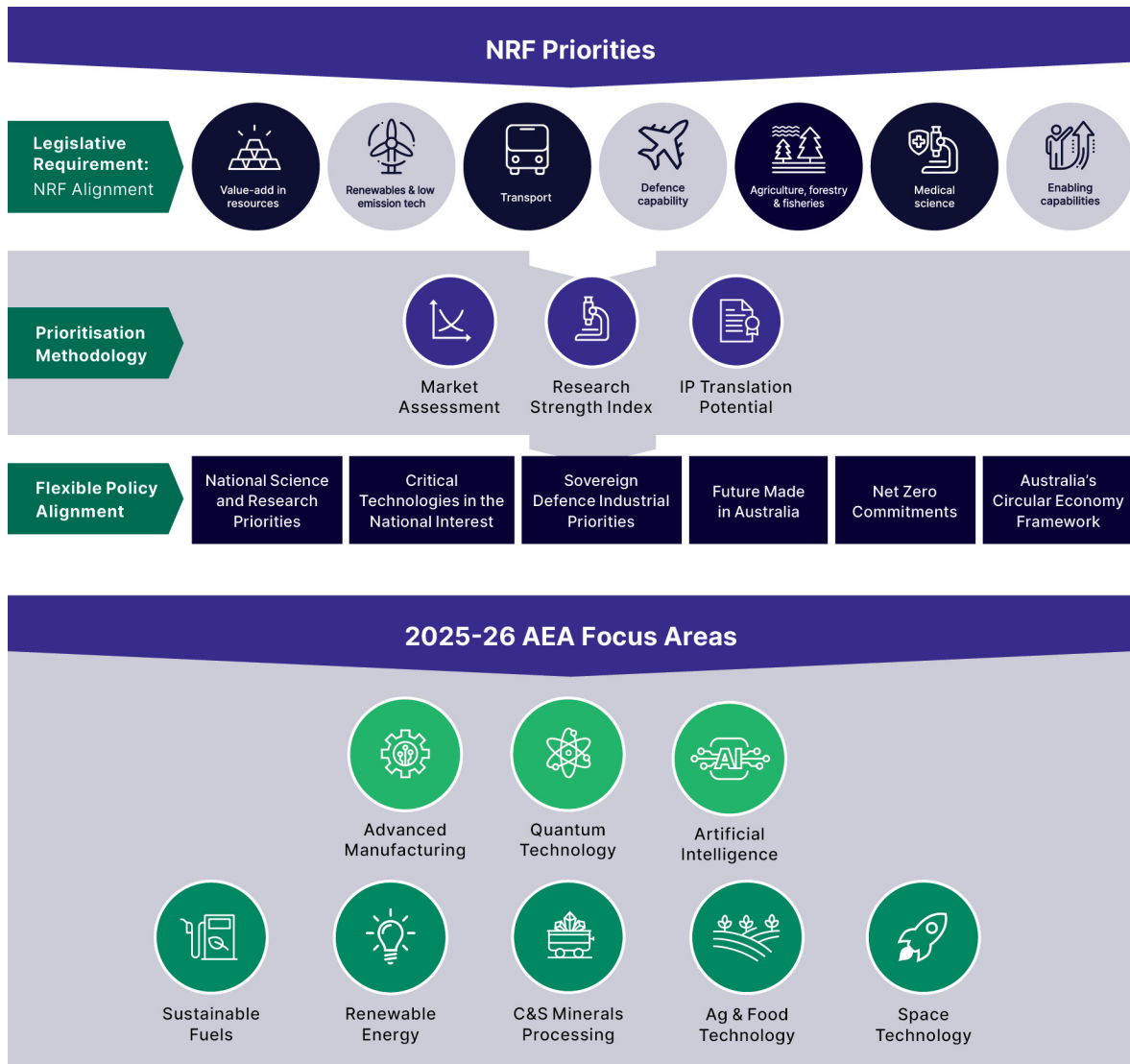
- renewable hydrogen
- critical minerals processing
- green metals
- low carbon liquid fuels
- clean energy manufacturing, including battery and solar manufacturing.

### Circular Economy

Australia's Circular Economy Framework (2024) highlights the importance of innovation in driving the development of disruptive technologies, business models, and processes that make circular practices practical and profitable. The AEA Board supports the Framework, noting the application of circularity principles by researchers to their projects can deliver not only improved economic returns, but also environmental and social benefits.



## AEA Investment Prioritisation – process overview



## Sovereign Defence Industrial Priorities (SDIPs)

Defence constitutes a major area of government priority and national interest. To align with this the AEA supports the [Sovereign Defence Industrial Priorities](#), as they relate to areas of research translation. The Board also notes the [Defence IS&T Strategy](#) and the [Defence Industry Development Strategy](#), and their role in formulating the priorities for Australia's defence technologies, especially in areas which can be augmented by university-led research and development.

Defence also has a major combined impact across the Australian economy and represents a clear area where there are shared equities with Australian research. There are clear opportunities for AEA supported projects to leverage commercial opportunities to also deliver Defence and wider National Security priorities, allowing both for research, development, commercialisation, and economic progress. These types of dual-use projects will help to ensure the continuing national security of Australia.

## Strong Commercial Focus

The AEA aims to support high quality research with strong commercial potential. AEA's program architecture achieves this through:

- selection of investment Focus Areas by comprehensive economic analysis using a range of market metrics;
- the requirement for private matched funding for the larger Innovate grants;
- assessment of the market opportunities identified by grant applicants, drawing on the technical expertise of the AEA Priority Managers, the AEA Board and external advice where necessary; and
- engagement with stakeholders including industry and representative bodies, government and experts to test the investment framework.

The AEA plays a significant role within the innovation system, with Government leveraging its capacity to inform, plan, and aggregate risk to achieve national objectives. The AEA Board and Priority Managers network extensively across Government and industry to ensure AEA's investment objectives reflect current pressure points across the economy, thereby maximising the likelihood of commercial success. This process is ongoing, with the investment plan reviewed annually to reflect recent learnings from grantees and current and future opportunities.

