

***Flinders University Response to the
Excellence in Research for Australia and Engagement and Impact
Review – October 2020***

ERA policy***Value of ERA***

Q3.1 To what extent is ERA meeting its objectives to:

- a.** Continue to develop and maintain an evaluation framework that gives government, industry, business and the wider community assurance of the excellence of research conducted in Australian higher education institutions.

A large amount.

ERA has strongly motivated universities to evaluate their research outputs. It provides a consistent evaluation framework for assessing research excellence, whereby all universities submit and are evaluated against comparable data. ERA has a significant impact within universities and with granting agencies such as the ARC where it is used as a measure of quality of the institution and feasibility of a proposed project. However, it has a limited impact for industry and business.

While acknowledging the value of the ERA in driving research improvement in universities, aspects of the ERA assessment process limit its usefulness and may lead to misinterpretation and misuse by those not familiar with the details of the model. Limitations include the use of two very different assessment models, citation-driven and peer review, for different disciplines; flexibility in the allocation of research outputs to FoR codes, though important in allowing universities to best present their research strengths ; issues relating to the scale of research undertaken, such as thresholds; and the problem of recognising truly interdisciplinary research when the assessment is discipline-based.

- b.** Provide a national stocktake of discipline level areas of research strength and areas where there is opportunity for development in Australian higher education institutions.

A moderate amount.

The ERA reporting mechanism provides scope for a comparative and cumulative estimation of university research performance in discipline areas, limited by the appropriateness of the FoR codes. The recent revised and expanded set of discipline codes will improve some aspects of this, but it will always be impossible to settle on a universally agreed set.

ERA results, however, provide little information about opportunities for research development in Australian higher education institutions.

c. Identify excellence across the full spectrum of research performance.

A large amount.

The analysis of research performance across the breadth of research as defined by the set of two and four digit FoR codes and the consideration of a range of performance measures provides a strong basis on which to identify excellence across the full spectrum of research performance. Arguments can be made about the relative importance of different measures (e.g. citation analysis, grant income, patents, HDR enrolment and student experiences, impact of the research) to the assessment process and the ERA struggles to identify cross-disciplinary excellence because of its FoR code basis.

d. Identify emerging research areas and opportunities for further development.

A small amount.

ERA provides virtually no information about areas for development. Development is prospective and based on new advances and emerging opportunities, whereas ERA is inherently retrospective. ERA analysis does not distinguish between established and emerging areas, nor is there adequate differentiation between areas not performing well in general and those in early stages of growth.

ERA supports small (by volume of outputs) disciplines within an institution by allowing them to achieve the same assessment outcome as much larger disciplines. However, it is unclear whether the ERA evaluation process supports emerging disciplines as there may be reluctance for universities to put these “untested” disciplines forward for assessment unless they are likely to achieve evaluation outcomes of above world standard.

From an opportunity identification and development point of view there are also concerns about existing categorisation of research activities, as FoR codes remain fixed for long periods, precluding the addition of new and emerging areas of research.

e. Allow for comparisons of research in Australia, nationally and internationally, for all discipline areas.

A moderate amount.

ANZSRC-FOR classifications support comparability of research performance within Australia (and possibly New Zealand). However, there is no true benchmark for international comparison with ERA ratings which, particularly in peer review disciplines, are determined quite differently from international bibliographic database and analysis platforms (such as Scopus/SciVal and Web of Science/InCites).

Q3.2 The ERA objectives are appropriate for meeting the future needs of its stakeholders.

Neither agree nor disagree.

As a very basic form of evaluation extending across Australian higher education institutions, ERA objectives are appropriate to meet the future needs of some stakeholders. However, the needs of different stakeholders are very diverse, and we suggest that the ARC should make a priority of identifying the future needs of stakeholders.

Q3.3 What impacts has ERA had on:

a. the Australian university research sector as a whole

The ERA process has coincided with, and is likely to be in part responsible

for, the focusing of research activity in the higher education sector resulting, over time, in fewer lower rated and more higher rated disciplines represented in the assessment.

ERA has exerted a positive impact in terms of enhanced public awareness of the quality of research at Australian universities and greater accountability in the sector as a whole.

b. individual universities

The points in Q3.3.a apply also to individual universities. In addition, the ERA exercise has had a significant impact on the behaviour of universities with respect to investment in particular disciplines and strategic staff recruitment, with the return on investment measured in terms of ERA ratings.

ERA enables universities to promote their research strengths and provides a mechanism for discussion with academic staff about performance within a national context.

c. Researchers

ERA provides a mechanism for discussion with staff about individual performance, albeit assessed on a limited set of KPIs. It has supported a strategy of emphasising “quality” over “quantity” of research outputs. The model favours researchers who focus on disciplinary-based performance rather than interdisciplinary research and prioritises securing citations over generating research outcomes that are important for the broader community, although the latter is now captured to some extent through the Engagement and Impact assessment exercise. However, it can create competition and friction between researchers and research groups within a university, for example where a high scoring publication fits into more than one FoR code.

At a more collective level, ERA has influenced the behaviour of discipline groups within universities, for example with respect to internal lobbying for support to increase or maintain ERA rankings.

d. Other?

No comment.

Q3.4 How do you use ERA outcomes? *Please describe.*

ERA outcomes are used to assess relative performance over time and between groups and in planning support for disciplines to maintain or improve rankings by selective investment. The relative contribution of research outputs and income by College staff towards high performing (and low performing) ERA disciplines are used as KPIs in annual reporting processes.

ERA outcomes are used in ARC and other grant applications to give an indication of the quality of the discipline within the institution.

ERA outcomes are also used as part of marketing and promotion campaigns where appropriate, although outcomes from other international rankings processes are more commonly used as ERA outcomes appear to have less of an impact, particularly on international student groups. ERA outcomes are also used to attract applicants to positions within disciplines.

