Online submission

24 October 2025

**Australian Academy of Science submission on the**
***Possible association to Horizon Europe***

Australia is at a crossroads in international research collaboration. In an era of rapid scientific transformation and rising geopolitical complexity, diversifying and strengthening mutually beneficial international research partnerships has never been more critical.

Association to Horizon Europe presents an opportunity for strategic, scaled collaboration that will boost Australia's productivity, innovation and mitigate geopolitical risks. It would enable access to world-leading funding and research infrastructure, deepen international collaboration, strengthen industry linkages, and support emerging researchers.

Joining Horizon Europe affirms Australia's commitment to excellence, global partnership, and scientific leadership.

Using New Zealand's successful association with Horizon Europe as a model and a proven track-record of Australian-EU scientific collaboration, now is the moment for policymakers to act.

The Academy:

- Strongly supports Australia's association to Horizon Europe to enhance access to world-leading research funding, infrastructure, collaboration opportunities and to mitigate geopolitical risks that can leave Australia's research and innovation base vulnerable.
- Strongly puts that association must not be drawn from Australian Research Council (ARC) or the National Health and Medical Research Council (NHMRC) research budgets which are already under considerable strain.
- Recommends investment in the Belmont Forum's multilateral Oceans Collaborative Research Action to demonstrate the value and impact of multilateral, cooperative research.

The Academy has a proven ability to convene expertise on this topic through the *Connecting Continents: Research Dialogue with Europe* seminar held at the Shine Dome in Canberra in July 2025. The seminar outlined the strategic, economic, scientific, and societal benefits of Australia formally joining Horizon Europe based on expert insights from senior EU officials, leading Australian scientists, and international Horizon Europe partners. The seminar was co-organised with the Delegation of the European Union to Australia, Euraxess Australia & New Zealand, the Embassy of Germany (AGRN), the Embassy of France, and the Embassy of Italy.

## Australia is an attractive partner for Europe – but must strengthen its R&D investment

Australia's unique geographical location, climate, critical minerals, and multicultural research workforce make it an attractive partner for European collaborators. Our strong research system, underpinned by excellence in research aligns well with the EU's commitment to scientific excellence and academic freedom.

Australia's ability to capitalise on these opportunities depends on the strength of domestic research investment. Australian investment in R&D is at a historic low. Within five years, Australia's trajectory will place us at the bottom of the OECD for R&D investment. Formally joining Horizon Europe helps address this gap by augmenting domestic research capabilities, linking public research with industries and commercial outcomes, creating pipelines from discovery to translation, and attracting global partnerships and funding.

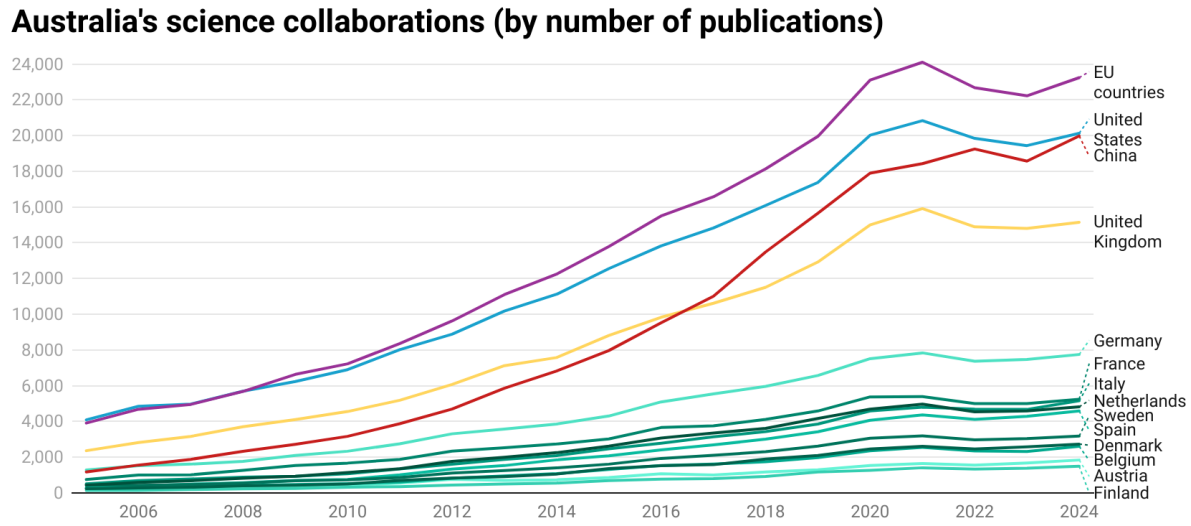
It is vital that association with Horizon Europe does not compromise Australia's domestic research investment. Participation must not reduce funding to the Australian Research Council (ARC) or the National Health and Medical Research Council (NHMRC). Sustained domestic investment is essential to ensure Australia can fully leverage the productivity and innovation benefits that Horizon Europe offers.