While most AEA projects funded to date are not yet complete, early indications of success are encouraging, with many projects successfully completed and moving further along the journey to commercialisation.

## AEA focus areas

To ensure AEA investment drives the best possible outcomes, the Board has identified focus areas within the above areas of national priority to be targeted for AEA funding. This is consistent with the requirement in HESA to set out detailed and specific advice on investment opportunities for the AEA in areas of national priority.

The Board has considered focus areas where the AEA program can make strong contributions to rebuilding, modernising, and diversifying Australia's industrial base and broader economy.

A shared strategic focus across the research and innovation community is a key step in driving stronger partnerships and better outcomes in areas where Australia can leverage its advantages to develop future industries. The identification of AEA focus areas (and research translation needs within each of these areas) is designed to provide the Australian research community with clear challenges against which to apply their expertise, capacity and talent.

Accordingly, when considering proposals, the AEA will first examine whether projects are addressing a genuine need before considering the capacity and capability of proponents to deliver it. The focus areas presented here will help ensure that proposals received from researchers are responding to genuine national needs and market opportunities.

## Prioritisation Approach

To inform the identification of AEA investment priorities, the Board has:

- Identified areas where Australia has competitive and high-quality research and where private markets stand ready to support and absorb commercialisation activity and outputs.
- Assessed research translation across technology areas, targeting fast-maturing areas where the linkage between scholarly effort and innovation outputs like patents is weaker than our peers.
- Ensured each area aligns with existing national priorities and initiatives across government to build critical mass and provide a commercialisation bridge toward realising key national goals.
- Consulted with industry, research, and other government bodies to inform decision-making.

## Expanded focus areas

The Board has reviewed the six 2024-25 Investment Plan focus areas in the context of the range of applications received over the past two years, the wider economic and geopolitical landscape, and emerging areas of government focus. The AEA's methodology for selecting emerging research strengths has been revised, with space technologies and renewable energy identified as suitable for inclusion, and food technologies being added to the digital agriculture focus area from AEA's Investment Plan 2024-25. On this basis, the Board has approved 8 focus areas for investment prioritisation in AEA grant rounds opened under this Investment Plan. These are outlined below with further information on the supporting data in the Appendix.

These 8 focus areas directly contribute towards areas of national priority and capitalise on opportunities in areas of Australian economic advantage, such as adding value to our critical mineral endowments, leveraging our geography for renewable energy abundance, and developing our high-quality and reputable agrifood sector.

The addition of space and renewable energy represent an opportunity to support new and emerging research, technologies, and industries in Australia, while the revision of agriculture and food technology (from the previous plan's digital agriculture focus area) allows the AEA to support more effectively some of Australia's largest manufacturing and agricultural industries. The addition and revision of these focus areas will send a strong signal to industry, universities, and researchers for the future priorities of the program for the coming year (2025-26) and allow the program to reflect Australia's evolving research and commercialisation strengths.

In addition to focusing on areas of economic strength, the AEA will support enabling capabilities with cross-sectoral application, namely, quantum technologies, artificial intelligence, and advanced manufacturing. The rapidly growing space industry similarly has many spillover benefits for agriculture, resources, and ICT sectors. This diverse approach aims to build a portfolio of AEA investments over time that will leverage the most promising technologies to deliver internationally competitive industrial capability in sectors of national importance.

These areas were selected from a broader list of opportunities derived through a scan of policy documents, strategies, roadmaps, and national priorities or missions, consideration of domestic and international technology foresighting frameworks, and analysis of associated data. It is important to note that these 8 focus areas do not represent an end state. Given the rapidly changing nature of frontier research, the time-sensitivity of commercialisation investment, and in the interest of maximising value for grant funding across areas and over time, ongoing monitoring and evaluation of future opportunities is regularly undertaken by the Board.

## > AEA Focus Areas (2025-26)



### Critical and Strategic Minerals Processing

*(supports the value-add in resources government identified priority area)*

Technologies which enable the transition from mineral to material, namely processing and early value chain manufacturing techniques utilising mineral inputs deemed critical or strategic to the national interest. This includes technologies to enable exploration, low environmental impact extraction and processing of minerals that are vital for the energy transition; new and sustainable value-add opportunities in green metals; novel and high purity refining methods; and other technologies to improve mineral recovery and processing efficiency.



### Sustainable Fuels

*(supports the renewables and low emissions technologies, transport and value-add in agriculture, forestry and fisheries government identified priority areas)*

Renewable energy carriers and fuels for transport and industrial uses which present sustainability benefits (primarily, quantifiable emissions reductions) when compared to traditional sources. This includes particular focus on the production of renewable hydrogen and low carbon liquid fuels (LCLF), which are produced sustainably from waste, biomass, or other feedstocks like captured carbon dioxide. LCLFs include sustainable aviation fuel (SAF), renewable and biodiesel for applications like maritime and construction, ethanol and e-fuels. This area also includes innovations in the transport, storage, and industrial applications of these fuels, and their use in the processing of green metals.



### Agriculture and Food Technology

*(supports the value-add in agriculture, forestry and fisheries government identified priority area)*

Agriculture and food technology includes applications of digital platforms and data-driven approaches such as Internet of Things (IoT) and precision agriculture, automation and robotics, prediction and modelling, remote observation and mapping, development of alternative proteins and novel foods; and innovations in food provenance, processing, packaging, and sustainability, to enhance the quality, traceability and diversity of food produced in Australia.



### Space

*(supports the defence capability government identified priority area)*

Technologies supporting the expansion of Australia's space assets in areas such as launch and satellite design and manufacture, as well as novel value-adding uses for existing space infrastructure, including earth observation, satellite communications, and positioning information. Advances in space technologies also enables progress in a range of industries and other technologies including agriculture and minerals and quantum-assured positioning, navigating and timing.