Q3.5 ERA outcomes are beneficial to you/your organisation.

Agree.

ERA outcomes provide crucial information for the development of research investment strategy. It also provides a comparison with other Australian universities and supports claims of excellence.

However, there is limited evidence to suggest that ERA has an impact on the ability to leverage or access research funding. For example, in our experience the assessment of, research environment that occurs in some funding schemes may track more closely to general university rankings rather than rankings of particular disciplines within the University.

Q3.6 Do you have any suggestions for enhancing ERA's value to you/your organisation? *Please explain your answer.*

More focused data needs to be collected from ERA and published with findings. Specific suggestions include the following:

- FTEs should include numbers of research-only, teaching and research and other staff at each level attributed to different FoR codes.
- FoR codes attributed to outputs should be published alongside lists of publications (and in the case of citation-based disciplines, citation counts), so that it is possible to gain a clearer picture of quality associated with different rankings.

More information should be provided on what constitutes 'world standard' in peer-reviewed disciplines.

ERA methodology

ERA methodology at a glance

Q3.7 The current methodology meets the objectives of ERA. *Please explain your answer.*

Neither agree nor disagree.

The current methodology is a credible compromise between meeting the objectives of ERA and the administrative burden of administering the process. There are, of course, limitations, most notably in the difference in citation-based and peer reviewed methodology. The use of a single source for citations (Clarivate in the most recent ERA) is problematic, whereas using two sources and finding a method to weight between them would increase coverage of outputs.

Q3.8 What are the strengths of the overall methodology? *Please describe.*

The ERA is broadly accepted in the University community. It achieves a balance between the administrative burden and objectives relating to evaluating the quality of research and provides a consistent structure for providing data. Disciplines are covered at a granular level the methodology provides a relatively efficient evaluation for citation analysis disciplines. In the citation-based disciplines, there are clear pathways to improve quality of research and assessed outcomes, which supports planning for improved performance.

Q3.9 What are the weaknesses of the overall methodology? *Please describe.*

Any metrics-based approach has limitations, including citations, which are not perfect but arguably the best proxy for research excellence. A key weakness of the ERA methodology is a lack of clarity about how ratings are determined in the peer-reviewed disciplines. Another weakness relates to Australian-focussed research. Whether it be law research as it relates to Australian jurisdictions, studies of Australian ecology and phylogenetics/systematics,

Australian history, Archaeology and Palaeontology, publication of research into uniquely Australian issues is incredibly important to the national research effort yet is likely to cite lower than, for example, equivalent North American or European research.

Citation analysis methodology

Q3.10 The citation analysis methodology for evaluating the quality of research is appropriate. *Please explain your answer.*

Agree

Notwithstanding the limitation noted above, the advantage of citation analysis methodology for those disciplines to which it is applied is that it poses a relatively straightforward process that staff can easily understand, with a reasonable administrative workload. It is also arguable that citations, where they can be used, are the best available proxy for research excellence.

Q3.11 Does the discipline-specific approach for evaluating research quality (citation analysis or peer review for specific disciplines) continue to enable robust and comparable evaluation across all disciplines?

Agree

The discipline specific approach generally enables robust and comparable evaluation across disciplines. However, there are a number of disciplines that could move between modes of assessment, particularly where improvements in relevant citation analysis datasets make it appropriate to use citation analysis for disciplines that are currently peer-reviewed.

Q3.12 What are the strengths of the citation analysis methodology? *Please describe.*

Academics understand the citation analysis methodology and it is relatively cheap and efficient to administer. It facilitates numerical comparisons, which makes interpretation simple. The methodology involves a lower administrative burden than peer-review in disciplines of comparable size. As a metrics-based methodology, it is relatively consistent and objective, and has greater transparency. The focus on impact of publications within the scholarly community discourages low quality, low impact papers.

Q3.13 What are the weaknesses of the citation analysis methodology? *Please describe.*

Assignment of papers to FoR codes is a balance between the mandated assignment of journals to codes and the limited capacity to assign to a different code. It is unclear how appropriately this channels publications into the correct disciplinary area. Citation analysis relies on established datasets which may have inbuilt biases, including weighting some knowledge brokers and mechanisms over others.

Research analytic databases fail to capture significant bodies of research published in the humanities. To be cited in either Web of Science or Scopus both the work cited, and the citing work need to be indexed in their database. This eliminates two significant bodies of published materials: works that are not indexed in the database and works where the citing publication is not indexed in the database. Non-cited works are authored books (a key output for most Humanities, Arts and Social Science (HASS) disciplines) and edited books and chapters in books (unless they are in an approved series); new journals that are established to progress an emerging area of research; regional journals that focus on local rather than international issues; and non-English language publications. Taken together, these omissions mean that Web of Science and Scopus significantly undervalue research in the HASS

sector. In a world where rankings are increasingly important to universities administrators, there are significant flow-on impacts for our sector.

Q3.14 Can the citation analysis methodology be modified to improve the evaluation process while still adhering to the ERA Indicator Principles? Yes/No.

Yes.

a. If you answered 'Yes', please describe how the methodology could be improved.

Explanations could be provided for cases where citation analysis does not correspond with the ERA score.

Peer review methodology

Q3.15 The peer review methodology for evaluating the quality of research is appropriate. Please explain your answer.

Agree.

In the HASS context, the peer review methodology is deemed essential for the national and international credibility of the ERA exercise. Citation practices in the humanities internationally do not perform the same relatively consistent and predictable function they perform in the physical sciences. Moreover, the centrality of books, rather than articles, to core excellence in the humanities is another limit on the validity of citation indices which only cover humanities journals in a very uneven and superficial manner. This is in part because the standard is based on books and book chapters with refereed journal articles only part of the picture.