## Association would advance Australia's national priority areas

Low productivity growth and a lack of economic complexity leave Australia vulnerable to geopolitical shifts and limit our agility in responding to national priorities.

Investing in basic research and development is key to reversing Australia's low productivity. Pillar 2 of Horizon Europe offers Australia an opportunity to leverage scientific funding for greater impact in areas of research that are important sectors for Australia, such as health, digital technologies (e.g. artificial intelligence, quantum technologies), climate, energy, natural resources and agriculture. Horizon Europe's Pillar Two aligns directly with Australia's National Science and Research Priorities, making the pairing an obvious boon to Australia's research agenda.

A benefit of international collaborative research funding programs is accessing the knowledge pool which is generated abroad to innovate and advance Australia's priorities. The Academy has analysed data on Australia's international research collaborations, which shows a consistent pattern of strong collaborations with European countries, emphasising the EU as a critical research partner to advance Australia's interests. Given this trend across individual countries, the combined strength of collaboration with the EU via the Horizon Europe program is expected to deliver amplified capability and benefit for Australia.




*Australian international science collaborations refers to publications with at least one author affiliated with an organisation located in Australia, as well as at at least one other author affiliated with another country. Science includes the following fields of research: 30 Agricultural, Veterinary and Food Sciences; 31 Biological Sciences; 32 Biomedical and Clinical Sciences; 34 Chemical Sciences; 37 Earth Sciences; 40 Engineering; 41 Environmental Sciences; 42 Health Sciences; 46 Information and Computing Sciences; 49 Mathematical Sciences; 51 Physical Sciences; and 52 Psychology.*

Chart: Australian Academy of Science • Source: Dimensions AI • Created with Datawrapper

*Figure 1*

The above figure includes areas of science that underpin the priorities of the National Reconstruction Fund. The recent Academy report Australian Science, Australia's Future: Science 2035 is the most comprehensive, evidence-based capability analysis of Australia's science system to support our national ambitions, informed by the forces shaping our economy. It identifies the eight science capabilities that will see the greatest increase in demand over the coming decade: agricultural science, artificial intelligence, biotechnology, climate science, data science, epidemiology, geoscience and materials science. These capabilities are directly relevant to the National Reconstruction Fund priority areas.

The Academy would welcome the opportunity to provide further analysis in areas of Australian Government interest to assess how likely association to Horizon Europe will strengthen Australia's capabilities. For example, in areas that we have clear gaps in capability (such as materials science), it would be beneficial for Australia to strategically assess the benefits and extent of collaboration with the EU so as to make informed and strategic decisions about Australia's negotiating position and to inform collaboration with international partners.