## Renewable Energy

*(supports the renewables and low emissions technologies government identified priority area)*

Technologies that increase efficiency and reduce the cost of renewable energy generation and use, including innovative improvements to conventional methods such as solar and wind, solutions for transmission or specific industry needs which require scaling support, and systems for the integration and management of renewable energy such as virtual power plants or demand management tools.

# Enabling capabilities

*(supports the enabling capabilities government identified priority area and have the potential to diversify and transform Australian industry across a number of sectors)*



## Quantum

Technologies which make downstream use of quantum physics principles to deliver innovations in sensing and measurement, positioning and timing, quantum communication and cryptography capabilities, and progress toward industry-ready quantum computation.



## Artificial Intelligence

Technologies which enable autonomous systems to solve problems and complete complex tasks such as prediction and object detection, with an initial focus on language processing, computer vision and support for robotics.



## Advanced Manufacturing

Uses complex technologies to innovate and produce cutting-edge products. It involves the introduction of new materials or processes with advanced properties to make high-value goods, such as novel composites or super and semiconductors, and includes advanced methods and equipment such as additive or hybrid manufacturing tools and process flows.

## > Early Successes - AEA Seed

AEA Seed program funding commenced in 2023-24, ahead of the full implementation of AEA from 2024-25. Seed supported Technology Readiness Level 3 to 5 projects, with grants between \$50,000 and \$500,000 to achieve proof-of-concept on research ideas pursuing a commercial and translational outcome.

The grants were targeted to the experimental end of the research and development spectrum and aimed to foster investment and collaboration between industry and university researchers. The Seed program is now complete and has produced many exciting and innovative projects for Australian research commercialisation. Some promising examples of successful projects are highlighted below.



**“Closed-loop smart cathodic protection technology for infrastructure protection and life extension”,** at Deakin University. The project aims to field test and validate a new and patent-pending corrosion control technology for critical parts in solar and wind farms. The project was supported by an AEA Seed grant of \$440,782. This smart system technology protects metal structures from corrosion by automatically adjusting protection levels based on real-time monitoring.



**“A sovereign Autonomous Underwater Vehicle (AUV) capability”,** at Sydney University. The development of the AUV aims to improve environmental data collection at offshore sites, making it simpler to capture high quality seafloor imagery over larger regions. The \$499,036 AEA Seed funding has enabled researchers to take robots from a research environment and start building experience in commercial delivery and demonstrations to a wider industry. Two UAV's have been deployed to survey seafloor sites near the Gippsland Offshore Wind Area in Victoria.



**“Ore-sand’s potential as a construction material”,** at University of Queensland. This project aims to create a sustainable alternative to sand extraction by transforming a mining by-product into a valuable resource, and moving towards a more sustainable, circular economy. The project’s innovative approach involves developing mineral processing techniques to create a new product called ore-sand, which can be used in construction and other industries. The project was funded by a \$180,000 AEA Seed grant.

## > Future work

Each year, as Australia's research and development (R&D) landscape and national priorities evolve, the Board will advise on changes necessary to match quality research with industry demand and capture emerging technology and innovation opportunities.

Consistent with the Australian Government's Future Made in Australia ambition, this approach will ensure AEA investment remains targeted over time in areas where Australia has comparative advantage and the highest likelihood of delivering real impact for Australian industry and the public.

In preparation for the next Investment Plan, the Board will continue to:

- examine AEA focus areas that represent opportunities for research translation and commercialisation and align with Australia's strengths and potential markets
- investigate ways of boosting participation of researchers with diverse backgrounds (including from regionally headquartered universities, female identified researchers and First Nations identified researchers)
- engage, through the Priority Managers, with potential industry partners to identify tangible problems that AEA investment could help address.



# Critical & Strategic Minerals Processing



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

Critical and strategic minerals processing includes technologies enabling the transition from mineral to material, namely processing and early value chain manufacturing techniques using mineral inputs deemed critical or strategic to the national interest. This includes technologies to enable exploration, low environmental impact extraction and processing of minerals that are vital for the energy transition; new and sustainable value-add opportunities in green metals; novel and high purity refining methods for minerals; and other technologies to improve mineral recovery and processing efficiency.



## > National priority

Strong policy priority that aligns with our resource advantage and feeds into other priority sectors. Critical and strategic minerals processing aligns with the national priority areas through adding value to extracted goods and the building of onshore industrial capability.

- [Critical Minerals Strategy 2023-2030](#)
- [List of Critical Technologies in the National Interest](#)
- [Future Made in Australia agenda](#)

### Advantage

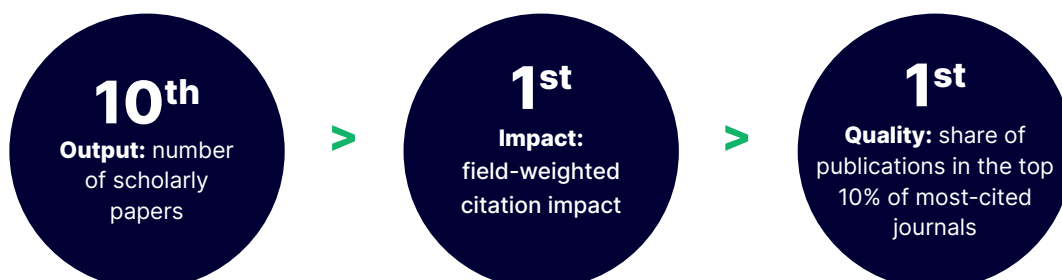
Australia possesses a diverse and rich mineral endowment and is a significant exporter of multiple critical and strategic mineral classes.

### Opportunity

To utilise our mineral endowment and competitive energy factor costs to reduce sovereign risks and realise more value from growing global demand.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Critical and strategic minerals processing was defined using custom search terms.





