

## Section 3—Excellence in Research for Australia

### 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 very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

*Answer: A moderate amount*

*ERA is meeting its objectives in the sector and in government, but is not broadly recognised by industry or other stakeholders. International researchers and students look to international rankings.*

- 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 very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

*Answer: A large amount.*

*ERA is used to understand what is happening in research at a university and across the sector.*

- c. Identify excellence across the full spectrum of research performance. *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

*Answer: A moderate amount.*

*Citation analysis is robust but mitigated by factors such as size of institution and submission; peer review assessment is subjective and does not translate well with some disciplines.*

- d. Identify emerging research areas and opportunities for further development. *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

*Answer: A small amount.*

*ERA is retrospective (it uses data which is up to eight years old) and some of the researchers are no longer active in the institutions under review.*

- e. Allow for comparisons of research in Australia, nationally and internationally, for all discipline areas. *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

*Answer: A moderate amount.*

*Citation analysis is a statistically valid way to measure world standard and is also useful for national comparisons.*

*Peer review is not a robust way to measure international/world standard, and is too subjective to allow for robust national comparisons.*

Q3.2 The ERA objectives are appropriate for meeting the future needs of its stakeholders.  
*Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree.*  
*Please explain your answer.*

- a. If you disagreed with the previous statement, what should the primary purpose of ERA be going forward? *Please explain your answer.*

*Answer: Neither agree nor disagree.*

Q3.3 What impacts has ERA had on:

- the Australian university research sector as a whole
- individual universities
- researchers
- Other?

*Please explain your answers.*

*Answer:*

*Consumes considerable resources across the sector as a whole, particularly with respect to smaller institutions where the costs are a greater relative percentage of the research budget compared to larger institutions. This is money that could be spent on research and therefore could diminish Australia's competitiveness in the longer term.*

*Has devalued teaching as there is so much prestige associated with research.  
Made research more competitive.*

*Universities have de-invested in some research areas because of ERA ratings which do not in any reflect teaching excellence or student interest.*

*There has been a negative impact on multi-disciplinary research areas because of volume constraints in terms of outputs.*

*It has informed research strategy, and helped universities focus on strengths.  
Universities have changed their research profile to fit ERA.  
Silo formation has been encouraged, particularly in smaller universities.*

*There has been a negative impact on quality assurance exercises such as reviewing books and article manuscripts as such service activities 'do not count for ERA' in university workload models.*

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

*Answer:* ERA outcomes are used for:

- Promotions
- University research strategy development.

Q3.5 ERA outcomes are beneficial to you/your organisation. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree or disagree.

ERA is useful if the ratings are good and the research excellence can be advertised, including to university councils.

ERA is not useful in areas where the ratings are not so good, including in disciplines with peer review assessment, or disciplines with low volume outputs which do not get assessed.

The focus on FOR 4 digit codes is a disincentive for interdisciplinary work.

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

Answer: ERA's value could be enhanced by better more comprehensive feedback (as was the case in the pilot), in addition to universities receiving numerical assessment.

A dashboard of assessment for deeper analysis could help.

ERA methodology

*ERA methodology at a glance*

Q3.7 The current methodology meets the objectives of ERA. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree or disagree.

ERA is useful to government and universities, but not broadly recognised by industry or other community stakeholders.

It provides a national stocktake of disciplines, but is retrospective, so has some limitations in terms of use for future development.

Disciplines evaluated by citation have a robust basis for international comparison; those assessed by peer review do not.

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

Answer: the citation-based analysis is good and robust for international comparisons.

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

Answer: the peer review analysis is not robust – it is subjective.

The outcomes for the disciplines evaluated by peer review cannot be compared with the outcomes for those evaluated by citation.

### Citation analysis methodology

Q3.10 The citation analysis methodology for evaluating the quality of research is appropriate. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Strongly agree.

The citation analysis is statistically robust.

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?

Answer: The outcomes for the disciplines evaluated by peer review cannot be compared with the outcomes for those evaluated by citation.

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

Answer: The citation analysis methodology is statistically robust, understood, and enables international comparisons.

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

Answer: Citation analysis ignores the relative contribution of each author on multi-author papers. It can be gamed.

Q3.14 Can the citation analysis methodology be modified to improve the evaluation process while still adhering to the ERA Indicator Principles? **Yes/No.**  
a. If you answered 'Yes', please describe how the methodology could be improved.

Answer: Yes. The inclusion of a narrative statement would be useful.

### Peer review methodology

Q3.15 The peer review methodology for evaluating the quality of research is appropriate. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: The peer review methodology for evaluating the quality of research is not appropriate as it is not yielding reliable or repeatable results.

