



Australian Government
Australian Research Council

**ARC submission to the Interim Report
of the Australian Universities Accord**

EXECUTIVE SUMMARY

The Australian Research Council (ARC) is a vital component of Australia's innovation and research system providing 7% of Government's annual investment in research and development. We play an integral role in supporting university research to produce high-quality and impactful research that benefits the Australian community economically, socially and environmentally.

For this reason, we have an interest in most aspects addressed in the Interim Report of the Australian Universities Accord. However, our focus in this submission is Sections 2.7.1.6, *The Importance of measuring research quality*, and 2.7.2.1, *Measure how useful university research is*.

A robust research evaluation framework is essential to drive a research system which supports effective stewardship, governance and policy that maximises the benefit from Australia's investment in research. While many universities argue that the former Excellence in Research for Australia (ERA) and Engagement and Impact (EI) provided significant benefits and drove improved quality of research, they came with too high an administrative burden which was noted in the Interim Report.

On 22 August 2023, Minister Clare announced the Government's response to the *'Trusting Australia's Ability: Review of the Australian Research Council Act 2001'* and stated that ERA and EI would not continue in their current form and that evaluation of excellence, impact and research capability within Australian universities needs reform.

Research remains a key element of all Australian universities, and reform of the performance measurement and management of university research is critical to ensure that the future contribution of universities is driven effectively. As such, the Minister for Education has requested the Australian Universities Accord Panel consider the recommendation on measuring impact and engagement in university research. Recommendations on a new model are to be provided to the Minister for Education for consideration alongside the Panel's Final report.

In response to a request from Minister Clare in August 2022, the ARC prepared an ERA Transition Plan with the support of a working group drawn from across the [university sector](#). This specifically addressed the request to develop a transition plan, in consultation with the sector and the Department of Education, to establish a modern data driven approach informed by expert review.

To assist the Panel, our submission shares that Transition Plan which reflects thinking as at December 2022. While we have continued to evolve our thinking as we consult with others across the sector, the key principles and approaches to commencing a consultation process with the sector, all outlined in the Transition Plan, remain highly relevant.

Transition to a new framework is not without challenges. Much consultation and work would need to be done to ensure that the data we collect can support robust and fair evaluations of quality and excellence across the system. However, a new framework offers opportunities to address other challenges – such as improving our capacity to answer new kinds of questions and to provide advice for the future.

When ERA was first introduced, it was considered world's best practice, but the international environment has evolved and other countries have changed in response. International practice provides valuable learnings. By leveraging these, along with our own innovations, Australia can continue to be a world leader in research evaluation.

The ARC is also taking the first steps needed for the transition by investigating smarter harvesting of data for evaluation of the research system, including for non-traditional research outputs, data linking using persistent identifiers, data curation and auto-coding techniques, and a deep dive into Indigenous studies to pilot some of these new approaches.

We look forward to working further with the Panel as it considers these issues.

EVALUATION MATTERS

The Interim Report noted importance of evaluating the performance of Australia's research system:

Research performance evaluation plays an important role in preserving Australia's research bedrock, demonstrating that the significant level of investment in university research is leading to strong outcomes for the nation.¹

At the recent address to the National Press Club of Australia, the Chair of Universities Australia also noted the need to consider the value of the sector holistically:

A better university system ... A system where the quality of our institutions is judged by more than just the broad brushstrokes of rankings ... A system where new knowledge is created from many inputs, and one that is, ultimately, measured by the value of the outcomes those inputs enable.²

The ARC agrees with both statements. Research evaluation is an essential feature of a healthy and functioning research system. Evaluation supports effective stewardship of the whole system, while providing government and the Australian community with an understanding of the outcomes and value made possible through its research investment. A strong research evaluation system can:

1. inform decisions about the appropriate quantum and mix of research investment today and in the future
2. provide assurance to government and the Australian community that the public investment in universities is appropriate and valuable
3. highlight Australia's research strengths and emerging areas of interest
4. drive sector wide behaviours that contribute towards achieving national priorities
5. streamline accreditation assessments by the Tertiary Education Quality and Standards Agency
6. understand if and how research translates into practical applications and real-world outcomes
7. improve policy design and implementation by providing an evidence base of where further intervention may be needed.

As discussed in our first submission to the Universities Accord Panel's Discussion Paper, the ARC has proposed five principles to guide this work to ensure it meets the needs of all stakeholders and is effective in serving Australia for the coming decade or more. These principles underpin the outline for a new research evaluation system as initially presented in the **ERA Transition Plan which is attached to this submission**. We believe these principles should be maintained by the Accord Panel and used to build a new system.

¹ Australian Government (2023), *Australian Universities Accord Interim Report*, p110, online version <https://www.education.gov.au/australian-universities-accord/resources/accord-interim-report>.

² D. Lloyd (2023), *Address to the National Press Club of Australia*, <https://www.universitiesaustralia.edu.au/media-item/address-to-the-national-press-club-of-australia/>

To assist with transitioning to the future, the ARC has begun expanding the ideas outlined in the transition plan and engaging with stakeholders to better understand where there would be 'early wins' and appetite for larger reform. This work builds on the guiding principles and recommendations presented in the Transition Plan: to build the data infrastructure; the development of a flexible performance evaluation system; and delivery of better analytics, foresighting and value. All these aspects require consultation with the sector.

A modern data-driven approach with expert review requires smarter data-harvesting to enable reduced reliance on manual allocation of research outputs and protracted traditional peer review of both traditional and non-traditional research outputs. We are beginning this work with a data stocktake to broaden our understanding of the data available now from external parties within the system (e.g. publishers, grants from other agencies, intellectual property information, research outputs, staffing and research income data), how it can be used to understand quality and impact, and what further data development may be required to deliver more robust evaluations to meet government and sector needs.