## > IP translation potential

From 2019-2023, **3.18%** of Australian academic publications for critical and strategic minerals processing were cited in patent applications. This is **below** the OECD average of **3.52%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

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## > Market opportunity assessment

- The market value of Australia's key energy minerals production currently stands at approximately **AU\$23.5 billion** for mining and **AU\$6.3 billion** for refining in 2024.<sup>1</sup>
- The market size for energy transition minerals doubled over the past five years, reaching **AU\$501 billion** in 2022.<sup>2</sup>

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## > Key challenges

- Improving techniques for minerals processing, in ways that increase production, improve processing and actively reduce costs.
- New techniques for exploration and exploitation of mineral resources.
- Reducing loss of economically useful minerals during processing.
- Climate change, the transition to net zero, and the environmental impact of minerals processing.

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## > Other Australian Government programs

- [The National Reconstruction Fund Corporation](#)
- [Export Finance Australia & the Critical Minerals Facility](#)
- [Northern Australia Infrastructure Facility](#)

<sup>1</sup> [IEA 2025, Global Critical Minerals Outlook 2025](#)

<sup>2</sup> [IEA 2023, Critical Minerals Market Review 2023](#)

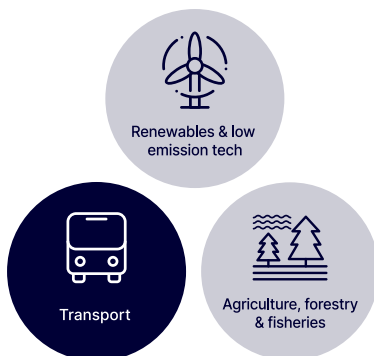
▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

# Sustainable Fuels



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

Sustainable fuels are renewable energy carriers and fuels for transport and industrial uses which present sustainability benefits (primarily, quantifiable emissions reductions) when compared to traditional sources. This includes particular focus on the production of renewable hydrogen and low carbon liquid fuels (LCLF), which are produced sustainably from waste, biomass, or other feedstocks like captured carbon dioxide. LCLFs include sustainable aviation fuel (SAF), renewable and bio diesel for applications like maritime and construction, ethanol and e-fuels. This area also includes innovations in the transport, storage, and industrial applications of these fuels, and their use in the processing of green metals.



## > National priority

Strong policy priority that aligns with Australia's resource advantage and feeds into other priority sectors. Sustainable fuels align with the national priority areas as an opportunity to capitalise on domestic and global energy trends and support realisation of net zero emissions targets.

- [National Hydrogen Strategy](#)
- [List of Critical Technologies in the National Interest](#)
- [Hydrogen Headstart program](#)
- [Future Fuels and Vehicles Strategy](#)

### Advantage

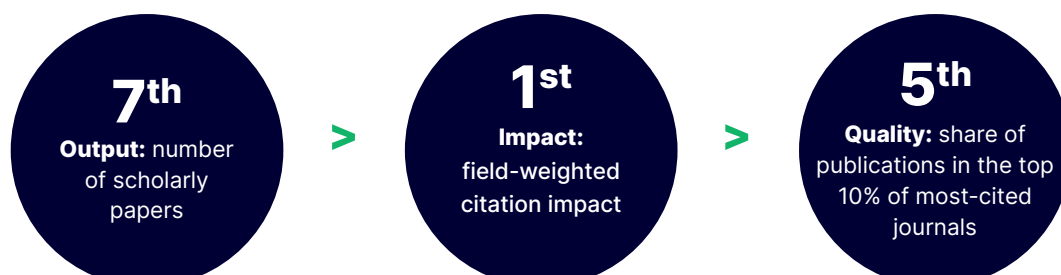
Australia possesses strong renewable energy resources, a wide range of feedstocks for alternative fuel chemistries and hosts downstream industries which require alternative fuels to realise emission reduction goals.

### Opportunity

Build domestic sustainable fuel industries which can support decarbonisation of hard-to-abate sectors while capturing value from the global energy transition.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Sustainable fuels were defined using custom search terms.



## > IP translation potential

From 2019-2023, **3.55%** of Australian academic publications for sustainable fuels were cited in patent applications. This is **below** the OECD average of **3.96%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

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## > Market opportunity assessment

- Australia's renewable hydrogen industry could produce **AU\$28.9 billion** per year by 2040.<sup>1</sup>
- Global market size for biofuel was **AU\$224 billion** in 2024.<sup>2</sup>
- Projected global compound annual market growth of **8.1%** from 2023-2030 for biofuel.<sup>3</sup>

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## > Key challenges

- Cost and efficiency of green hydrogen, and its production, compared to more carbon intensive methods (e.g., grey or blue).
- Ensuring safe and cost-effective storage, transport and handling of hydrogen.
- Developing low emission or renewable alternatives to high-carbon fuels.
- Scaling the supply, storage, and distribution of secure and reliable biofuel and synthetic fuel, including feedstock processing capability and integration with existing refinery infrastructure.
- Building domestic power-to-liquid (PtL) capability to take advantage of energy factor costs and renewable energy buildout.

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## > Other Australian Government programs

- [ARENA and the Future Made in Australia Innovation Fund](#)
- [Industry Growth Program](#)
- [Hydrogen Headstart Program](#)
- [Future Made in Australia Hydrogen Production Tax Incentive](#)
- [Future Fuels CRC](#)
- [Clean Energy Finance Corporation \(CEFC\)](#)

1 [DCCEEW 2024, Australia's National Hydrogen Strategy](#)

2 [Frost & Sullivan 2024, Oil & Gas Industry Innovation Tracker: Future Fuels, 2024](#)

3 [Frost & Sullivan 2024, Oil & Gas Industry Innovation Tracker: Future Fuels, 2024](#)

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

# Agriculture & Food Technology



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Agriculture and food technology includes applications of digital platforms and data-driven approaches such as Internet of Things (IoT) and precision agriculture, automation and robotics, prediction and modelling, remote observation and mapping, development of alternative proteins and novel foods; and innovations in food provenance, processing, packaging, and sustainability to enhance the quality, traceability and diversity of food produced in Australia.

## > National priority

Agriculture and food technology aligns with the national priority areas through supporting development of sustainable processes and advanced technology across agriculture, forestry, and fishery value chains. Agriculture is a key export sector drawing on Australia's resource advantage and where technology driven productivity gains are particularly impactful.



