Australian Government
Department of Industry, Science and Resources

The Prime Minister's Prizes for Science 2027–2029 – Science Prizes

Advice for responding to assessment criteria

Strong nominations will include specific examples of nominee activities that demonstrate how the achievement meets the assessment criteria.

We encourage nominators use the full breadth of the assessment criteria to demonstrate how the nominee profoundly impacted their respective field.

Using strong evidence and examples, explain why you, as the nominator, believe the nominee should be considered for this prize.

Prime Minister's Prize for Science

Assessment criterion 1

Demonstrated original and in-depth Australian research effort (10 points)

Demonstrate this by identifying the originality and depth of the research effort undertaken predominately in Australia that underpins the nominated achievement.

For team nominations also describe:

- each member's contribution
- the benefits of the collaboration
- why the prize should be jointly awarded.

Strong responses to this criterion will:

- Clearly and convincingly outline the significance of the research effort and demonstrate the contribution of original knowledge to the scientific field. For example, this may be demonstrated by:
    - The research development outcomes including new instrumentation, drugs, methodologies and the establishment of research centres.
    - The leadership and vision of the nominee(s) to develop original research to expand scientific knowledge and capability at the national and global level. This may include the extension and use of research by others to further develop or explore alternative applications.
- Clearly explain how the achievement has made a meaningful and substantial contribution to Australia's science and research capability. Clearly identify if the work was undertaken overseas or in collaboration with international partners. Highlight the benefits, outcomes or advances delivered to Australia and the Australian research community.
- Explain why you believe the nominee(s) should be considered for the Prize. Clearly outline the context, challenges and beneficial outcomes of the nominees' achievements that have contributed to the advancement of scientific knowledge.

Assessment criterion 2

Demonstrated impact (10 points)

Demonstrate this by identifying the achievement's impact on its field of science and, where appropriate, more broadly.

Strong responses to this criterion will:

- Clearly and convincingly outline the significant impact of the research to the field of science, including any strategies the nominee(s) used to maximise scientific impact. For example, this may be demonstrated by:
    - Research impact to the scientific field, including beyond the primary discipline. This may include the broadening of the knowledge base and extension to other disciplines, for example, via multi- or trans-disciplinary collaborations.
- National and international collaborations and leadership initiatives with diverse stakeholders. For example, collaborations that involve universities, publicly funded research organisations, other research bodies, governments and businesses, in Australia and overseas. Provide evidence of any existing or potential broader societal, health, environmental or economic impacts of the research, such as:
    - New partnerships and synergies resulting from the research.
    - Environmental benefits, for example, waste reduction, recycling programs, renewable energy production/use and strategies to reduce carbon footprint.
    - Value of the research public good, for example, impact on government policy/legislation (national and global), representation on national and international working groups.
    - Student engagement, including initiatives to engage primary and secondary school students and post-graduate student leadership and mentorship (e.g. PhD candidates, post-doctoral researchers).
    - Engagement with educational institutions and research centres. For example, the establishment of ARC Centres of Excellence.
    - Representation on advisory boards, including non-government, government and not-for-profit groups. Including both executive and non-executive roles within the sector, paid and non-paid roles.
- Engagement with the broader community, for example through public lectures and science communication strategies.

Prime Minister's Prize for Innovation

Assessment criterion 1

Demonstrated commercialisation of scientific knowledge (10 points)

Demonstrate this by identifying the key research and development efforts involved in innovatively translating scientific knowledge into a commercially available product, process or service.

Include details of the underlying research and the innovation pathway leading to successful commercialisation, including:

- the roles and contributions of those involved
- the competitive landscape and how the innovation benchmarks against this
- research outcomes
- capital investments and grant funding
- intellectual property protections granted
- relevant regulatory approvals
- commercial arrangements, such as licencing.

For team nominations also describe:

- each member's contribution
- the benefits of the collaboration
- why the prize should be jointly awarded.

Strong responses to this criterion will:

- Clearly and convincingly outline commercialisation outcomes and benefits of the innovation to Australia.
- Include evidence of commercial availability, such as:
    - market ready partnerships
    - sales records and retailer listings
    - company formation and/or subsidiaries for the commercialisation of the scientific knowledge (e.g. start-ups and spin offs)
    - evidence of public trading availability (e.g. company listing of the ASX)
    - record of domestic and/or global customer base
    - product certification from reputable organisations.

- Describe the research and innovation pathway to final product, process or services and its successful commercialisation, including:
    - research outcomes
    - capital investments and grant funding
    - intellectual property protections granted (e.g. patents)
    - relevant regulatory approvals (e.g. for pharmaceuticals and medical devices)
    - commercial licencing agreements
    - market assessments, including product-market fit
    - return on investment assessments
    - a commercial plan, including leverage finance for commercialisation.
- Explain why you believe the nominee(s) should be considered for the prize.

Assessment criterion 2

Demonstrated value and benefit to Australia (10 points)

Demonstrate this by detailing the direct and indirect economic, social and, where relevant, environmental benefits of the innovation to Australia, such as:

- employment outcomes for Australia
- the value of sales, tax revenues and other financial returns
- royalty streams to the host research organisation
- new partnerships and synergies
- the value of its public good
- any environmental benefits.

Include details of other benefits of the innovation process, such as:

- pathways for further research and development
- PhD student involvement in the research programs
- any unexpected outcomes.

Strong responses to this criterion will:

- Clearly and convincingly outline the value and unique benefits of the innovation, the transformative nature of the product, process or service to the economy and society. For example, evidence may demonstrate:
    - increased employment within the sector
    - capital investments and other forms of financial returns (e.g. the value of sales, tax revenues and royalty streams)

- new partnerships and synergies resulting from the innovation
- environmental benefits, for example, waste reduction, recycling programs, renewable energy production/use and strategies to reduce carbon footprint
- value of the innovations public good, for example, changes to state or federal policy/legislation.