Smarter harvesting of data will open-up opportunities to enrich and deepen data sources through linking disparate data sets. To assist with this, the ARC is contributing to the design and implementation of Persistent Identifiers (PIDs) through the Australian PID Strategy Taskforce and the National PID Strategy, along with the five-year Roadmap led by Australian Research Data Commons. Increased uptake and consistent use of PIDs will improve the efficiency and accuracy of data and improve the tracking of research and research impact with less input required from researchers and universities. We are also exploring with stakeholders the development of algorithms that will automatically code data such as research fields. This coding work was done previously by universities as a manual process and automatic coding would produce a substantial resource saving.

The ARC has also begun preparations for a proposed pilot evaluation of Indigenous studies, following the establishment of Indigenous research codes in 2019. Indigenous studies research has never been evaluated in Australia so there is little insight into the contribution of Australian knowledge to this global discipline. We don't know, for example, where the research hot spots are, how much funding is being allocated, or what impacts research is having for Indigenous communities.

The ARC has commenced discussions with Indigenous researchers regarding the development of an Indigenous Studies Research Pilot Plan. The pilot seeks to drive visibility of the discipline and co-design a framework to suit the needs of the discipline, leveraging all available data, and limiting burden for participating universities. In consultation with the sector, the ARC will seek views on key priorities and voluntary provision of data from universities.

This work aims to provide a fuller understanding of the breadth of Indigenous research and how it is contributing to strengthening Australia, both economically and socially. This includes examining research outputs (including quantity, foci and hot spots), research impact and engagement, along with the research environment (funding, staff, and culture). Research environment is a new concept to research evaluation in Australia but well embedded into other international models; it aims to highlight the context in which research is done and will include physical and social factors that influence the ability of researchers to produce excellent research and impact.

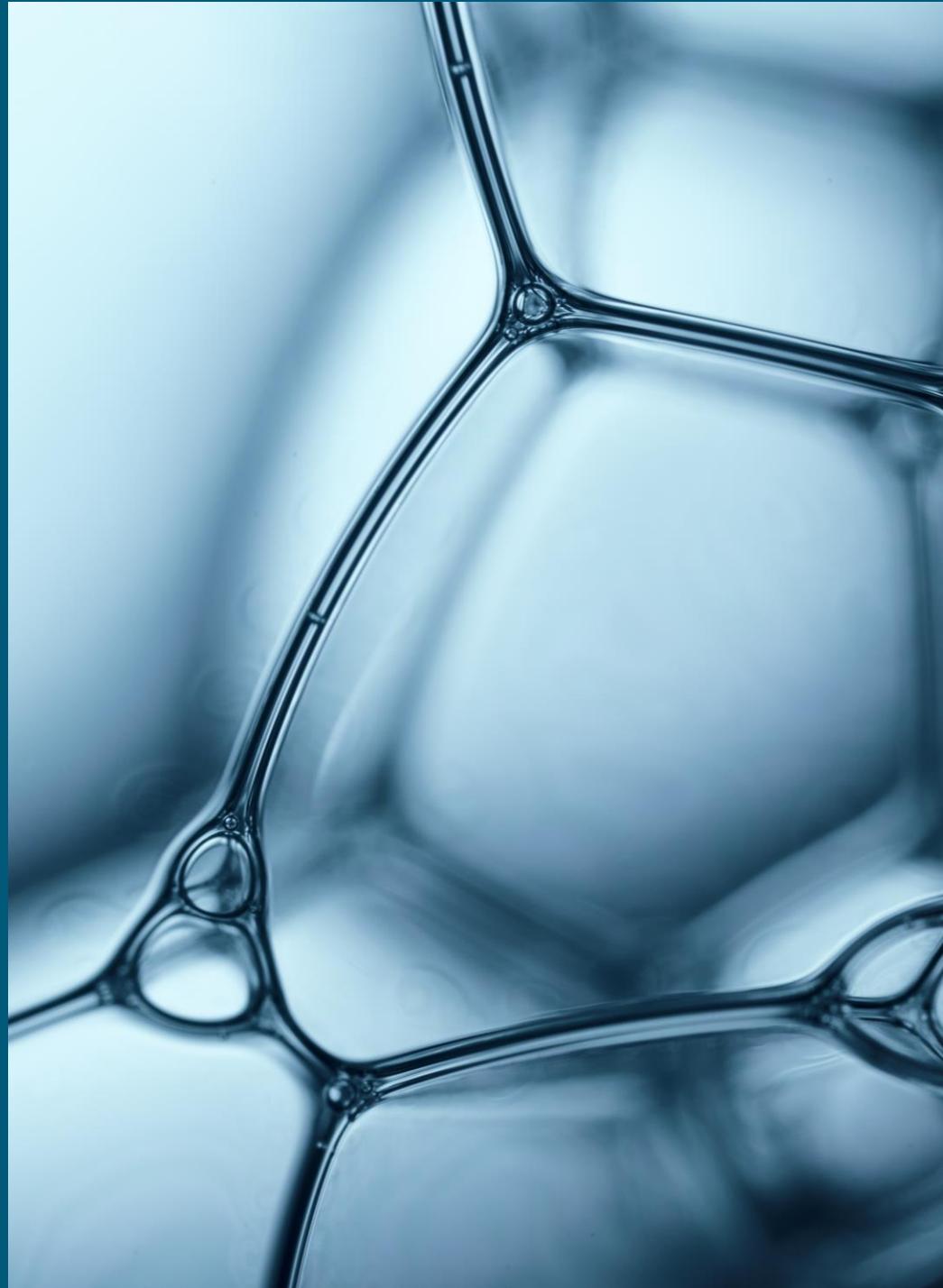
We look forward to continuing our discussions with the Accord Panel in regard to this proposed work and assisting with its deliberations and response to the Minister for Education regarding measuring impact and engagement in university research.