- [National Agricultural Traceability Strategy 2023-2033](#)
- [Food and Beverage Accelerator \(FABA\) Trailblazer](#)
- [On Farm Connectivity Program](#)
- [Food Systems Roadmap](#)
- [National Soil Strategy](#)
- [Australian Agricultural Sustainability Framework](#)

### Advantage

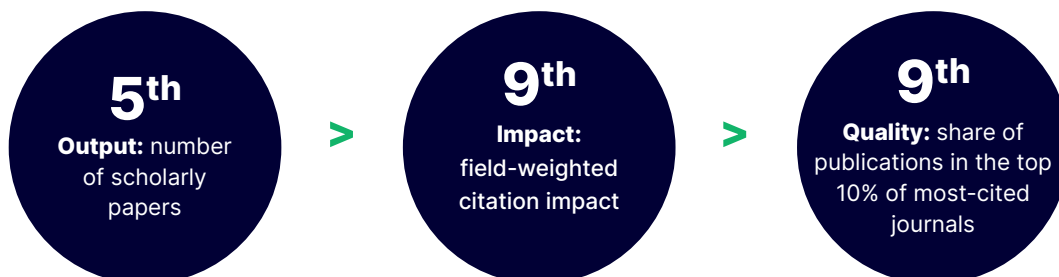
Australia is a trusted exporter of a wide range of agricultural and food products and a major supplier for growing global markets.

### Opportunity

To increase agricultural and food system productivity and value-add while expanding Australia's trusted brand into new markets and supporting sustainability and conservation goals.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Agricultural and food technology was defined using custom search terms.



## > IP translation potential

From 2019-2023, **2.86%** of Australian academic publications for agricultural and food technology were cited in patent applications. This is **below** the OECD average of **3.56%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

## > Market opportunity assessment

- Australian Agtech market size of **AU\$299 million** in 2023.<sup>1</sup>
- Australian food technology market size of **AU\$11.25 billion** in 2023.<sup>2</sup>
- Global Agtech market size of **AU\$24.6 billion** in 2023.<sup>3</sup>
- Global food technology market size of **AU\$407.5 billion** in 2022.<sup>4</sup>

## > Key challenges

- Applying new technologies to improve labour productivity.
- Reducing carbon emissions in agriculture, production, processing and transport.
- Maintaining food production and security, especially in areas affected by climate change.
- Meeting new consumer and market demands.
- Sustainability of current agricultural systems, particularly relating to biodiversity, water demands and soil health.
- Pest and disease threats impacting productive capacity.

## > Other Australian Government programs

- [The National Reconstruction Fund](#)
- [Future Drought Fund](#)
- [Industry Growth Program](#)
- [Food Agility CRC](#)
- [Future Food Systems CRC](#)
- [Rural Research and Development Corporations](#)
- [Zero Net Emissions Agriculture CRC](#)

1 [GlobalData 2024, Australia Agtech Market Summary, Competitive Analysis and Forecast to 2028](#)

2 [Grand View Research 2025, Australia Food Technology Market Size & Outlook, 2030](#)

3 [GlobalData 2024, Agtech Market Summary, Competitive Analysis and Forecast to 2028](#)

4 [Statista 2022, Food tech market size worldwide 2022](#)

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

# Quantum



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

Quantum technologies make downstream use of quantum physics principles to deliver innovations in sensing and measurement, positioning and timing, quantum communication and cryptography capabilities, and progress towards industry-ready quantum computation.



Enabling  
capabilities

## > National priority

Quantum technologies require considered and timely investment in research and commercialisation to seize the economic and strategic opportunities that they present. Quantum aligns with the national priority areas through support for transformative technologies that drive cross-sectoral productivity.

- [National Quantum Strategy](#)
- [List of Critical Technologies in the National Interest](#)
- [National Defence Strategy](#)

### Advantage

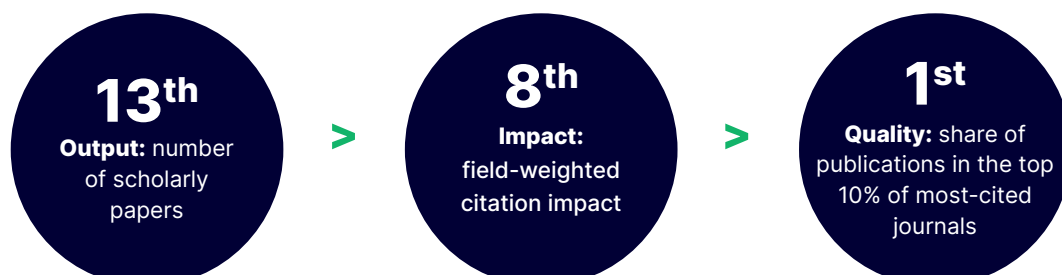
Australia hosts world-leading research and early-stage commercialisation activity in quantum technologies and holds comparative advantages in sensing, computing hardware, software and algorithms, communications and materials.

### Opportunity

Capitalise on an early-mover advantage to capture a share of the emerging global quantum technologies market and realise productivity and enabling benefits across domestic industries. This will also support sovereign capability in a key dual-use technology.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Quantum was defined using the Field of Research (FoR) Code 5108 – Quantum Physics.



## > IP translation potential

From 2019-2023, **3.58%** of Australian academic publications for quantum were cited in patent applications. This is **above** the OECD average of **2.79%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

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## > Market opportunity assessment

- Australian quantum technology market size of **AU\$1.55 billion** in 2024.<sup>1</sup>
- Projected compound annual market growth of **6%** from 2020-2040.<sup>2</sup>
- Projected global market size of **AU\$61.9-140.6 billion** by 2035.<sup>3</sup>

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## > Key challenges

- Applying quantum properties to attain secure and decryption resistant communication and data-storage systems.
- Overcoming engineering challenges such as error correction, scalability and integration with classical systems.
- Developing sovereign capability to manufacture components and materials for use in quantum devices.
- Building a fault-tolerant quantum computer which is accessible and commercially useful.
- Identifying promising use cases for quantum computing capabilities that demonstrate practical advantage over classical computing.