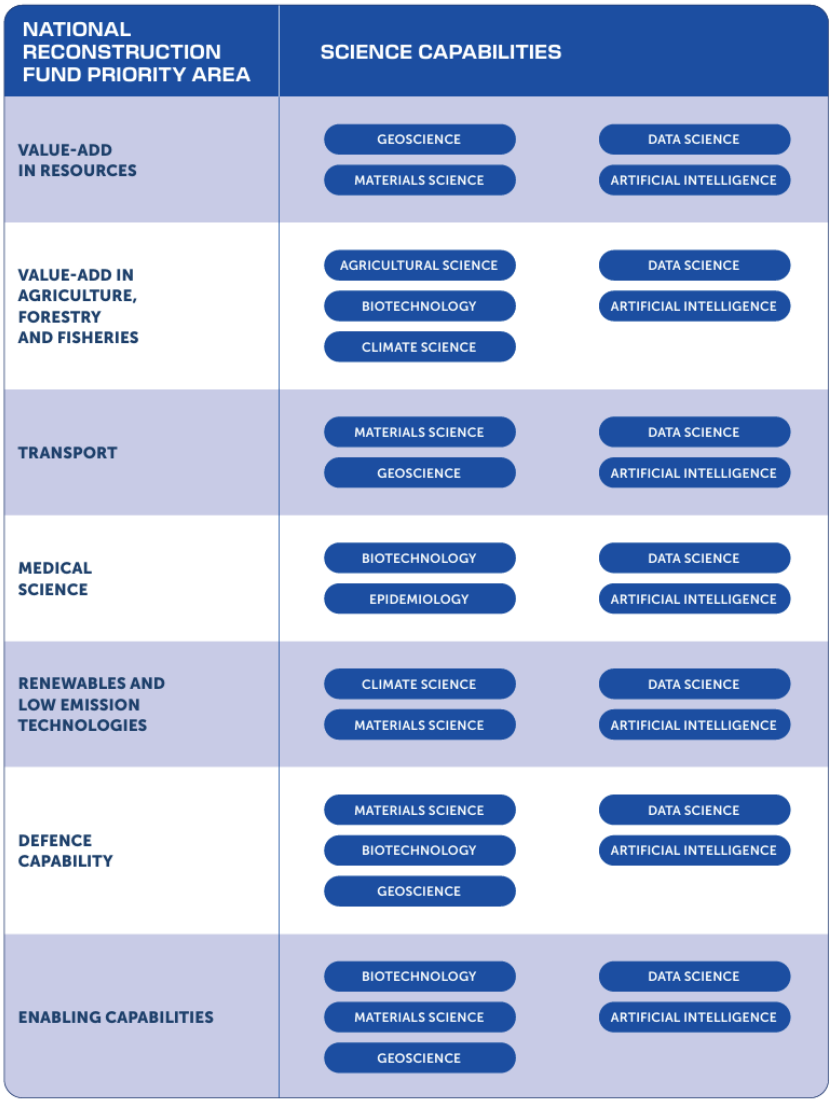



*Figure 2: Excerpt from page 65 of Australian science, Australia's future: Science 2035.*

While Australia maintains good collaboration with individual European Union nations, joining Horizon Europe will provide an opportunity for coordinated collaboration and access to EU research networks to achieve a multiplier effect, and all under an umbrella that aligns with our national priorities.

At the *Connecting Continents* event, the Academy presented data on Australia's research collaborations in areas aligned to three of the Australian Government's Future Made in Australia priorities: green metals, low-carbon liquid fuels, and clean energy manufacturing. Following China, the EU collectively leads in these fields (see Figure 3 below as an example). This makes membership with Horizon Europe a strategic investment that will pay dividends in building Australian capacity and benefiting from global knowledge generation.