Australian Government
Australian Research Council

A plan to transition to a new framework for research evaluation and data

December 2022



Australia's national research assessments

Excellence in Research for Australia (ERA) is the longstanding assessment of the academic quality of Australian university research by discipline against international benchmarks.

The Engagement and Impact (EI) assessment examines how well researchers engage with the end-users of research, and how well universities are translating research into economic, social, environmental and cultural impacts beyond academia.

What are the objectives of the national assessments?

ERA and EI were designed to robustly report on Australian research quality, engagement and impact at a level of detail that is not available anywhere else. The programs are the only tool available to government to measure research performance across Australia's university system. They are crucial for strategic planning and for identifying areas of research excellence or that require development. They can also provide rigorous evidence for decisions on public investment in research.

ERA and EI provide data on the state of Australian university research

ERA and EI provide comprehensive data across all disciplines from physics to creative arts. This unique information on the research landscape is most valuable to government and universities.

The ERA data set is particularly beneficial in humanities and social sciences (HASS) disciplines where citation data is not a useful indicator of research quality. It is also valuable for many smaller universities that are not visible in world university ranking reports and therefore rely on ERA to measure research performance.

EI case studies have provided examples of innovative ideas and best practices that universities can use to improve engagement and impact outside of academia.

ERA and EI help drive research performance

ERA and EI work on the principle that robust and transparent assessment of university research can improve performance. EI has driven behavioural and cultural change in universities towards valuing and prioritising research translation activities.

ERA has been especially successful as the results have driven competition and quality across the sector. In 2010, 68 per cent of Australian university research was rated world standard or above; this rose to 85 per cent by 2018.

Why does the ARC run ERA and EI?

Responsibility for national research assessment was moved from the then Department of Education, Science and Training to the ARC in early 2008 following a Government decision to develop and implement ERA.

Acknowledging the ARC's expertise in research assessment, it was tasked in 2015 with developing and implementing the inaugural EI assessment.

The *ARC Act 2001* makes no specific mention of quality or impact assessment.



The evolution of research assessment

Australia's approach to national research assessment over the past twenty years reflects the evolving needs and priorities of government.



Australia before research assessment

Prior to the early 2000s, Australia had no comprehensive measure of the quality or impact of university research. Policy drivers focused on the volume, rather than quality, of research outputs.



Development of research assessment

In 2004 the then government began development of the Research Quality Framework (RQF), to assess research quality and impact. It was not implemented. Following a change of government in 2007, work began on developing ERA.



ERA assesses research quality

ERA was piloted in 2009, with full rounds in 2010, 2012, 2015 and 2018.



EI assessment is introduced

EI was announced in 2015 in response to global trends to assess research impact. It was piloted in 2017 and run in 2018.

Since 2018

Both ERA and EI were last conducted in 2018. The ARC conducted a review of ERA and EI in 2020–21 which laid foundations for future improvements. In August 2022, the Minister for Education asked the ARC to discontinue ERA 2023 and develop a plan to transition ERA to a modern data driven approach informed by expert review.



Robust but resource-intensive assessments

How does ERA work?

ERA collects data from Australian universities about all of their researchers and research publications to build profiles of each specific discipline. Committees of experts then assess each discipline at each university (known as units of evaluation or UoEs) and apply a rating based on performance against world standards.

The evidence for research quality that Committees use to rate a UoE is either peer review of a sample of outputs or a profile of citation metrics. Citation metrics, which reduce the assessment workload, are reasonable indications of quality in many but not all disciplines.

Once assessments are complete, the ARC reports on all ratings, for example, quantum physics at the University of Sydney was rated 5 in ERA 2018. Reporting also includes sector-wide data profiles of academic staffing, gender, research career stages, publishing activity and income.

ERA rating scale

UoEs are rated against world standard, not ranked against each other.



How much effort is involved in an ERA round?



42 universities made **submissions for ERA 2018** that included data on 76,000 researchers and 506,000 research outputs. In total, they wrote over 650 explanatory statements and 3,000 research statements for non-traditional research outputs, and ensured 60,000 full-text outputs were made available for peer-review.

To conduct **assessments**, 150 distinguished researchers across 8 committees determined over 2,600 performance ratings, drawing on the support of around 1,000 peer reviewers.

How does EI work?

EI uses case studies (with some supporting metrics) submitted by universities to demonstrate the engagement between researchers and end-users, the impact of research and the approach to translating research into impact in each broad discipline. Panels of university and end user experts provide ratings for each element. The case studies (supported by appropriate metrics) allow universities to demonstrate to the panels the different types of engagement and impact that occurred in each discipline.

Once assessments are complete, the ARC reports on all ratings along with information on sector best practices in engagement and impact. As an example, the University of Queensland was rated as 'high' for each element of engagement and impact for engineering in the last EI round.

EI rating scale

EI gives separate ratings for impact, approach to impact, and engagement.



How much effort is involved in an EI round?



40 universities made **submissions for EI 2018** that included 626 engagement case studies and engagement metric profiles and 637 impact case studies and approach to impact case studies.

To conduct **assessments**, 70 university and industry experts across 5 committees (including one dedicated Indigenous Research committee) determined over 2,500 separate performance ratings.

What challenges need addressing?

While ERA and EI provide significant benefits, the programs impose a high administrative burden on universities. Recent advances in technology are approaching the point where it will be possible to transition to a **data-driven framework** that will **relieve the reporting burden for universities**.