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## > Other Australian Government programs

- [The National Reconstruction Fund](#)
- [Industry Growth Program](#)
- [Advanced Strategic Capabilities Accelerator \(ASCA\)](#)
- [Defence IS&T Strategy – Accelerating Asymmetric Advantage: Delivering More, Together](#)
- [Defence Industry Development Strategy](#)

1 [CSIRO 2022, Growing Australia's Quantum Technology Industry](#)

a. Market estimate calculated using CAGR of 6% and market estimate from CSIRO report for 2030 of \$2.2 Billion.

2 [CSIRO 2022, Growing Australia's Quantum Technology Industry](#)

3 [McKinsey 2024, Quantum Technology Monitor April 2024](#)

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

# Artificial Intelligence



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

AI encompasses technologies that enable autonomous systems to solve problems and complete complex tasks such as prediction and object detection, with an initial focus on language processing, computer vision and support for robotics.



## > National priority

Fast-moving enabling technology area with considerable benefits to early-mover adoption and investment. AI aligns with the national priority areas by supporting commercialisation of transformative advanced technologies that drive cross-sectoral productivity and support national interests.

- [List of Critical Technologies in the National Interest](#)
- [National Defence Strategy](#)

### Advantage

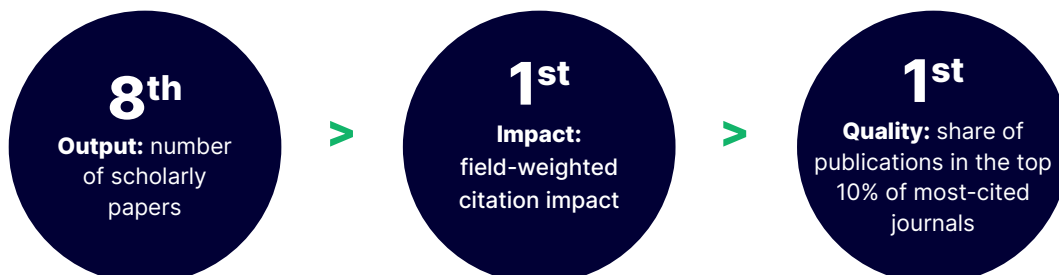
Australia possesses strong AI research capability alongside diverse, secure, and unique sources of data with significant downstream industry demand for AI tools.

### Opportunity

To apply existing research capability to uplift general productivity and produce application-specific AI products that can support industries and scale up and out internationally.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. AI was defined using a pre-existing curated research area in Scival.





## > IP translation potential

From 2019-2023, **3.83%** of Australian academic publications for AI were cited in patent applications. This is **below** the OECD average of **3.92%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

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## > Market opportunity assessment

- Australian market size of **AU\$2.95 billion** in 2023-2024.<sup>1</sup>
- Predicted compound annual market growth of **13.1%** from 2025-2030.<sup>2</sup>
- Global market size of **AU\$296 billion** in 2023.<sup>3</sup>

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## > Key challenges

- To find solutions which help to reduce the resource and energy demands of AI applications.
- Extracting value from Australia's existing large datasets efficiently, securely and within privacy requirements and social licence expectations.
- The application of new and novel AI products and services to existing supply chain or business processes that have the potential to create value and improve productivity.

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## > Other Australian Government programs

- [Industry Growth Program](#)
- [The National Reconstruction Fund](#)

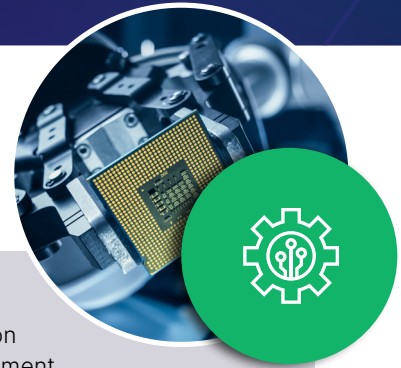
1 [IBISWorld 2024, At a Glance - OD5562 Artificial Intelligence in Australia](#)

2 [IBISWorld 2024, At a Glance - OD5562 Artificial Intelligence in Australia](#)

3 [UNCTAD 2025, AI market projected to hit \\$4.8 trillion by 2033, emerging as dominant frontier technology](#)

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

# Advanced Manufacturing



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

Advanced manufacturing uses complex technologies to innovate and produce cutting-edge products. It involves the introduction of new materials or processes with advanced properties to make high-value goods, such as novel composites or super and semiconductors, and includes advanced methods and equipment such as additive or hybrid manufacturing tools and process flows.



Enabling capabilities

## > National priority

Advanced manufacturing enables the development of more complex and skilled domestic manufacturing industries and strengthening of Australia's economic prosperity, and national security. Advanced manufacturing aligns with national priority areas by supporting commercialisation of transformative advanced technologies that drive cross-sectoral productivity, increase global competitiveness, builds local and sovereign capability, and supports Australia's national interests.

- [List of Critical Technologies in the National Interest](#)

### Advantage

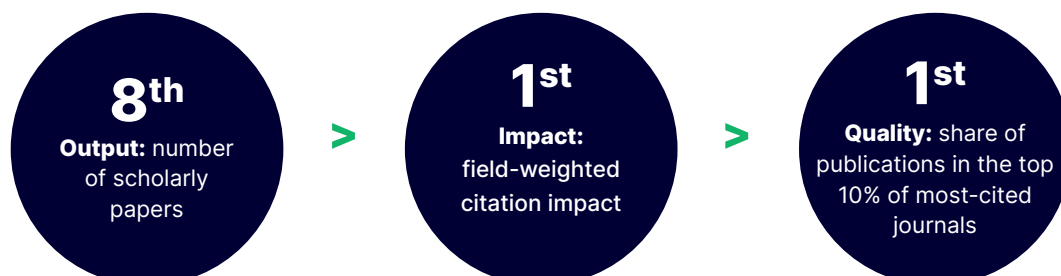
Australia has access to a wide range of input materials and minerals, a highly skilled workforce, and world-leading research with nascent industrial potential.

