



# Australian Academy of Science

Anna-Maria Arabia  
Chief Executive, AAS  
[annamaria.arabia@science.org.au](mailto:annamaria.arabia@science.org.au)

# Critical features of science academies

- **Independent** – non-institutional adviser to decision makers
  - Can be government endorsed but not government owned
- Strong ability to **convene** scholars from across the region/jurisdiction
- **Inclusive and diverse** in discipline, gender, age, geography, culture, etc
- Consider how the expertise and unique perspective of **early- and mid-career scholars** can be embedded into academy functions
- Uphold **standards** of excellence
- **Integrity**: high standards of academic and social integrity and ethics.
  - positive reputation is crucial for impact

# Role and Responsibilities

1. Ability to gather and synthesise knowledge from different sources
  - In order to provide knowledge-based evidence to inform decision making (regionally and globally)
  - Transparency in the source of that knowledge
  - Commitment to development of science-policy advisory skills
2. Leadership role in shaping knowledge generation in the region and globally
3. Leadership role in mentoring scholars and strengthening the workforce

# Independence is paramount

In 2022, President of the National Academy of Sciences, Professor Marcia McNutt wrote....

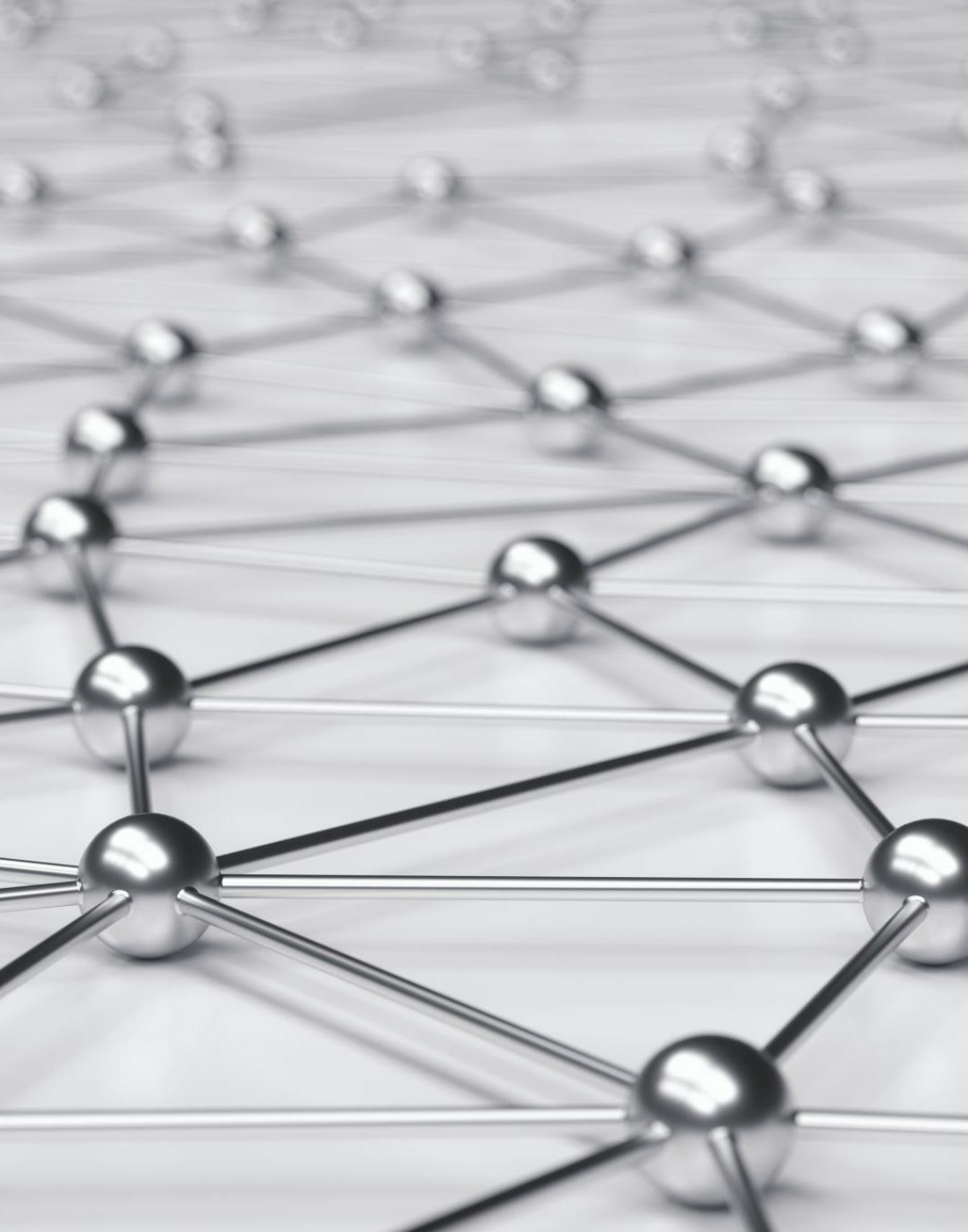
*“The US National Academy of Sciences (NAS) decades ago was dependent on government grants and contracts for nearly all of our operations. Steadily over the years we have diversified our funding through private philanthropy. Currently about 30 percent of our work is directly funded by private foundations to support specific projects of broad public importance. In addition, both individual donors and philanthropic foundations have built up the NAS endowment...”*