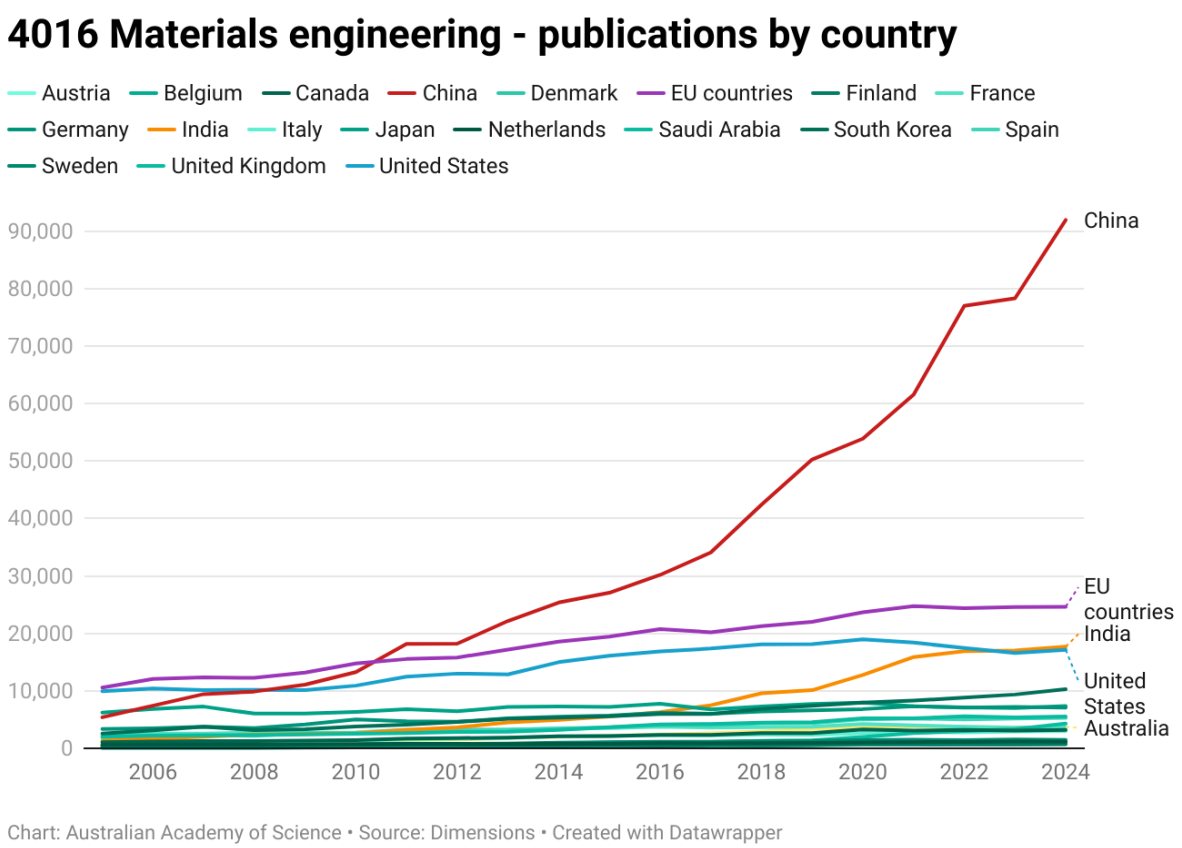



*Figure 3*

## Association would provide access to world-class funding and infrastructure

Australia's co-funding mechanism through the National Health and Medical Research Council (NHMRC) provides funding to Australian organisations participating in Horizon Europe projects. However, under the current arrangement, the EU does not provide funding for the participation of Australian research entities in collaborative research projects. Association would allow Australian researchers to receive funding directly and to lead projects.

Infrastructure linkages already exist between Australia and Europe, from the Square Kilometre Array (SKA) to the joint use of the Australian Synchrotron by European teams. Formal association would expand access to shared research infrastructure and increase the impact of existing collaborations.

Association with Horizon Europe would:

- Provide access to significantly larger pools of funding in areas of interest to Australia. For example, the European Commission's AI in Science Strategy will harness artificial intelligence (AI) in sectors such as healthcare, agriculture and defence. The strategy will double Horizon Europe's annual investments in AI to over €3 billion, including doubling funding for AI in science.
- Position Australia to contribute its scientific excellence to addressing global challenges, demonstrating leadership in priority areas such as climate science and One Health.
- Enable seamless integration with major EU infrastructure programs like the European Organization for Nuclear Research (CERN), the European Molecular Biology Laboratory (EMBL), and the European Union's Earth observation program, Copernicus.

## Association would support Australian early career researchers

Horizon Europe's strong support for interdisciplinary work makes it particularly beneficial for early-career researchers seeking rich and globally relevant experience across science, innovation, and policy.

Australian institutions have benefitted from training and mobility programs such as Marie Skłodowska-Curie Actions, which have supported over 250 Australian researchers. These programs help build the next generation of globally networked scientists. Currently, Australian institutions are self-funded in Doctoral Networks and Staff Exchange as Australia is a non-associated third country participant.

At the *Connecting Continents* event, Professor Katherine Andrews, Head of Tropical Parasitology Lab at the Institute for Biomedicine and Glycomics and Professor of the School of Environment and Science at Griffith University, emphasised the benefits for Early and Mid-Career Researchers of joining Horizon Europe: *"Leading these programs is incredibly complex. Being part of them early in their careers gives them an opportunity to think about how they might lead a program in the future to develop a solution for one of the complex problems we're all trying to solve."*

## Association would deepen connections with industry

Horizon Europe supports applied research consortia, helping small and medium enterprises to collaborate internationally, scale innovations, and access the EU market.