A general issue with the peer review methodology, however, is the lack of information coming out of the evaluation process to explain the rating. The process could potentially be improved if outputs were randomly assigned to peer reviewers, with a weighting system to ensure that output from all researchers in the discipline are peer reviewed.

Q3.16 What are the strengths of the peer review methodology? Please describe.

The peer review methodology is accepted by the university community, is analogous to the way grant applications and submissions to journals are usually assessed and is effective in providing a broad overview of the strength of a discipline in any given university. In the absence of metrics, it is the most comprehensive form of evaluation.

Done well, peer review allows for detailed assessment of strengths and weaknesses across a discipline. It is therefore imperative that any quality assessment include a peer review component. A strength of the peer review approach is that outputs are examined by academics with expertise to assess the quality of the work and its contribution to the disciplines.

Procedurally, the requirement for peer reviewers to outline their approach to selecting articles and peer review is a strength. However, it is not clear how the ARC assessment committee uses this information, which is a drawback.

Q3.17 What are the weaknesses of the peer review methodology? Please describe.

While the peer review method is broadly accepted, it is seen by some as lacking transparency. The method does not permit peer reviewers to provide a detailed account of the strengths and weaknesses of a particular sample (e.g. by reference to individual works). Diverse works are difficult to assess holistically. The selection of only 30% of outputs for peer review means that it is not a comprehensive assessment. Opportunities exist for results to be influenced by

the selection of works by the institution in the absence of transparency about whether it is a fair and representative sample or whether it is the best 30% in the estimation of the institution. Provision of more information on attribution of outputs by discipline to different four digit FOR codes would improve transparency. The other weakness is a lack of definition of what constitutes world standard research performance. There may be an inherent bias among the peer reviewers based on their personal experiences of research performance rather than an objective assessment of what constitutes world standard.

Q3.18 Can the peer review methodology be modified to improve the evaluation process while still adhering to the ERA Indicator Principles? Yes/No.

Yes.

a. If you answered 'Yes', please describe how the peer review methodology could be improved.

To increase the transparency of the peer review process, more information should be published regarding the evaluation of peer review items, possibly similar to the RCI distribution profile.

The peer review methodology should be comprehensive (all outputs reviewed) or items to be reviewed could be randomly selected within particular categories (e.g. type of output, identity of author). Common standards should be developed between the ARC and the universities to ensure adequate time release for reviewers from their other duties to allow peer review to be properly conducted. Without agreed standards, there is a risk that academics at some institutions will be obliged to conduct this work on top of other academic duties, with the risk that either insufficient time is allocated to the task (undermining the process) or the work is completed on a voluntary basis.

Contextual indicators

Q3.19 The volume and activity indicators are still relevant to ERA. Please explain your answer.

Agree.

Volume and activity indicators are relevant to the ERA and should be maintained in order that small disciplines at an institution are not disadvantaged. A measure of comparative productivity is useful and makes the ERA assessment meaningful.

Q3.20 The publishing profile indicator is still relevant to ERA. Please explain your answer.

Agree.

The publishing profile indicator is still relevant to ERA however may be more appropriate for peer review disciplines where it may be a proxy indicator for quality.

Q3.21 The research income indicators are still relevant to ERA. Please explain your answer.

Agree.

Research income is a strong indicator of research standing and associated indicators are relevant to ERA, although more information on how it feeds into ranking would be welcome.

Q3.22 The applied measures are still relevant to ERA:

The applied measures in the current assessment process are not well understood by staff and are of limited value to ERA and end-users and should be removed to reduce administrative burden.

- a. Patents. Please explain your answer.
- b. Research commercialisation income. Please explain your answer.
- c. Registered designs. *Please explain your answer.*
- d. Plant breeder's rights. Please explain your answer.
- e. NHMRC endorsed guidelines. *Please explain your answer.*

ERA rating scale

Q3.23 The five-band ERA rating scale is suitable for assessing research excellence. Please explain your answer.

Neither agree nor disagree.

The current 5 bands create a useful measure and the potential for meaningful comparisons. It is important to remember that the focus of the ERA is to measure the quality of Australian university research against international benchmarks, not create a scale for a fine scale comparison of Australian universities.

Q3.24 Noting that 90% of units of evaluation assessed in ERA 2018 are now at or above world standard, does the rating scale need to be modified to identify excellence? Yes/No.

No.

- a. If you answered, 'Yes', please explain how the rating scale can be modified to identify excellence.

ERA low-volume threshold

Q3.25 The ERA low-volume threshold is appropriate. Please explain your answer.

Disagree.

In most cases we argue that the threshold should be higher to provide a more solid and substantial case for assessing a discipline. However, support for the current ERA low-volume threshold comes from small disciplines that will be disadvantaged if the volume is changed. From a humanities and social science perspective, there are unintended and undesirable consequences of the threshold of 50, accentuated by the prevalence of single authorship in humanities. This threshold makes many humanities disciplines in smaller institutions invisible. It is argued that a lower threshold would permit a truer picture of the national research profile to emerge. In addition, the low volume threshold may need to be kept low or reduced for the new Indigenous Research disciplines.

Overall, we suggest that consideration be given to increasing the threshold to 100 outputs but allowing an "opt-in" for disciplines between 50 and 100 outputs.

Q3.26 Are there ways in which the low-volume threshold could be modified to improve the evaluation process? Please describe.

As noted above, we support an "opt-in" option for disciplines below the threshold and assign peer reviewers in peer review disciplines to assess low volume outputs in a two-digit FoR code that do not meet the low volume threshold in any 4-digit FoR code.