Transition to a new framework is not without challenges. Much work remains to be done to ensure that the data we collect can support robust and fair evaluations of all disciplines.

However, a new framework offers opportunities to address other challenges – such as improving our capacity to answer new kinds of questions and to provide advice for the future.

When ERA was first introduced it was considered world's best practice, but the international environment has evolved and other countries have changed in response. International practice provides valuable learnings. By leveraging these along with our own innovations, Australia can continue to be a world leader in research evaluation.

What will this plan achieve?

The ARC was tasked with developing a plan to transition from its Excellence in Research for Australia (ERA) evaluation to establish a modern data-driven approach informed by expert review. This plan proposes a new framework that will be less burdensome, more flexible and better suited for the future.

This plan provides government with a first step for consultation with the sector. The ARC developed the plan in consultation with an expert working group that provided advice to the ARC CEO (see ARC website for [full membership](#)). We will continue to work with the Department of Education to develop the plan and its implementation further.

Recommendations

Recommendation 1

A new and integrated framework

That the ARC transition from ERA and EI to a new framework for research evaluation and data.

Recommendation 2

Guiding principles

That the framework is underpinned by guiding principles for efficient, balanced, connected, diverse, and trusted and relevant reporting and evaluation.

Recommendation 3

Building the data infrastructure

That the framework is underpinned by the development of research data infrastructure that provides robust and reusable evidence of research capacity, quality and impact across the diversity of Australia's university research.

Recommendation 4

Flexible performance evaluation

That the framework comprises a program of research performance evaluation with a mix of deep-dive evaluations in research priority areas and a pathway to system-wide evaluation based on flexible data-informed methodologies that are co-designed with universities and other stakeholders.

Recommendation 5

Better analytics, foresighting and value

That the framework provides regular research analytics and foresighting for universities, industry and government stakeholders and promotes the value of public investment in research.

What is needed and why?

A national research evaluation framework is necessary to determine Australian research strengths and encourage universities to benchmark and improve their performance (quality and impact) in line with government priorities.

Although other sources of information on research performance exist, they are not Australian-focused and do not reflect Australian government priorities. Without reliable knowledge of our research strengths, government will be limited in its ability to target investments and support mission-based research initiatives, such as the Trailblazer Universities Program, the National Collaborative Research Infrastructure Strategy, Centres of Excellence, Australia's Economic Accelerator program, or leverage the Australian Universities Accord.

A new framework should ensure that existing positive effects from ERA and EI are not lost – and expand into new areas of opportunity.

What are the key components?

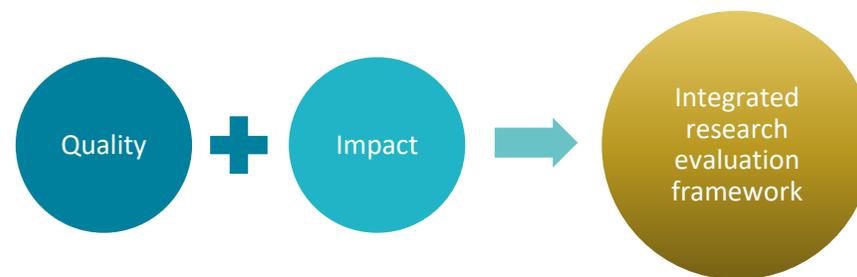
- **Data collection:** All aspects of research evaluation rely on access to accurate, relevant and sufficient data. None of the existing benefits of ERA and EI would be possible without good data. A new framework would need to capture this data without manual submissions from universities. This would require additional time to improve the data infrastructure for HASS disciplines, to ensure equitable evaluations across all disciplines.
- **Better support for government:** ERA ratings can be used by government to inform decision making on investment and priority setting. The ratings can also be used by TEQSA as evidence for university accreditation. A new framework could fulfil government (including TEQSA) requirements in a more targeted and relevant way. This is critical for most smaller universities.

- **Capacity to answer diverse questions:** A new framework could help the ARC to answer a broader range of stakeholder questions. ERA is designed to answer questions about traditional academic disciplines, but it is less well suited to questions about collaborative or interdisciplinary research. A new framework would better inform policy in key areas, for example, climate change, quantum technology, food security and Indigenous studies.

A new framework that considers research quality and impact together would reflect the fact that all of these aspects of research are part of the same pipeline and may lead to further innovation.

Future benefits

- *Continued drive for improvement*
- *Better understanding of the whole research pipeline*
- *Improved efficiency and lower workload*



Recommendation 1

That the ARC transition from ERA and EI to a new framework for research evaluation and data.

What can guide the development of the new evaluation framework?

Acknowledging that the recommendations outlined in this plan would require substantial sector consultation and work with the Department of Education prior to implementation, the principles below are designed to guide specific methodologies and technical requirements of the new framework.