*In the run-up to the 2016 election, the NAS completed a consensus report *The Economic and Fiscal Consequences of Immigration*, with funding from the MacArthur Foundation. This report framed much of the discussion during the candidates’ debates, by demonstrating that the benefits of immigration accrue differentially over time and space. For example, social services for the first generation of immigrants cost more than they contribute to the US economy, but the second and third generations of those immigrants repay the investment by many fold. Border regions that assimilate the first generation of immigrants are typically the regions that pay their costs of providing social services, whereas the benefits of later generations are accrued nationally through job creation and taxes on individual and corporate earnings.*

***Had this immigration report been requested by the Obama administration, it would have been immediately discredited by the new Trump administration.***

***Had it been requested by the Trump administration, the motives for writing the report would have been questioned.***

***Because the sponsor was a foundation, it was widely viewed by opposite sides of the political aisle as a fair and accurate assessment of an important issue for the nation.”***



# The future computing needs of the science sector in Australia

- As science evolves in response to new challenges, patterns of usage and types of users of high-performance computing facilities are constantly evolving.
- It is crucial that Australia adopts a proactive strategy to assess needs across the research sector.
- The Australian Academy of Science is gathering a representative group of scientists and industry leaders to provide a multidisciplinary perspective on Australia's HPC and big data needs
- This will inform emerging policy issues.
- The non-institutional basis of the AAS is critical to the success of this initiative.



- In December 2022 Australia's Department of Climate Change, Energy, the Environment and Water asked the Australian Academy of Science to provide independent scientific advice on the future of Australia's Great Barrier Reef under different climate change scenarios.
- Climate change science and how to protect the GBR against the many threats it faces is a challenging and contested areas of science policy in Australia with many competing interests.
- We brought together a diverse team with different skillsets, geographically dispersed, including multi-disciplinary experts to deliberate and produce an evidence-based scientific report for Federal Minister for the Environment.
- 84 roundtable participants included Traditional Owners, lawyers, engineers, policy experts, marine and climate scientists, social scientists, economists, modellers and others.
- We achieved meaningful incorporation of Traditional Owners into all aspects of the project and the report; and we developed a framework for the co-production of knowledge into the future.
- We are due to publish the methodology to help others better incorporate indigenous knowledge into policy advice.



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# STEM Women Global Network

Supporting organisations:



**aasssa**  
THE ASSOCIATION OF ACADEMIES  
AND SOCIETIES OF SCIENCES IN  
*Asia*



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