STEM subjects assessed on citations are better rewarded than those assessed by peer review (e.g., humanities in general, social sciences and creative arts). This is a disincentive for regionally-headquartered universities to pursue non-STEM disciplines or multidisciplinary research, even though research in these fields is of great value to regional communities.

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

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

Answer: The methodology is too subjective and assessors are experiencing fatigue.

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

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

Answer: The peer review methodology could be improved by also including some citation analysis and other quality assurance measures such as reviews.

#### Contextual indicators

Q3.19 The volume and activity indicators are still relevant to ERA. Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.

Answer: Strongly agree.

A minimum volume is needed for a realistic assessment of quality. It must be based on statistical norms. Larger volumes would prevent identification of focused nodes of excellence at smaller universities.

Q3.20 The publishing profile indicator is still relevant to ERA. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree nor disagree

Q3.21 The research income indicators are still relevant to ERA. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree.

Research income is good for determining track records.

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

a. Patents. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Strongly disagree – should be in EI assessment.

b. Research commercialisation income. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Strongly disagree – should be in EI assessment.

c. Registered designs. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Strongly disagree – should be in EI assessment.

- d. Plant breeder's rights. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Strongly disagree – should be in EI assessment.

- e. NHMRC endorsed guidelines. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Strongly disagree – should be in EI assessment.

#### *ERA rating scale*

- Q3.23 The five-band ERA rating scale is suitable for assessing research excellence. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: *Strongly agree.*

*World standard is appropriately recognised under the current rating scale. World standard cannot be moved.*

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

Answer: *No.*

#### *ERA low-volume threshold*

- Q3.25 The ERA low-volume threshold is appropriate. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: *Strongly agree.*

*The low-volume threshold of 50 is based on statistical analysis.*

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

Answer: *No. It is statistically robust. Counting more does not make the threshold more valid.*

#### *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.*

Answer: *By-line with exceptions (challenge is mobility – if people have recently arrived, by-lines haven't yet started).*

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

Answer: *the census date approach can be gamed. It is a one-day snapshot.*

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

*Answer: Yes, with exceptions. There can be game-playing around adjunct appointments.*

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

*Answer: There can be game-playing around adjunct appointments.*

#### ERA interdisciplinary research and new topics

Q3.31 ERA adequately captures and evaluates interdisciplinary research. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

*Answer: Disagree.*

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

*Answer: A dedicated process is needed for interdisciplinary research. It needs to be assessed outside the existing categories. Narrative would be helpful for interdisciplinary research but not transdisciplinary research.*

#### 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.*

*Answer: No*

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

- a. Using established ERA methodology i.e. the low-volume threshold would apply to the Indigenous Studies discipline and all its specific disciplines
- b. For Aboriginal and Torres Strait Islander studies by combining low-volume disciplines into single units of evaluation
- c. 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)
- d. Other. *Please describe.*

*Answer: A group of Indigenous researchers should decide the best approach for evaluating Indigenous studies in ERA.*

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

*Answer: As above.*

## ERA process

### Collection of ERA data

Q3.35 ERA should move to an annual collection of data from universities. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree nor disagree.

Additional transactional costs would be involved if the data collection was annual, but institutions might also get into a routine pattern of providing the data.

Using international data sets such as Scopus would reduce the annual burden on universities.

Annual data collection might disadvantage research based on long-term studies.

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

Answer:

Advantages: it could stop gaming; it would provide a routine basis for data collection.

Disadvantages: it would involve more transactional costs; it would discourage long-term studies.

### 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?

- a. Yes, *Please explain your answer.*
- b. No, *Please explain your answer.*

Answer: No, ERA should focus on excellence only.

Q3.38 In future ERA rounds, research outputs should be published with their assignment to specific disciplines following completion of the round. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree nor disagree.

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

Answer: *It would stop gaming*

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

Answer: *It could be destructive.*

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

Answer: How much it cost universities to compile their submissions.



## 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? *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

Answer: A moderate amount. The numeric part of the assessment is not useful with end-users, but the narrative is. Discussing the narrative with researchers has been helpful in encouraging them to engage with end-users.

- b. provide clarity to the Government and the Australian public about how their investments in university research translate into tangible benefits beyond academia? *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

Answer: A small amount. One case study per FOR code is not adequate for universities to demonstrate the breadth of the benefits of the research effort and value for money, especially in Health disciplines.

- c. identify institutional processes and infrastructure that enable research engagement? *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

Answer: A small amount. The assessment relates to past, established research and individual researchers had difficulty engaging with the process.