Major European companies with a strong presence in Australia (such as Thales, Siemens, Airbus, Ericsson, Frequentis, and Acciona) are already involved in hundreds of Horizon Europe projects globally. However, without formal association, these collaborations typically occur through their European headquarters rather than their Australian operations. Association would allow these existing industry partners to collaborate with Australian universities and research institutions on industry R&D in Australia.

## Association has provided benefits to New Zealand

Pillar Two of Horizon Europe was considered closely aligned with New Zealand's scientific strengths, and they became an associated member of Horizon Europe in 2023. New Zealand has been successful in receiving 19 Horizon Europe projects out of 93 eligible proposals (success rate of 19.7%).

Despite being a nation that spends only 1.4% of GDP on R&D, joining Horizon Europe has enabled New Zealand to gain access to 458 partner organisations, secure €8.03 million (NZ$16.1 million) in funding, and establish strategic associations and collaborations in quantum and space sciences. New Zealand expects a 10:1 economic return by 2045 on its investment in Horizon Europe.

At the *Connecting Continents* event, Professor Nicholas Rowe from the University of Auckland spoke about how Horizon Europe supports ambitious, inclusive, and multidisciplinary collaborations. He noted that Horizon Europe *"presented an opportunity for leadership that there's no way I could match with anything in Australia or New Zealand, financially."*

Iain Cossar, General Manager for Science, Innovation and International Policy, New Zealand Ministry of Business, Innovation and Employment (Chief Negotiator for New Zealand's membership with Horizon Europe) credited their success to bipartisan political support and a strong science-policy interface. He urged Australia to use New Zealand's experience as a practical, scalable model for engagement. In his words, *"We joined because we value the science. We joined because we value the international, multilateral connection. We joined because the process was smooth, and we were able to work through it quickly and efficiently with our colleagues."*

## Belmont Forum engagement would provide insights into the benefits of Horizon Europe

Australia is represented on the Belmont Forum through Future Earth Australia (hosted by the Australian Academy of Science). The Belmont Forum is a partnership of funding agencies, international scientific councils, and regional consortia dedicated to promoting transdisciplinary, transnational research to help understand, mitigate, and adapt to global environmental change.

The Belmont Forum is an alternative model for international science collaboration with a global environmental change focus. It provides an institutional mechanism for Australia to participate and drive scientific and diplomatic collaborations, otherwise lacking in our R&D system. Since its establishment, the Belmont Forum has successfully led over 23 calls for proposals, supporting over 192 projects and thousands of scientists and stakeholders, representing over 90 countries. Belmont Forum projects have been cited in more than 2500 national and international policy documents and scientific journals, e.g. the Intergovernmental Panel on Climate Change.

Previously, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) was the Australian member. Through its support of the Belmont Forum, CSIRO was able to leverage €1.65 million contributions against €6.48 million from international partners.

Australia could strengthen its commitment to international ocean research by investing $2 million in the Belmont Forum's multilateral Oceans Collaborative Research Action and submitting an Annex before March 2026. Doing so:

- Amplifies Australia's excellence in oceans research, management, industry, and policy to the global community. Australia is a known leader in oceans science with much to contribute to this space.
- Materially builds Pacific relationships in an area of mutual strength and priority, fortifying regional leadership towards co-hosting of COP31.
- Creates tailored evidence to advance our National Science and Research Priorities, Sustainable Oceans Plan, and Nature Positive Plan.
- Provides access international research infrastructure and data. This is particularly important as cuts to the United States' National Oceanic and Atmospheric Administration have impacted Australian researchers' access to data.
- Strengthens the R&D pipeline in the Blue Economy (economic activities associated with the marine environment) as the initiative seeks transdisciplinary teams that include industry.

Active participation in the Belmont Forum will reinforce Australia as a global leader in sustainability research, diversifying critical research linkages and international partnerships with responsible countries, while strengthening our sovereign interests. Investing in the Belmont Forum's OCEANS 2 CRA can act as a blueprint for how Australia engages in larger funding mechanisms such as Horizon Europe.

To discuss or clarify any aspect of this submission, please contact Lauren Sullivan, Manager Policy at science.policy@science.org.au.