We propose that the ERA better account for different publishing volumes in different disciplines. For instance, the new FoR Codes applicable for law permit much better differentiation between different areas of law and are therefore generally welcomed. However, the change may make it difficult for smaller law disciplines to be evaluated in more than one or two four-digit codes. Any new ratings would not be comparable to previous ERA ratings.

ERA staff census date

Q3.27 What is the more appropriate method for universities to claim research outputs — staff census date or by-line? *Please explain your answer*

Each approach has advantages and disadvantages. The census date approach has the advantage of measuring strength of a discipline at the time of the census date, whether this be through research activity in the assessment period or via strategic recruitment. The by-line approach would hide the impact of strategic recruitment making ERA assessments even more retrospective than they currently are. Flinders' staff deem the by-line approach more appropriate because it ensures research is credited to the institution where it was produced. It would also disincentivise the census date driven recruitment behaviour that is seen as detrimental to and a distortion of the system. On balance, we support the census-date approach on the basis that, despite its drawbacks, it recognises more closely the most recent research capability of the discipline at an institution.

Q3.28 What are the limitations of a census date approach? *Please describe.*

The census date approach allows significant 'gaming' of submissions through strategic appointments at census date which while having an impact on the ERA evaluation process, do not necessarily contribute to research quality. A single census date may disadvantage researchers who are employed but on unpaid leave (extended unpaid maternity, parental leave etc.) which may discriminate against female researchers who are more likely to use unpaid leave. It also introduces workflow inefficiencies for the library, whose role in the verification workflow is to obtain a copy of ERA-eligible outputs for inclusion in the ERA submission. If a researcher has left Flinders prior to census date, sourcing these outputs would no longer be required.

Q3.29 Would a by-line approach address these limitations? *Yes/No. Please explain your answer.*

A by-line approach would address manipulation of the system by recruitment for short-term gain and mitigate the unpaid leave limitation and workflow inefficiencies.

Q3.30 What are the limitations of a by-line approach? *Please describe.*

The by-line approach is not considered responsive to change in research strategy and priority. Universities should be afforded an opportunity to review and validate outputs for assessment, for example not all outputs in a citation supplier database meet the definition of research. Further challenges associated with by-line approach relate to inconsistencies in how Flinders researchers affiliate on their by-lines, and how data are collected and interpreted by citation database providers.

The by-line approach provides universities with greater incentive to retain high performing staff, with the corollary that it may restrict staff mobility across institutions. It is difficult to identify what the impact would be in terms of encouraging collaboration among staff in a given institution.

ERA interdisciplinary research and new topics

Q3.31 ERA adequately captures and evaluates interdisciplinary research. *Please explain your answer.*

Disagree.

a. If you disagreed with the previous statement, how could interdisciplinary research best be accommodated? *Please describe.*

The ERA does not adequately capture and evaluate interdisciplinary research. One approach to address this would be to allow universities to submit outputs under an 'interdisciplinary' code (assessed by an interdisciplinary committee), where they outline a rationale for their approach, and highlight particular interdisciplinary strengths in terms of research questions, academic outputs and funding. Alternatively, a broader FoR code system could be weighted for multidisciplinary inclusion. Options to report outputs should not only be split across disciplines but also use the degree of the split as a measure to capture cross-discipline research. Calibrating FoR codes to respond to multidisciplinary activity could potentially counter the tendency to consolidate research within particular codes to achieve a calculated benefit.

ERA and Indigenous research

Q3.32 My institution would meet ERA low-volume threshold in Indigenous studies at:

a. Two-digit? Yes/No. *If you answered 'yes', please list which ones.*

b. Four-digit? Yes/No. *If you answered 'yes', please list which ones.*

At this stage with the introduction of the new codes, Indigenous research is quite difficult to accurately identify without further modelling. We are most likely to meet the thresholds at 2-digit level only through research outputs primarily in:

- 4501 Aboriginal and Torres Strait Islander culture, language and history
- 4504 Aboriginal and Torres Strait Islander health and well being
- 4503 Aboriginal and Torres Strait Islander environmental knowledge and management

Q3.33 In ERA, the best approach for evaluating Indigenous Studies is (choose one):

- Using established ERA methodology i.e. the low-volume threshold would apply to the Indigenous Studies discipline and all its specific disciplines
- For Aboriginal and Torres Strait Islander studies by combining low-volume disciplines into single units of evaluation
- For Aboriginal and Torres Strait Islander studies by combining low-volume disciplines into two units of evaluation (one unit comprising Humanities, Arts, and Social Sciences disciplines and one unit comprising Science, Technology, Engineering and Mathematics disciplines)
- Other. *Please describe.*

See below.

Q3.34 What would be the advantages and/or disadvantages of your preferred approach for evaluating Indigenous studies in ERA? *Please describe.*

Indigenous research should be given strategic priority, proposed analysis should be undertaken to map Indigenous research against 4-digit and 2-digit codes to provide an informed and appropriate low-level threshold. Recommend data analytics/indicators that can capture, highlight and distinguish Indigenous research conducted by Aboriginal and Torres Strait Islander researchers.

ERA process

Collection of ERA data

Q3.35 ERA should move to an annual collection of data from universities. Please explain your answer.

Disagree.

There is marked opposition to moving ERA to an annual collection of data from universities mainly due to the associated administrative burden, noting that the extent of the burden may depend on the nature of the annual collection (assignment of disciplines, review of types etc) and whether third party data would suffice for the evaluation. There is also potential for a continual cycle of assessment to produce a heightened sense of agitation and unease within research areas.

Alternatively, an annual (internal) ERA modelling exercise lessens the risks pertaining to timeliness and efficiency in collecting and organising data. Annual data collections could also reflect incremental changes rather than the 3/5 year major trendlines.