### Opportunity

To add value to our existing material inputs and develop domestic capability in production of complex goods and services that command greater value in global supply chains.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Advanced manufacturing was defined using the Field of Research (FoR) Code 4016 – Materials engineering.



## > IP translation potential

From 2019-2023, **4.51%** of Australian academic publications for advanced manufacturing were cited in patent applications. This is **above** the OECD average of **4.33%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

## > Market opportunity assessment

- Australian additive manufacturing market size of **AU\$102 million** in 2023.<sup>1</sup>
- Projected compound annual market growth of **15.5%** from 2024-2030.<sup>2</sup>
- Global market size of **AU\$39 billion** in 2024.<sup>3</sup>
- Projected global compound annual market growth of **20.4%** from 2021-2026.<sup>4</sup>

## > Key challenges

- Heavy industry must transition to net-zero emissions to comply with international targets.
- Building resilient supply-chains for sovereign goods such as defence electronics and other inputs into an increasingly technologically enabled manufacturing sector.
- Producing a greater share of energy transition goods onshore.
- Supporting capital intensive sectors like mining and agriculture with cost-competitive, flexible, and on-site manufacturing tools.
- Supporting the circular economy through the design of sustainable materials and low-waste manufacturing tools and processes.
- Building domestic supply chains for costly feedstock materials into additive and other advanced processes, like powders and spray coatings.
- Building industry confidence through novel quality assurance and testing for outputs manufactured through advanced methods such as 3D-printing or additive processes.
- Build Australian capability in the semiconductor supply chain by producing and processing raw minerals and developing fabless design and software.

## > Other Australian Government programs

- [The National Reconstruction Fund](#)
- [Industry Growth Program](#)
- [Australian Composites Manufacturing CRC](#)
- [Additive Manufacturing CRC](#)

1 [NMSC 2025, Australia Additive Manufacturing Market Share and Analysis 2030](#) Broader estimates for advanced manufacturing were not available.

2 [NMSC 2025, Australia Additive Manufacturing Market Share and Analysis 2030](#)

3 [Frost & Sullivan 2022, Global Additive Manufacturing Growth Opportunities](#)

4 [Frost & Sullivan 2022, Global Additive Manufacturing Growth Opportunities](#)

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

# Space Technology



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

Space technology includes technologies supporting the expansion of Australia's space assets in areas such as launch and satellite design and manufacture, as well as novel value-adding uses for existing space infrastructure, including earth observation, satellite communications, and positioning information. Advances in space technologies also enable progress in a range of industries and other technologies including agriculture and minerals and quantum-assured positioning, navigating and timing.

## > National priority



Space technology has been identified as a national priority by the Australian Government, specifically by CSIRO and its Space Technology Future Science Platform. It also heavily aligns with existing NRF priorities: Transport, Enabling Capabilities and Defence Capability. Innovations in space technology provide opportunities for advanced manufacturing and have applications in maritime and agricultural domains. Further alignment includes the Moon to Mars Initiative and the AUKUS pact.

- [Space Technology Future Science Platform](#)
- [Moon to Mars Initiative](#)
- [iLAUNCH Trailblazer](#)
- [List of Critical Technologies in the National Interest](#)
- [National Defence Strategy](#)

### Advantage

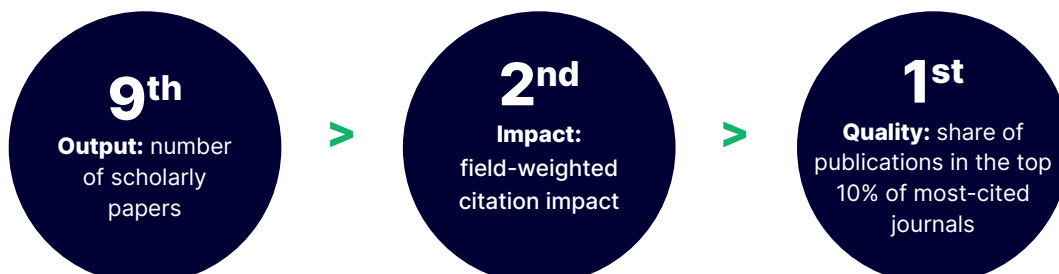
Australia hosts world-leading space research with unrealised commercial potential, alongside developed supporting infrastructure and land intensive industry which can harness downstream benefits of innovation in areas like hyperspectral imaging and satellite communications.

### Opportunity

To take advantage of falling barriers to entry, lower launch costs and growing domestic investment to gain sovereign space capability both in terms of scaling manufacture of components and platforms like small and standardized satellites, and in value-add uses of data collected and transmitted in space.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Space technology was defined using custom search terms.



## > IP translation potential

From 2019-2023, **1.61%** of Australian academic publications for space technology were cited in patent applications. This is **below** the OECD average of **1.70%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

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## > Market opportunity assessment

- Australian market size of **AU\$7.5 billion** in 2023-24.<sup>1</sup>
- Projected compound annual market growth of **6.4%** from 2025-2030.<sup>2</sup>
- Global market size of **AU\$987 billion** in 2023.<sup>3</sup>
- Projected global compound annual market growth of **9%** from 2023-2035.<sup>4</sup>

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## > Key challenges

- Reducing the cost of space operations, for example through the development of remote solar power supply.
- Building Australia's Space Domain Awareness and ability to sense and track space objects.
- Building earth observation capabilities and tools.
- Applying quantum timing to increase navigational and positioning capability of space assets, as well as quantum communication principles to allow secure and reliable transfer of information to and from space.
- Continued development of high speed and high-performance communications, tracking and signaling.
- Development of advanced materials, robotics, optical systems and scanning technologies.
- Improving space living conditions, for example through health monitoring and food supply.