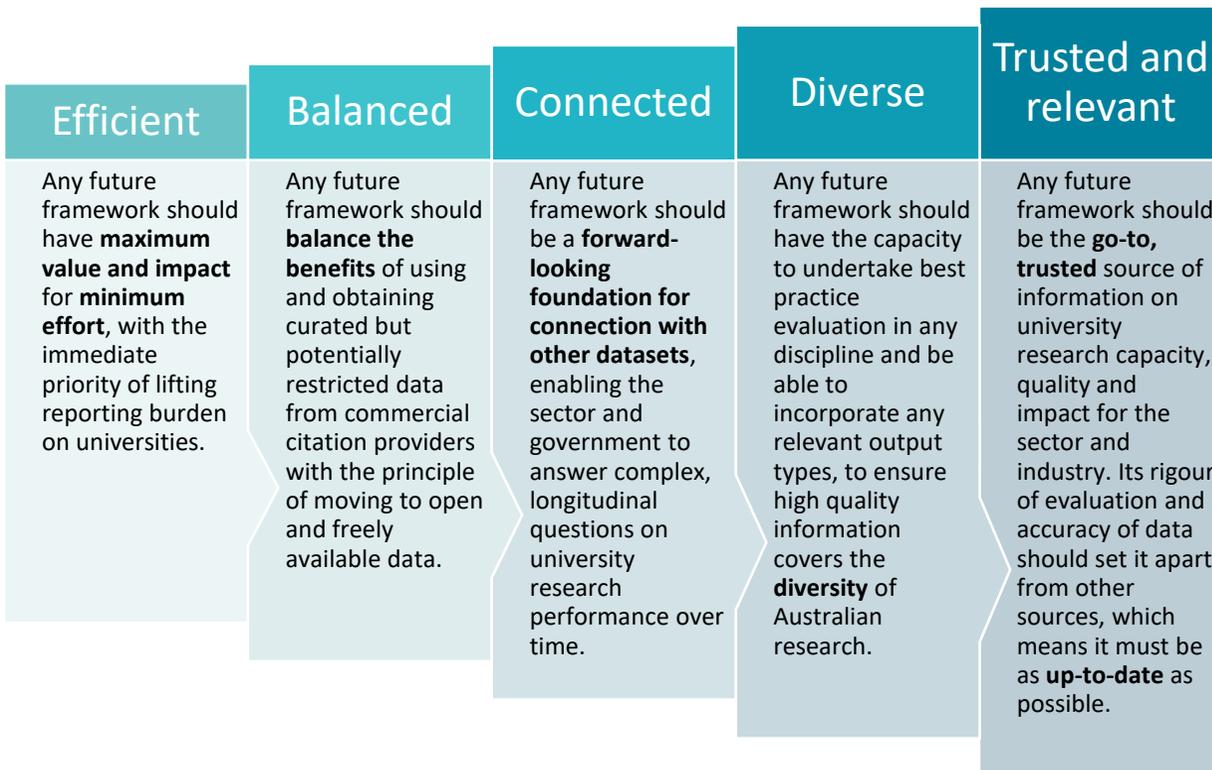
These principles will help ensure a new framework meets the needs of all stakeholders and is effective in serving Australia for the coming decade or more.



Recommendation 2

That the framework is underpinned by guiding principles for **efficient, balanced, connected, diverse, and trusted and relevant reporting and evaluation.**

What are the guiding principles?



What data is needed in the new framework?

Evaluation is only as good as the data on which it is based. The previous ERA system relied on manual submissions of all data from universities of all their research activity. It provided excellent data for conducting rigorous evaluations. But it was also very burdensome.

With technological advances in big data and ICT, there is an opportunity to **remove university submissions** – relieving universities of their primary burden of research evaluation reporting.

The future for data is promising but we aren't there yet

There are two key elements of data infrastructure needed to conduct research evaluations on a national scale:

- **data harvesting** (the collection of data that can be used)
- **data curation** (ensuring accuracy of the data, and organising and packaging the data into a useful format)

In the previous ERA, universities were involved in doing both manually to provide enough accurate data for all disciplines. In future, this could be addressed via...



Smart data harvesting with less effort

A data driven framework could significantly cut the reporting burden for universities. Today, the ARC can use data harvesting from commercial publishers and third parties to gain information about 75% of the research publications previously submitted. However, that data is mainly from STEM disciplines. Other disciplines (mainly HASS) have comparatively less data available. To build data harvesting across all areas we need to:

- continue to work with **commercial publishers** and leverage **open access data**
- partner with universities in building up their data infrastructure to enable **data harvesting in HASS disciplines**
- continue to work with the Department of Education and third-party providers to develop suitable **engagement and impact indicators** and refine existing university reporting requirements.



Data curation

The key challenges in data curation are to **ensure data accuracy** and **organise vast amounts of research data** into meaningful topics or disciplines. Assigning outputs to fields of research, for example, is necessary to establish appropriate benchmarks for comparison. To date, this has been a manual process, with university staff reviewing individual research outputs. We have been working with data providers to develop an **Artificial Intelligence (AI) algorithm** to do this automatically.



Persistent identifiers

We need to partner with universities to ensure greater use of **persistent identifiers (PIDs)** – e.g. ORCIDs and DOIs) and more **standardised metadata practices** for the research they produce, which facilitates effective harvesting (note - the use of PIDs is currently varied but some universities require researchers to use PIDs as a condition of employment). PIDs would then be attached to all published research, which greatly supports data harvesting.



Research impact

Finally, we could co-design with universities more effective and streamlined practices to develop **case studies of their research impact**, which in the short to medium term is likely to remain an important feature of the evaluation and promotion of the benefits arising from research. This support would establish consistent best practices to improve data and impact measurement.

What are the incentives and benefits?