Q3.36 What would be the advantages and/or disadvantages of an annual data collection? *Please describe.*

Advantages of an annual data collection would include timely collection of research output information, some of which can be difficult to identify one or more years' post publication. The shorter timeframe may also reduce opportunities to 'game' submissions. A key disadvantage pertains to the administrative burden in the absence of mitigating measures. Moreover, ERA has credibility among researchers because it considers performance over time and is able to generate broadly predictable results. Annual assessment risks introducing meaningless variations in assessment and would provide no more information than triennial or longer, at much greater expense to the university sector.

Publication of ERA data

Q3.37 In future ERA rounds, should the volume of outputs submitted for each unit of evaluation be included in the National Report?

Yes.

a. Yes, *Please explain your answer.*

Universities need a comprehensive picture of activity levels as reflected by volume of outputs and staff profiles associated with a particular ranking. This provides greater transparency of process and is useful for industry and other end-users to understand the scale of research within universities.

b. No, *Please explain your answer.*

Q3.38 In future ERA rounds, research outputs should be published with their assignment to specific disciplines following completion of the round. *Please explain your answer.*

Strongly agree

a. What would be the advantages? *Please explain your answer.*

Publication of research outputs with their assignment to specific disciplines would make the rankings more transparent and give universities a clearer idea of what they need to do to improve their rankings.

b. What would be the disadvantages? *Please explain your answer.*

No comment

Q3.39 What other data do you think the ARC should publish following an ERA round? *Please describe.*

The ARC should publish numbers of teaching and research and research only FTEs at each level (A-E); and a metric on cross-discipline outputs.

Section 4—Engagement and Impact Assessment

EI Overview

Q4.1 Considering that EI is a new assessment, to what extent is it meeting its objectives to:

a. encourage greater collaboration between universities and research end-users, such as industry, by assessing engagement and impact? *Please explain your answer.*

A small amount.

There is limited perception to date that the EI has encouraged greater collaboration between universities and research end users. The assessment has focused minds on research impact and highlighted how collaboration can benefit different parties however there appears to be limited awareness of the evaluation process or buy-in by researchers. Collaboration between research and end users is driven by need, not by government assessments. To date, there is no clear consensus as to how impact should be recorded or measured.

b. provide clarity to the Government and the Australian public about how their investments in university research translate into tangible benefits beyond academia? *Please explain your answer.*

A small amount.

The EI assessment provides small numbers of examples of research translation. However, there is a difference between having a substantial impact, and messaging around impact. Often the substantial impact is well into the future, long after the messaging, at which many universities are quite proficient. Assessment can highlight good practice but in the absence of clear metrics on how impact can be evidenced, the current EI assessment is more a measure of how well the university has recorded their E&I, than the actual quality of E&I.

The relatively small number of case studies referred to in an EI assessment cannot comprehensively describe benefits beyond academia, moreover it is easy for high impact research to become invisible because it is not one of the “chosen” case studies.

c. identify institutional processes and infrastructure that enable research engagement? *Please explain your answer.*

A small amount.

The current approach fails to recognise self-supporting research programs (i.e. a university may not necessarily need to specifically invest in or support a program of research for it to lead to impact). Moreover, there is a broader need to establish processes that recognise EI as an integral part of research work. EI

should be an ongoing activity that drives value rather than an external reporting requirement.

- d. promote greater support for the translation of research impact within institutions for the benefit of Australia beyond academia? *Please explain your answer.*

A small amount.

The majority of researchers, beyond those involved in specific cases studies, do not appear to be invested in or even aware of the EI evaluation. The EI assessment does not support translation of research; at best it acknowledges that this could be important. Researchers and communities/end user needs ultimately drive translation of research impact.

- e. identify the ways in which institutions currently translate research into impact? *Please explain your answer.*

A moderate amount.

The existing ways institutions currently translate research into impact include communications, education, public exchanges, slow and persistent interactions with those affected, policy discussions, papers, creation of tools and resources, protecting and commercialising intellectual property and solving problems of relevance to and in partnership with industry, peak bodies and community agencies. The extent to which EI assessment contributes to this is likely to be minor.

In the context of HASS, the humanities are much better served by narratives of value than by measurement. The very large element of public rather than commercial benefit in this sector means that contract research is a very unreliable proxy for success. Impact and engagement are important to humanities researchers, but they only have meaning within an explanatory context. Consequently, assessment of a selective number of rigorously evidence-based narratives would give a much better account of society's return for investment in humanities research than any falsely homogenising measures

- Q4.2 The EI objectives are appropriate for the future needs of its stakeholders. *Please explain your answer.*

Agree.

Real-world impact is important, and the objectives of the EI assessment does seek to capture this real-world impact. However, except in some very clear circumstances, there is no clear consensus on what kind of impact is most significant and, in particular, how it can be measured.

- Q4.3 What impact has EI had on:

- a. the Australian university sector as a whole? *Please describe.*

EI is a useful reminder at a whole of sector level that the overarching purpose of research is to build knowledge, discover things and enable change. However, the impact of the EI assessments have been minimal. Other avenues of awareness of the importance of EI have been much more significant, for example some internal funding programs have been adjusted to foster greater engagement and research translation. The much more urgent issue than trying to measure engagement and impact is the improvement of research translation outcomes through a sector wide research translation strategy supported by, for example, well-funded research translation infrastructure and capability building (much like the Catapult program in the UK and the Fraunhofer Institute network in Germany).

b. Individual universities. Please describe.

In general terms, EI assessments have had little impact within universities, although it has encouraged individual universities to reflect on their capabilities and better track their research engagement and impact. It has also led to the establishment of capability building and research funding programs to support EI. Greater visibility of research through the impact example narratives has been marginally beneficial.

c. researchers. Please describe.