- d. promote greater support for the translation of research impact within institutions for the benefit of Australia beyond academia? *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

Answer: A small amount. Translation requires proactive action, not a past measurement of performance. However, it has resulted in some universities putting in place better mechanisms for measuring engagement and impact.

- e. identify the ways in which institutions currently translate research into impact? *A very large amount; A large amount; A moderate amount; A small amount; Not at all. Please explain your answer.*

Answer: A small amount. The existing approach does not effectively identify how institutions translate research into impact.

Q4.2 The EI objectives are appropriate for the future needs of its stakeholders. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree or disagree. Objectives 1 and 2 are clear and if achieved will deliver benefit. Objectives 3 and 4 are less likely to be achieved using the current template and assessment process, which is poorly designed.

Q4.3 What impact has EI had on:

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

Answer: EI has had little impact. It is not linked to funding, and is poorly designed to achieve its aims.

b. Individual universities. *Please describe.*

Answer: EI has facilitated the design by universities of tools to measure impact and engagement. The methodology reflects badly on some research areas e.g. Indigenous research, and is a potential disincentive to pursue work in the relevant areas.

c. researchers. *Please describe.*

Answer: The outcomes can reflect badly on individual researchers. The methodology is poorly understood by researchers.

d. other sectors outside of academia? *Please describe.*

Answer: None. The EI process is not understood by industry. The EI panels were dominated by academics. Industry, NGOs, not-for-profits, museums etc should be better represented on panels.

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

Answer: EI outcomes are being used as institutional performance measures. They can be used to provide meaningful feedback on areas of improvement, and drive institutional strategy around recruitment of staff, as well as institutional processes to enhance the capture of EI.

Q4.5 The EI outcomes are valuable to you or your organisation. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree. As for Q.4.4.

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

Answer: The outcomes, if positive, can be used to communicate the value of research to government and the community.

#### *EI definitions*

Q4.7 The current Engagement definition is appropriate. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree.*

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

Answer: Agree

Q4.8 The current Impact definition is appropriate. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree.*

Answer: Agree

- 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. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree.*

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

Answer: Disagree. Unlike RDCs, ACIAR was not counted as an end-user. A number of RUN members had cases of excellence and impact from agricultural research in the developing world program, funded by ACIAR.

- 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.*

Answer: Yes, as for Q.4.9a.

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

Answer: No.

## 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.*

Answer: Yes. RUN supports the use of two digit ANZSRC FoR codes. Alignment with two digit FoR codes enables direct comparison with the ARC's ERA outcomes.

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

Answer: No. Researchers do not understand SEO codes, and they aren't used in ERA.

### *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.*

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

Answer: The units of assessment need to be adjusted to suit the size of the university's research effort. The number of units need to be scaled up for larger institutions. They should also be scale up in fields with lots of researchers.

#### *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. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree.*

Answer: Agree.

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

Q4.15 The low volume threshold is set at the appropriate level. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree.

#### *Engagement indicators*

Q4.16 Overall, the engagement indicator suite for the assessment of research engagement is suitable. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Disagree. The matrix is adequate but could be improved. Engagement indicators are all income based, which creates bias towards institutions with high research incomes. Deep engagement with end-users can occur with little or no income, particularly in HASS disciplines.

Q4.17 The cash support from research end-users indicator using HERDC data is appropriate for the assessment of research engagement? *Strongly agree; agree; neither agree nor disagree; disagree; strongly disagree. Please explain your answer.*

Answer: Disagree. The focus on cash support from research end-users favours larger universities and some disciplines. HASS disciplines largely receive in kind support. NGOs give in kind support.

Q4.18 The research commercialisation income is appropriate for the assessment of research engagement. *Strongly agree; agree; neither agree nor disagree; disagree; strongly disagree. Please explain your answer*

Answer: Disagree. Smaller universities are disadvantaged.

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.*

Answer: Yes. These could include having end-users as co-authors and listed on grants; repeat collaborations etc.

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

Answer: No

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

Answer: No

Q4.22 The co-supervision of HDR students should be made an engagement indicator in future rounds of EI. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree. Only for students undertaking industry engaged research.

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.*

Answer: Yes but only if they are developed with end-users.

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

Answer: Yes. Commercialisation income is important from an institutional perspective but is not an ideal proxy for engagement.

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

Answer: Yes, but only if they are developed with end-users.

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

Answer: Yes, but only if they are developed with end-users.

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

Answer: Yes, but only if they are developed with end-users.

#### *Engagement narrative*

Q4.24 The narrative approach is suitable for describing and assessing research engagement with end-users. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree. The narrative approach is suitable to use across a range of disciplines.