- Provide evidence of any other economic, health and wellbeing, social or environmental benefits to society resulting from the innovation, such as:
  - financial returns beyond shareholdings
  - post-graduate student engagement (e.g. PhD candidates, post-doctoral researchers)
  - representation on advisory boards, including non-government, government and not-for-profit groups. Including both executive and non-executive roles within the sector, paid and non-paid roles
  - the formation of industry groups
  - engagement with educational institutions and research centres.

Malcolm McIntosh Prize for Physical Scientist of the Year and Frank Fenner Prize for Life Scientist of the Year

Assessment criterion 1

Nature of the research achievement (10 points)

Demonstrate this by identifying the originality and impact of the achievement within its field of science, with the work having been undertaken predominantly in Australia.

Strong responses to this criterion will:

- Clearly and convincingly outline the significance of the research achievement and impact or potential future impact on the current state of the scientific field. For example, this may be demonstrated by:
    - The research development outcomes including existing or potential new instrumentation, drugs and methodologies.
    - The leadership and vision of the nominee(s) to develop original research to expand scientific knowledge and capability at the national and global level. This may include the extension and use of research by others to further develop or explore alternative applications.
    - Clearly state the impact or potential impact the nominee's achievements, most significant publications or patents have on the relevant field of science.
- Clearly explain how the achievement has contributed to Australia's science and research capability. Clearly identify if the work was undertaken overseas or in collaboration with international partners. Highlight the benefits, outcomes or advances delivered to Australia and the Australian research community.
- Explain why you believe the nominee should be considered for the Malcolm McIntosh Prize for Physical Scientist of the Year or the Frank Fenner Prize for Life Scientist of the Year.

Assessment criterion 2

Benefit, or potential for benefit, to human welfare or society (10 points)

Demonstrate this by identifying the application of the research achievement, particularly to Australia.

Strong responses to this criterion will:

- Clearly and convincingly outline realised or probable tangible benefits to human welfare or society resulting from the nominee's research achievements. This may be demonstrated by details on any existing or potential societal, cultural, health, environmental or economic impacts of the research, such as:
    - New partnerships and synergies resulting from the research.
    - Environmental benefits, for example, waste reduction, recycling programs, renewable energy production/use and strategies to reduce carbon footprint.
    - Value of the research public good, for example, impact on government policy/legislation (national and global), representation on national and international working groups.
    - Describe any engagement with educational institutions and research centres, including associated student projects or collaboration with or establishment of ARC Centres of Excellence.
    - Representation on advisory boards, including non-government, government and not-for-profit groups. Including both executive and non-executive roles within the sector, paid and non-paid roles.
    - Engagement with the broader community, for example through public lectures and scientific communication strategies.

Prize for New Innovators

Assessment criterion 1

Nature of the innovation achievement (10 points)

Demonstrate this by identifying the key research and development and innovation efforts predominately undertaken in Australia that enabled the partial or full commercialisation or translation of the scientific research.

Include details of the underlying research and the innovation pathway, including:

- the role of the nominee in the process
- the originality and impact of the achievement within its field of science
- any early studies or assessments of commercial viability or readiness
- any capital investments or grant funding granted or applied for
- any Intellectual Property protections (such as patents) granted or applied for
- any other relevant regulatory approvals granted or applied for
- any commercial arrangements, such as licencing.

We will consider the innovation, underlying research and trial pathway equally important.

Strong responses to this criterion will:

- Clearly and convincingly outline the value and benefit from realised or probable commercialisation or the translation of the scientific research.
- Describe the pathway leading to the development and commercialisation or translation of research into a product, process or service, including any planned further research and development.
- Clearly explain how the achievement has contributed to Australia's research, development and innovation capability. Clearly identify if the work was undertaken overseas or in collaboration with international partners. Highlight the benefits, outcomes or advances delivered to Australia.
- Include evidence of the originality and viability of the innovation, such as:
    - A description of any proof-of-concept studies, and production and testing of early prototypes. This may include intellectual property protections granted or applied for (e.g. patents).
    - Details of progress made towards early-stage commercialisation including feasibility studies, market ready assessment and the formation of a commercial entity.

- A commercial plan and leverage finance for commercialisation, which may include capital investments and grant funding (granted or applied for).
- Market assessments, including product-market fit.
- Impact statements, including return on investment assessments.
- If relevant, evidence of commercialisation including, licencing agreements, sales or tax revenue.

- Explain why you believe the nominee(s) should be considered for the Prize for New Innovators.

Assessment criterion 2

Value and benefit to Australia (10 points)

Demonstrate this by detailing the potential or current direct and indirect economic, social and, where relevant, environmental benefits of the innovation to Australia, such as:

- capital investment and employment outcomes for Australia
- forecast financial returns
- royalty streams to the host research organisation
- new partnerships and synergies
- the value of its public good
- any environmental benefits.

Strong responses to this criterion will:

- Clearly outline the originality and viability of the innovative product, process or service and the potential to make a significant contribution to addressing a real-world challenge.
- Provide details of existing or potential economic, health and wellbeing, social or environmental benefits to society resulting from the innovation, such as:
  - Examples of waste reduction, recycling programs, renewable energy production/use and reduced carbon footprint.
  - Details on influence on state or federal policy/legislation.
  - Existing or potential partnerships and synergies, which may include the formation of industry groups.
  - Knowledge transfer as represented by licences, joint ventures or spin-offs, franchising and material transfer agreements (assignment agreements).

- Representation on advisory boards, including non-government, government and not-for-profit groups. This may include executive and non-executive roles within the sector, paid and non-paid roles.
- Engagement with educational institutions and research centres, including associated student projects.