Again, EI assessments have had marginal impact on researchers, in some cases making them more aware of the importance of engaging with stakeholders and monitoring the impact of their research. It has caused some individual researchers to reappraise their contacts with stakeholders and to take into greater consideration the purpose of their research. Much greater benefit could be realised from EI if lessons learnt from case studies were distilled in support of capability building and the development of research translation strategies. There is a strong likelihood that the researchers who are paying greater attention to EI as a result of the assessment probably already had this as a point of focus. It is not a universal priority.

d. other sectors outside of academia? Please describe.

There appears to be little or no impact of the EI assessment on sectors outside of academia. Communities/end users should require academics to articulate their purpose and demonstrate research value and impact, but the EI exercise with its limited scope and challenges with defining modes of assessment is not the vehicle for this. In general, EI has been undertaken as a measurement exercise without adequate demonstration of the value of it to any of the stakeholders, whether they be government, universities, individual researchers or existing or potential end-users.

Q4.4 How do you, or your organisation, use EI outcomes? Please describe.

EI outcomes are used to highlight high impact research, develop marketing materials, and inform strategic investment into programs leading to impact, although with marginal effect over and above existing activities in these areas. They form part of ongoing research group discussions on making a difference in the world and how to identify and convey that effectively.

Q4.5 The EI outcomes are valuable to you or your organisation. Please explain your answer.

Neither agree nor disagree.

EI outcomes, particularly the development of the case-studies, are of limited but some value.

Q4.6 How else could EI outcomes be used? Please describe.

There is a lack of transparency concerning the function of the EI assessment, leading to uncertainty about whether the process is more about gaining competitive ground as an institution or generating institutional improvements in research engagement and impact. In this context it would be valuable if EI outcomes could be used to drive a culture of excellence and a desire to contribute to society. This will only happen if individual researchers become more convinced of the validity of the assessment than they currently are.

EI outcomes could be used to provide clear exemplars on best practice for engaging with stakeholders and producing sustainable impact. Another application would be to support very long-term research programs since real

world impact often comes years after active research has been completed at a particular institution. However, this is difficult for institutions as it is not always apparent which research programs will have the greatest impact down the track.

El definitions

Q4.7 The current Engagement definition is appropriate.

Agree, but note that it is difficult to provide evidence that demonstrates engagement as defined.

a. If you don't agree, what are your suggested amendments to the Engagement definition? *Please describe.*

Q4.8 The current Impact definition is appropriate.

Agree, but note that it is difficult to provide evidence that demonstrates impact as defined.

a. If you don't agree, what are your suggested Amendments to the Impact definition? *Please describe.*

Q4.9 The current end-user definition is appropriate.

Disagree

a. If you don't agree, what are your suggested amendments to the end-user definition? *Please describe.*

As noted in the Consultation Paper, exclusions of a range of bodies is problematic. We support the inclusion of a much broader range of end-users (governments, businesses, non-governmental organisations, education providers, communities and community organisations).

b. Are there any end-user categories excluded in the current definition of research end-user that you think should be included? *Please explain your answer.*

Q4.10 Are there other key terms that need to be formally defined? Yes/No. *If you answered 'Yes', please explain your answer.*

Yes

The issue of 'Approach to impact', understood here as university support for engagement and impact, is greatly problematic and could benefit from a stronger definition.

El methodology

Unit of assessment

Q4.11 Are the two-digit Field of Research codes the most appropriate method to define units of assessment for Engagement and Impact? Yes/No. *Please explain your answer.*

No

El's use of FoR codes means that it will always be a poor mechanism for evaluating interdisciplinary research, which is often the basis of impact. The focus of impact should be on the Socio-Economic Objective codes as it is from this perspective that the end-users/beneficiaries of the impact will view the contribution research has made.

- Q4.12 Are there other ways to classify units of assessment in EI, for example, SEO codes? Yes/No. *Please explain your answer.*

As above, most view SEO codes as more appropriate units of evaluation for impact case studies, as they focus on describing intended to actual outcomes rather than describing the research leading to the impacts. SEO codes would provide a clear distinction between ERA and EI, and prompt universities to more actively consider research objectives.

Selectiveness of EI

- Q4.13 Should there be more or fewer units of assessment per university? More units of assessment; The same number as in EI 2018; Fewer units of assessment.

There is support for the same number. More units of assessment would more accurately describe research activities however it is important to balance this outcome with managing the administrative burden. In this context, it may be preferable to provide an opt-in mechanism for larger disciplines such as health and medical research, dependent on scale.

- a. How many and why? *Please explain your answer.*

No comment

EI low-volume threshold

- Q4.14 The EI low-volume threshold should continue to be based on the number of research outputs submitted for ERA.

Disagree

- a. If you disagree, how should eligibility for assessment in EI be determined? *Please explain your answer.*

The EI low-volume threshold should not continue to be based on the number of research outputs submitted for ERA, for two reasons. In areas of policy related research, impact often does not come in the form of academic outputs, but in the form of reports and 'grey literature'. These may not be captured by ERA, but nonetheless represent valid output from universities. Secondly, where impact materialises long after the research is finished in a particular area, volumes of academic output may be low.

- Q4.15 The low volume threshold is set at the appropriate level. *Please explain your answer.*

See response to Q4.14

Engagement indicators

- Q4.16 Overall, the engagement indicator suite for the assessment of research engagement is suitable. *Please explain your answer.*

Disagree

The current metrics used for engagement (e.g. cash support) provide some indication but are not sufficient to show adequate evidence of quality of engagement.

- Q4.17 The cash support from research end-users indicator using HERDC data is appropriate for the assessment of research engagement? *Please explain your answer.*

Disagree.

The cash support from research end-users indicator using HERDC data is not appropriate for the assessment of research engagement. The indicator is tantamount to double counting (it is also used for ERA reporting), and large investments may have limited impact.