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## > Other Australian Government programs

- [The National Reconstruction Fund](#)
- [Defence Industry Development Grants Program](#)
- [SmartSat CRC Program](#)

1 [IBISWorld 2024, At a Glance - OD5545 Satellite Communications and Astronautics in Australia](#)

2 [IBISWorld 2024, At a Glance - OD5545 Satellite Communications and Astronautics in Australia](#)

3 [World Economic Forum 2024, Space: The \\$1.8 Trillion Opportunity for Global Economic Growth](#)

4 [World Economic Forum 2024, Space: The \\$1.8 Trillion Opportunity for Global Economic Growth](#)

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

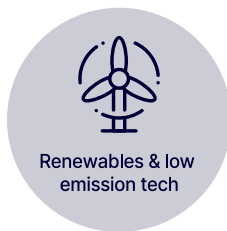
# Renewable Energy



[Australia's Economic Accelerator](#) (AEA) is a \$1.6 billion Australian Government investment aimed at transforming Australia's research translation and commercialisation landscape. AEA grants support the Australian Government identified priority areas for the economy (outlined in the [National Reconstruction Fund Corporation \(Priority Areas\) Declaration 2023](#)). Within these priorities, the 2025-26 Investment Plan will prioritise projects that align with one or more of 8 focus areas, including advanced manufacturing, artificial intelligence, agricultural & food technology, quantum, sustainable fuels, critical minerals and strategic minerals processing, space technologies and renewable energy.

Renewable energy spans technologies that increase efficiency and reduce the cost of renewable energy generation and use, including innovative improvements to conventional methods such as solar and wind, solutions for transmission or specific industry needs which require scaling support, and systems for the integration and management of renewable energy such as virtual power plants or demand management tools.

## > National priority



Renewable energy sources present an opportunity to move beyond finite fossil sources and their climate externalities while creating energy abundance. Efficient and cheap energy will deliver both a boost to general competitiveness and empower energy and R&D intensive industries such as mining and manufacturing. Delivering on Australia's clean energy ambitions will also secure our energy supply against volatility, reduce risks to health and environment, and foster sovereign capability to play a leading role in the market for energy transition products and renewable energy exports.

- [Powering Australia Growth Centre](#)
- [Australia's Circular Economy Framework](#)
- [Future Made in Australia agenda](#)
- [Australian Government's Net Zero Plan](#)
- [Small-Scale Renewable Energy Scheme](#)

### Advantage

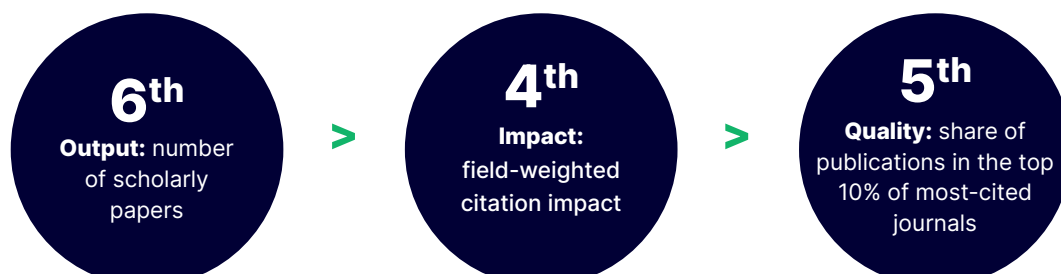
Australia has resource and land endowments that support large-scale expansion of renewable energy generation, in addition to highly competitive research, a recent acceleration in patenting activity and a high proportion of recent PhD graduates in relevant fields.

### Opportunity

To build and utilise abundant supply of renewable energy both as an enabler for the competitiveness of key sectors downstream such as manufacturing and ICT, and to utilise scale to develop energy generation and management products that can command value in the global energy transition.

## > Research strength

Australia's rank in the OECD calculated using 2019-2023 bibliometric data from Elsevier's SciVal. Renewable energy was defined using custom search terms.



## > IP translation potential

From 2019-2023, **2.98%** of Australian academic publications for renewable energy were cited in patent applications. This is **below** the OECD average of **3.58%**.

Where Australia's score is below the OECD average, this indicates a greater potential for translation of research. Publication data is from the Lens database.

## > Market opportunity assessment

- Australian renewable energy market size of **AU\$30.7 billion** in 2024.<sup>1</sup>
- Projected compound annual market growth of **12.1%** from 2025-2032.<sup>2</sup>
- Global renewable energy market size of **AU\$1.9 trillion** in 2024.<sup>3</sup>

## > Key challenges

- Accelerating decarbonisation and achieving net-zero goals in a transitional environment of rapidly increasing demand for electricity.
- Ensuring energy security and grid resilience to withstand Australian conditions.
- Developing new business models and smart infrastructure that enable rapid scaling and uptake of new technologies.
- Enabling the transition to a more distributed and digitally enabled power grid, including through innovations in advanced metering, smart inverters and virtual power plants (VPPs).
- Developing secure data and software-based approaches to optimising power distribution and use, including applications of AI, modelling of grids and energy markets, and cybersecurity tools to enable safe movement of data and reduce risks from proliferation of digitally enabled energy products.
- Scaling sustainable, reliable, and flexible energy solutions that also help to build a more circular economy.
- Creating software and hardware solutions for integration of growing numbers of consumer energy resources (CER) into the grid, including for use of CER as demand management or distributed grid tools.

## > Other Australian Government programs

- [The National Reconstruction Fund](#)
- [ARENA Funding](#)
- [Export Finance Australia & the Critical Minerals Facility](#)
- [Clean Energy Finance Corporation \(CEFC\)](#)

1 [Markets & Data 2023, Australia Renewable Energy Market Assessment, Opportunities, and Forecast, 2016-2030F](#)

2 [Markets & Data 2023, Australia Renewable Energy Market Assessment, Opportunities, and Forecast, 2016-2030F](#)

3 [Statista 2024, Market value of renewable energy industry worldwide 2030](#) | Statista

▪ Where market estimates were obtained in US dollars, an exchange rate of AU\$1= US\$0.6382 was used.

[aea.gov.au](http://aea.gov.au)