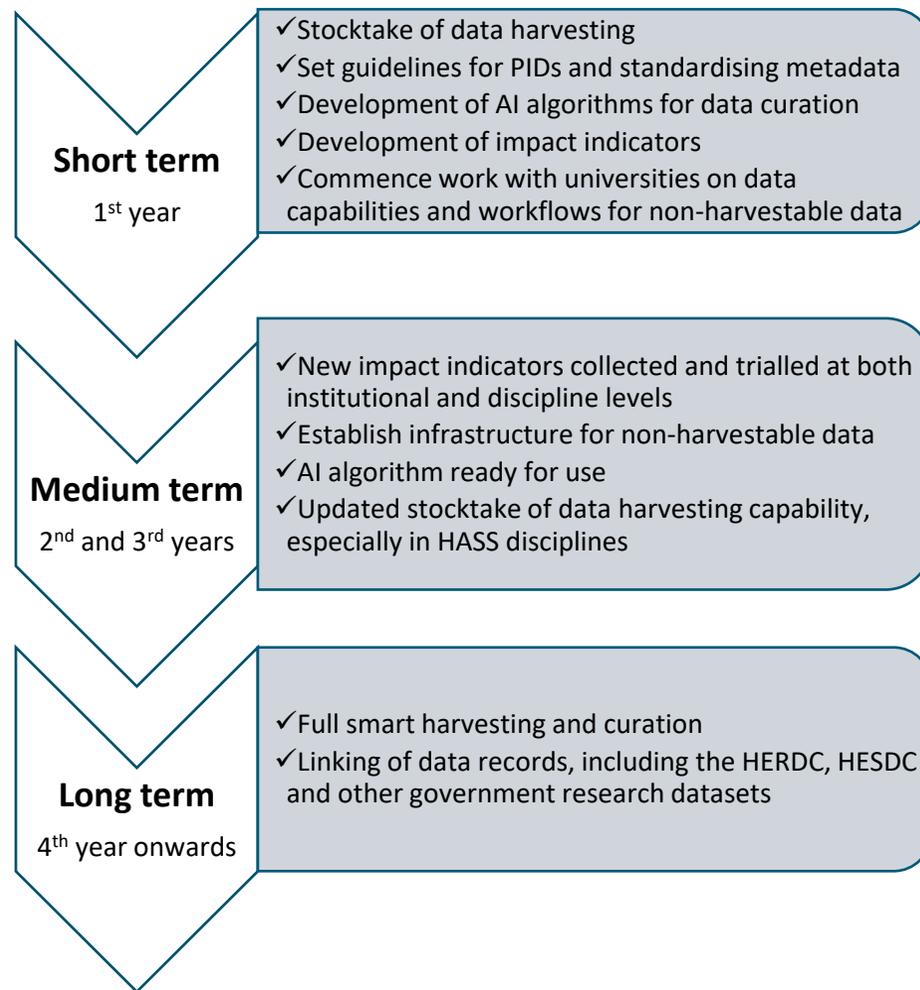
For universities, improving data infrastructure will **reduce the burden** of research evaluation reporting, as universities will no longer be making manual submissions. While some short-term assistance will be required from universities (for example, to ensure use of PIDs) this will still be a major reduction compared to previous assessments. This framework will encourage **better, more consistent data practices** across the university sector. This creates opportunities for future efficiencies.

For government, this framework enables **more options for evaluation and analytics** as data collection becomes more sophisticated. Robust sector-wide evaluations will be possible in the medium-to-long term, enabling similar benefits to previous ERA rounds. Improved data infrastructure will allow connections to other data sources (for example, competitive grants, Australian Research Data Commons, Department of Industry, IP Australia, and alternative metrics) to build up a broader picture of the Australian research system.

What are the risks and what could be lost?

The success and timeframe of implementation will depend on university buy-in to improve data practices. The development of AI algorithms for data curation could face technical challenges that limit effectiveness. There may be loss of data that was previously available in ERA data collections, especially for HASS disciplines. This could limit the value of connecting evaluation data to other datasets and using outcomes for some other purposes such as system-wide funding allocations.

These risks could be monitored through regular health-checks of the data infrastructure and mitigated through options for manual data collection in specific areas if important gaps in data remain. Human oversight will remain crucial when interpreting data. The loss of data will be a significant limitation at first (particularly in HASS disciplines) but should become marginal in the long-term as the data infrastructure develops.



Recommendation 3

That the framework is underpinned by the development of research data infrastructure that provides robust and reusable evidence of research capacity, quality and impact across the diversity of Australia's university research.

What could flexible performance evaluation look like?

With adequate data infrastructure, government could establish a **flexible** performance evaluation with the capacity to adapt to different areas of the research system as needed.

Instead of applying a one-size-fits-all methodology, evaluation methods could adapt to the type and areas of research performance, in alignment with the global best practice principles of responsible research evaluation. Evaluations would continue to involve expert review and ratings by discipline or topic as needed, with peer review where necessary.

The full spectrum of research

To ensure the performance evaluations are relevant to stakeholders, they could cover

- **research quality** – using combinations of citation analysis and expert review
- **research impact** – using a combination of case-studies and indicators

Contextual information on research capacity, such as staffing profiles, investment and support in the research environment provides additional important insights into the health of sector and would also be captured.

Types of evaluation

University-specific evaluation

Single-institution evaluations could be undertaken with the cooperation of specific universities (for example, new entrants into the university system) for the purpose of TEQSA research quality determinations.

Pathway to system-wide evaluation

A low-burden regular evaluation of the whole university sector could be conducted, once adequate data infrastructure is achieved. This would help universities maintain their strong global standing, provide broad

information on the sector for government, and facilitate funding allocation (if necessary). The evaluation could be conducted in a single round (all disciplines) or staggered over several rounds (different discipline clusters each year). It could use available data plus voluntary contributions from universities, with harvestable data analysed annually and other data on a staggered basis.

Priority deep-dive evaluations

Special evaluations of research performance could be tailored for priority areas, such as Indigenous studies, quantum computing, climate change or food and agriculture. There could be 2-4 evaluations per year, with voluntary contributions from universities.

Indigenous Studies as an example deep-dive

Understanding the current state of Indigenous Studies research is a high priority for government and Indigenous stakeholders.



A flexible co-design approach could develop a purpose-built evaluation with **Indigenous Studies experts and Indigenous stakeholders** for the specific contexts, research practices and needs of the Indigenous research community. Experts would assist the ARC in defining key questions and methodology, and would conduct all evaluations by peer review.