Q4.18 The research commercialisation income is appropriate for the assessment of research engagement. *Please explain your answer*

Disagree.

Research commercialisation income is not appropriate for all disciplines as a core indicator.

Q4.19 Are there additional metrics that would be appropriate across many or all disciplines? *Yes/No. If you answered 'Yes', please outline the metrics. If you answered 'No', please explain your answer.*

No

Q4.20 Are there alternative metrics that would be appropriate across many or all disciplines? *Yes/No. Please specify the metrics.*

Yes.

Alternative metrics are number of co-authored papers and co-supervision of HDR students.

Q4.21 Should any of the current Engagement metrics be redesigned? **Yes/No. If you answered 'Yes', which ones and how?**

No comment

Q4.22 The co-supervision of HDR students should be made an engagement indicator in future rounds of EI. *Please explain your answer.*

Agree.

See 4.20.

Q4.23 In your opinion, are any of the ERA applied measures appropriate indicators of research engagement in EI?

a. **Patents.** *Yes/No. Please explain your answer.*

No.

Patents, where end-users and the higher education provider contribute to a patent (i.e. shared patent) and licence of patent (but not the patent itself).

b. **Research commercialisation income.** *Yes/No. Please explain your answer.*

No.

Not appropriate across all disciplines.

c. **Registered designs.** *Yes/No. Please explain your answer.*

No.

Requires qualification that end-users and the higher education provider contribute to the design.

d. **Plant breeder's rights.** *Yes/No. Please explain your answer.*

No

Requires qualification that end-users and the higher education provider contribute to the rights.

e. **NHMRC endorsed guidelines.** *Yes/No. Please explain your answer.*

No comment

Engagement narrative

Q4.24 The narrative approach is suitable for describing and assessing research engagement with end-users. *Please explain your answer.*

Agree.

The narrative approach allows institutions to frame their research engagement with end-users in context.

a. If you disagree, what alternative approach could be used to replace the narrative? *Please explain your answer. If you are suggesting indicators, please be specific.*

Q4.25 One engagement submission per broad discipline is sufficient for capturing the research engagement within that discipline. *Please explain your answer.*

Neither agree nor disagree.

Engagement in disciplines is highly diverse, and many examples do not fit the stipulated criteria. Selecting just one engagement submission reduces complexity and administrative burden. However, 'cherry picking' a single example that does not reflect broader engagement across a discipline can be misleading.

Q4.26 The engagement narrative needs to be longer. *Please explain your answer.*

Disagree

The current length is sufficient.

Q4.27 Additional evidence is needed within the narrative. *Please explain your answer.*

a. If you agreed, what evidence should be provided? *Please describe.*

It should be appropriate and possible to link to evidence via URLs.

Impact narrative

Q4.28 The narrative approach is suitable for describing and assessing impact. *Please explain your answer.*

Strongly agree.

a. If you disagree, what alternative approach could be used to replace the narrative? *Please explain your answer. If you are suggesting indicators, please be specific.*

Q4.29 One impact study per broad discipline is sufficient for capturing the research impact within that discipline. *Please explain your answer.*

Neither agree nor disagree.

Selecting just one impact study per broad discipline reduces complexity and administrative burden. However, 'cherry picking' a single example that does not reflect the full range of impact across a discipline can be misleading.

Q4.30 The impact narrative needs to be longer. *Please explain your answer.*

Disagree. The current length is sufficient.

Q4.31 There is a need for additional evidence to be provided within the narrative. *Please explain your answer.*

Agree.

a. If yes, what evidence should be provided? *Please explain your answer.*

It should be appropriate and possible to link to evidence via URLs.

Q4.32 In your opinion, are there quantitative indicators that could be used to measure the impact of research outside of academia? *Yes/No. Please explain your answer.*

No comment.

b. If you answered 'yes' to the previous question, please name and describe the quantitative indicator/s, and the disciplines for which they are relevant. *Please list and describe.*

Approach to impact Narrative

Q4.33 The narrative approach is suitable for describing and assessing approach to impact. *Please explain your answer.*

Neither agree nor disagree.

a. If you disagree, what alternative approach could be used to replace the narrative? *Please explain your answer. If you are suggesting indicators, please be specific.*

Q4.34 One approach to impact narrative per broad discipline is sufficient for capturing the activities within that discipline. *Please explain your answer.*

Neither agree nor disagree.

Q4.35 The approach to impact narrative needs to be longer. *Please explain your answer.*

Disagree

Q4.36 There is a need for additional evidence to be provided. *Please explain your answer.*

It should be appropriate and possible to link to evidence via URLs.

Q4.37 Would there be benefit in combining engagement and approach to impact? *Yes/No. Please explain your answer.*

Yes

We suggest that engagement and approach to impact overlap and could be combined to reduce the administrative burden.

EI rating scales

Q4.38 The engagement rating scale is suitable for assessing research engagement. *Please explain your answer.*

Agree.

Although allocation to the scale is poorly defined and the scale is coarse, the uncertainty surrounding the assessment decisions supports maintenance of the current 3-point scale.

Q4.39 The descriptors for the engagement rating scale are suitable. *Please explain your answer.*

No comment.

Q4.40 The impact rating scale is suitable for assessing impact. *Please explain your answer.*

No comment.

- Q4.41 The descriptors for the impact rating scale are suitable. *Please explain your answer.*
No comment.
- Q4.42 The approach to impact rating scale is suitable for assessing approach to impact. *Please explain your answer.*
No comment.
- Q4.43 The descriptions for the approach to impact rating scale are suitable. *Please explain your answer.*
No comment.

El interdisciplinary research

- Q4.44 Should EI continue to include an interdisciplinary impact study in addition to the two-digit Fields of Research impact studies? *Yes/No. Please explain your answer.*
Yes.
There is a strong need to include interdisciplinary case studies in disciplines such as science, where much of the engagement and impact is interdisciplinary and is not well captured at present.

El and Aboriginal and Torres Strait Islander research

- Q4.45 Should the EI low-volume threshold be applied to the unit of assessment for Aboriginal and Torres Strait Islander research in EI 2024 with the option to opt in if threshold is not met? *Yes/No. Please explain your answer.*
Yes, Indigenous research is an area of growth, the EI low-level threshold should be adjusted to capture the breadth of research outputs. The option to opt-in should be available when the low-level threshold is not met and will allow for community research impact to be captured.
- Q4.46 Should the unit of assessment for Aboriginal and Torres Strait Islander research include engagement in EI 2024? *Yes/No. Please explain your answer.*
Yes, this unit assessment should include engagement, which will provide a benchmark to assess community engagement and impact into the future.

Section 5—Overarching Issues Common to both ERA and EI

Frequency of ERA and EI

- Q5.1 How often should ERA occur? *Every three years; Every five years; Other, please specify. Please explain your answer.*
The IRU (of which we are a member) has argued a six-year cycle with alternating ERA and EI exercises spaced three years apart. A compromise could be a five-year cycle with the ERA and EI exercises offset.
- Q5.2 What impact would a longer assessment cycle (i.e. greater than three years) have on the value of ERA results, particularly in the intervening years? *Please explain your answer.*
Extending the assessment cycle to five years would have very little impact on the value of ERA results. A longer cycle would also allow for more planning, and results would reflect the operation of long-term strategies as opposed to short term activities designed to boost ratings.

Q5.3 How often should the EI assessment occur? Every three years; Every five years; Other, please specify. *Please explain your answer.*

See Q5.1

Q5.4 What impact would a longer assessment cycle (i.e. greater than three years) have on the value of EI results, particularly in the intervening years? *Please explain your answer.*

A longer EI assessment cycle would have very little impact on the value of EI results.

Streamlining and simplifying ERA and EI

Q5.5 ERA and EI should be combined into the one assessment. *Please explain your answer.*

Disagree

The workload impact and the preference to move to a different basis for allocation of results (SEO codes vs FoR codes) prompts disagreement with this statement.

a. What would be the advantages and/or disadvantages. *Please explain your answer.*

See above.

Q5.6 Are there other ways to streamline the processes to reduce the cost to universities of participating in ERA and EI? Yes/No. *Please explain your answer.*

Covered in various comments above.

Q5.7 In your view, what data sources could ERA utilise? *Please explain your answer.*

ERA could feasibly increase its use of citation databases, although it is important to validate which outputs are included in the assessment (e.g. remove non-research outputs).

Q5.8 In your view, what are the most time-consuming elements of an ERA submission? *Please describe.*

The most time-consuming elements of an ERA submission are the assignment of research outputs to disciplines and selection of items for peer-review. From a workflow perspective, the collection of research outputs for peer review, especially non-traditional research outputs, and Open Access flags are the most time-consuming elements.

a. Are there efficiencies that could be introduced? Yes/No. *Please describe.*

Potential efficiencies include considering a more holistic, national approach to peer review collection.

Q5.9 In your view what are the most time-consuming elements of an EI submission? *Please describe.*

No comment.

a. Are there efficiencies that could be introduced? Yes/No. *Please describe.*

No comment.

Utilising technological advances and pre-existing data sources

Q5.10 ORCID iDs should be mandatory for ERA. *Please explain your answer.*

ORCID iDs should be mandatory, however the creation/use of an ORCID is not necessarily within the control of an institution. Researchers are personally responsible for ORCID iDs and this will remain the case unless Universities and/or the ARC mandate they have one for ERA.

Peripheral issues connected with ORCID iDs include researchers potentially having multiple ORCID iDs and the requirement for data cleaning regardless of the source. Experience has also shown that ORCID iDs impose unnecessary constraints in reporting research outputs, with some outputs are not captured by ORCID.

- a. *What are the advantages and/or disadvantages? Please explain your answer.*

See above.

Q5.11 *The automatic harvesting of output data using ORCID iDs would streamline a university's submission process. Please explain your answer.*

Agree.

Automatic harvesting will streamline the submission process in time, but currently universities do not necessarily have the ability to maintain ORCID profiles and getting buy-in from staff to make necessary changes may require more resources than alternate approaches. The ORCID profile may be broader than 'research', and it may not be possible to separate the research and non-research (e.g. teaching oriented) activities or outputs included within the profile.

Automatic harvesting would involve less burden on (some) researchers however some outputs may be overlooked. Utility would depend on whether ORCID can capture NTRs as well as journal articles. Institutional name variation would also need to be considered. In time, with the incentive provided by ERA policy, streamlining should occur.

- a. *What are the advantages and/or disadvantages? Please explain your answer.*

See above.

Q5.12 *DOIs should be mandatory for ERA. Please explain your answer.*

Mandatory DOIs are not appropriate for all forms of outputs. Moreover, there is limited ability to influence publishers to have DOIs. If they are required, there should be form of "amnesty" for the retrospective census period.

- a. *What are the advantages or disadvantages? Please explain your answer.*

See above.

Q5.13 *Are there new ways to collect data to reduce the cost and burden to universities of participating in ERA and EI whilst maintaining the robustness of the ERA and EI process? Yes/No. Please explain your answer.*

A more holistic approach to data collection could be considered, especially peer review items where there are multiple authors from different institutions. Assess more disciplines, where appropriate, through citation analysis and move to by-line requirement for affiliation.

- a. *What are the advantages and/or disadvantages? Please explain your answer.*

See above.