An **Indigenous Studies National Report** might include:

- Indigenous research workforce statistics, income and other data
- Contribution made in Indigenous Studies to the research landscape, including locations and topics of critical mass
- A heat map of Aboriginal and Torres Strait Islander Countries that have been identified in publications as being involved in research
- Beneficial impacts for Indigenous communities and sectors.

Indigenous Studies would continue to be assessed in sector-wide evaluations. A deep-dive would provide additional, more detailed information in advance of a sector-wide evaluation.

What are the incentives and benefits?

For universities, the framework continues to provide a system-wide understanding of performance, which is especially valuable to smaller or newer universities without the capacity to conduct their own evaluations. Priority evaluations allow for robust testing and **promotion of priority areas**, which will benefit all universities undertaking research in these areas.

There will also be greater scope for universities to gain recognition for specialising in areas of success, due to the wider range of evaluation types. This may incentivise universities to **collaborate and/or build capacity in priority areas**, and to gain recognition of good performance across the whole pipeline of research considered holistically.

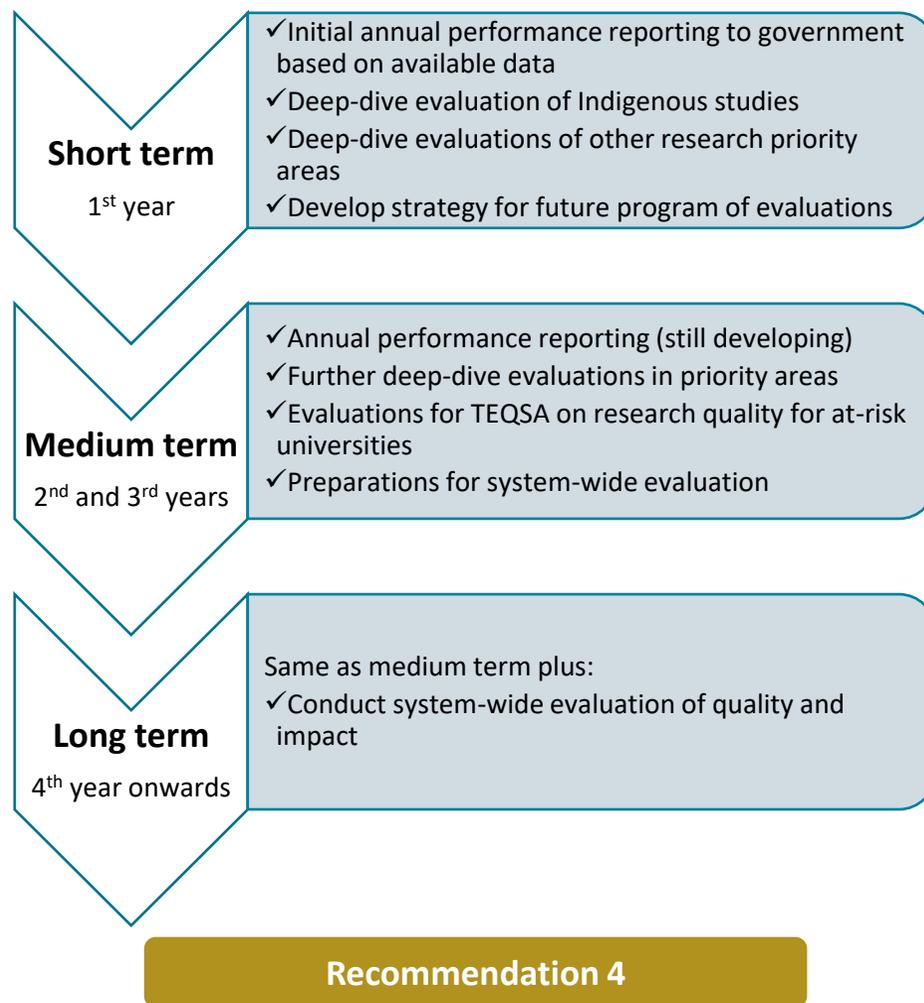
For government, the framework enables a variety of targeted evaluations based on government priorities and/or available data in the short term. Evaluation capacity will expand as the data infrastructure improves.

In the long term, this framework continues to provide system-wide evaluation of Australian research performance, for public accountability and policy purposes. It will also provide options for funding allocation, if required. Priority evaluations will **significantly improve government understanding** of research strengths in areas of direct national priority.

Optional participation by universities (although not without some risks) provides opportunities to improve government partnerships with universities and other stakeholders. Evaluations will be most successful when valuable to all parties.

What are the risks and what could be lost?

Losses would be marginal in the long-term when system-wide evaluation is available. Should government require **system-wide evaluation in the short to medium term**, this would come at the cost of **higher burden for universities** (as they provide additional data for evaluation) or **reduced rigour** in assessment methodology (as some compromises are made in areas where data is absent).



That the framework comprises a program of research performance evaluation with a mix of deep-dive evaluations in research priority areas and a pathway to system-wide evaluation based on flexible data-informed methodologies that are co-designed with universities and other stakeholders.

What would analytics and foresighting look like?



Analytics and foresighting

Based on the new framework, a sophisticated **analytics and foresighting capability** could be developed with the Department of Education to advise government, universities and industry. In the medium-to-long term, these analyses could grow to cover most disciplines and outputs, topic-modelling, longitudinal trends, linkage to other government datasets, and opportunities to facilitate university, industry and international collaborations.

Promoting the value of research



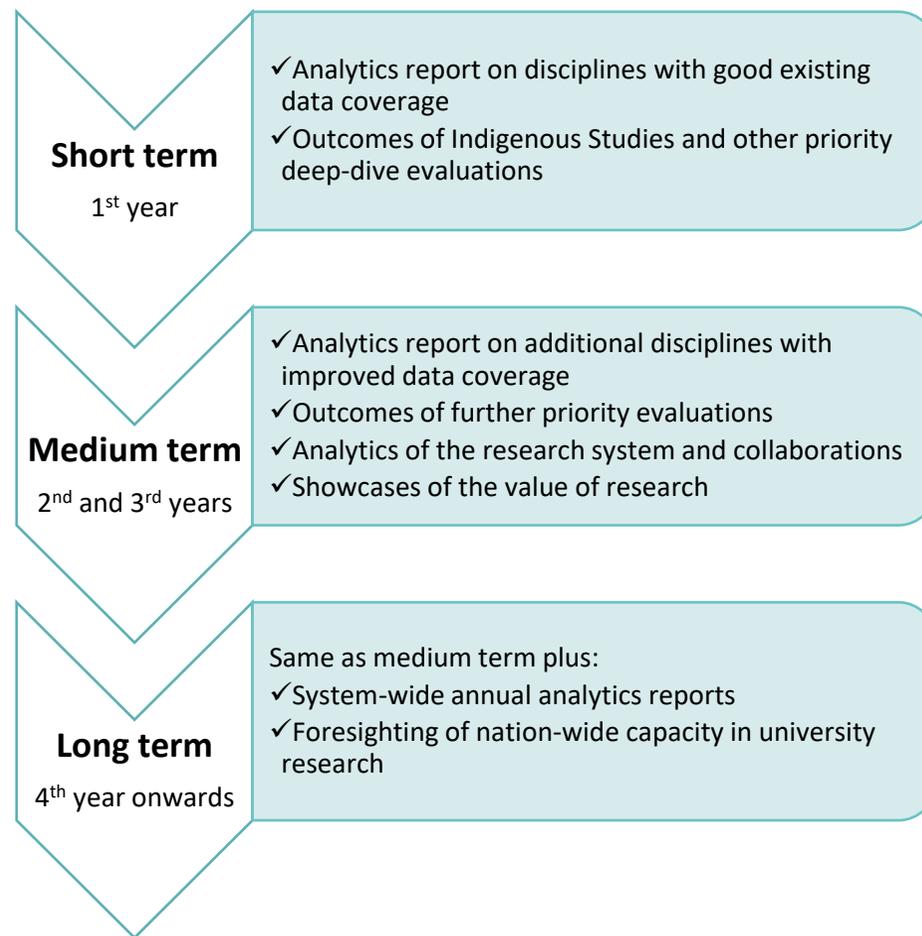
This could also begin a program that **showcases evidence of research quality and impact**, to ensure that the new framework is seen as the **go-to source** for understanding the research system. This could build **public appreciation of research** through outreach and strategic communications. It would leverage the outcomes of priority evaluations and analytics derived from the improved data infrastructure.

What are the incentives and benefits?

Greater availability of analytics and foresighting could facilitate **greater collaborations** across the research and innovation ecosystem, assist with **strategic planning** for universities and government, help the university system **evolve to meet new challenges**, and build **public confidence** in the value of research.

What are the risks and what could be lost?

Little could be lost with this framework, if it leverages existing knowledge, experience and systems. The primary risk is accurate representation of data. All stakeholders would need to provide a high level of accuracy in analytical products, and clearly articulate any limitations in publications.



Recommendation 5

That the framework provides regular research analytics and foresighting for universities, industry and government stakeholders and promotes the value of public investment in research.

Should the government cease to evaluate research?

The ARC Review Consultation Paper asks:

Do you believe there is a need for a highly rigorous, retrospective excellence and impact assessment exercise, particularly in the absence of a link to funding?

In response to this question, some universities may argue that the government should not be in the business of research evaluation at all. The Go8 appears likely to argue that ERA and EI should be discontinued and not replaced. However, smaller universities are reliant on an independent research evaluation system to maintain their TEQSA certification as a university. TEQSA does not have this capability. There are a number of reasons for the government to continue to evaluate university research, including evidence for taxpayers, alignment of university incentive structures with Government priorities, coverage in non-citation disciplines, and evaluation of smaller and more specialised universities.

The Go8 submission to the ERA EI Review (2021) describes ERA as a 'key tool', and 'one of the world's most respected research quality rating measures' that is 'part of a robust, transparent and regular assessment of university research.'

Assurance for taxpayers

The government spends billions of dollars every year on university research through block funding and competitive grants. Research evaluation performs an important role in **ensuring that universities are using that funding to perform high quality research**. Evaluating impact demonstrates that these research funds are translating to real world benefits. International research data collections and rankings do not have the granularity or robustness to provide these assurances for all Australian universities.

Incentives for universities

In the absence of a government evaluation program, universities would inevitably adopt some other means of measuring research quality and informing business decisions. These incentives may or may not align with government priorities. Government evaluation programs provide an **ongoing policy lever for government** to set research quality incentives for universities that are aligned with government policy priorities.

Small and specialised universities.

Some universities have argued that the rising prominence of international rankings means that research quality can be understood without an ERA-like evaluation.

While this may be true for large comprehensive institutions that rank highly, Australia has many smaller institutions that have low rankings (or are not ranked at all) but **produce excellent research in certain disciplines, or perform mission-based research that is focused on Australian priorities**. National research quality and impact evaluation is important for government to be able to identify, and universities to promote, these pockets of excellence in small and specialised universities.

Non-citation evaluation

Many disciplines cannot be properly understood using citation data sets alone. Our evaluation provides a **unique source of research quality information** for research outputs and disciplines that are not well-served by citation-based indicators.