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. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Disagree. It does not holistically capture the body of work in the discipline.

Q4.26 The engagement narrative needs to be longer. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree or disagree as it seems appropriate.

Q4.27 Additional evidence is needed within the narrative. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree or disagree as it seems appropriate.

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

#### *Impact narrative*

Q4.28 The narrative approach is suitable for describing and assessing impact. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree since it may only be deduced using a narrative approach.

- 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. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Disagree. It depends on the size of the university and the discipline.

Q4.30 The impact narrative needs to be longer. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree. It needs to be about 10-15% longer.

Q4.31 There is a need for additional evidence to be provided within the narrative. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Disagree. There needs to be a separate section for evidence.

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

Answer: reference to websites; journal articles; tall poppy nominations etc.

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.*

Answer: Yes.

- a. 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.*

Answer: A survey instrument; cost benefit analysis.

#### *Approach to impact Narrative*

Q4.33 The narrative approach is suitable for describing and assessing approach to impact. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree. As for Q4.28.

- 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. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Disagree. It should vary depending on the size of the university or discipline.

Q4.35 The approach to impact narrative needs to be longer. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Neither agree or disagree as it seems appropriate.

Q4.36 There is a need for additional evidence to be provided. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree. As for Q.4.31.

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

Answer: No, since even though they are required generally to occur in tandem, they can be mutually exclusive.

#### *El rating scales*

Q4.38 The engagement rating scale is suitable for assessing research engagement. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree, since any more granularity will not offer additional meaning, only needless complexity.

Q4.39 The descriptors for the engagement rating scale are suitable. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree, since they are self-explanatory and in plain language.

Q4.40 The impact rating scale is suitable for assessing impact. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree, since any more granularity will not offer additional meaning, only needless complexity.

Q4.41 The descriptors for the impact rating scale are suitable. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree, since they are self-explanatory and in plain language.

Q4.42 The approach to impact rating scale is suitable for assessing approach to impact. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree, since any more granularity will not offer additional meaning, only needless complexity.

Q4.43 The descriptions for the approach to impact rating scale are suitable. *Strongly agree; Agree; Neither agree or disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree, since they are self-explanatory and in plain language.

#### *EI 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.*

Answer: Yes, since interdisciplinary research represents the domain where researchers are tackling grand global challenges that can be expected to make a massive impact and leave a lasting legacy.

#### *EI 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.*

Answer: Yes, since this is an underrepresented area that is addressing the significant societal issue of closing the gap, and we need to identify as many examples of good EI as possible.

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.*

Answer: Yes, since this is an area where EI is likely, and is making significant progress in addressing the societal issues of closing the gap.

### 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.*

Answer: Every five years since higher frequencies impose higher costs on universities, and this impost should be minimised.

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.*

Answer: A longer cycle would ease the administrative burden and cost, but it shouldn't be longer than five to reflect the dynamic change in research occurring in some universities.

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

Answer: Every five years since higher frequencies impose higher costs on universities, and this impost should be minimised.

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.*

Answer: As for Q5.2.



## Streamlining and simplifying ERA and EI

Q5.5 ERA and EI should be combined into the one assessment. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Disagree. EI is not robust enough to consider combining with ERA. The two assessments measure different aspects of research.

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

Answer: The disadvantages would be a massive workload for universities, and a conflation of difficult to associate submissions.

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.*

Answer: There are existing datasets and programs that could be used to inform ERA and EI, instead of institutions creating items specific to the assessments.

HEPs could provide ORCID/ResearcherID/ScopusID for each researcher at the census date. However, this methodology is potentially problematic as the HEPs would have less control. It would only work if the FOR was assigned by the citation provider, with the HEP's providing input if more appropriate FOR codes were required.

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

Answer: HERDC is the logical choice for ERA. Publications datasets could include Dimensions (which has article level FoR codes), SciVal and/or Clarivate, all of which can accommodate byline requirements.

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

Answer:

- Processing output eligibility based on underlying staff eligibility.
- Coding the income submission.
- Reviewing the FoR codes applied to researchers and their outputs to ensure that they are appropriate and compliant.
- Identifying issues and requesting corrections in the citation providers database.
- Communication with discipline experts.

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

Answer: The following suggestions would save significant time for institutions to prepare for ERA:

- Existing HERDC data could be used for income
- Eligible research outputs and their citation data could be sourced from existing databases such as ORCID, Scopus or Web of Science (where indexed and based on bylines).

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

Answer: Communication with academics/discipline experts, the development of narratives/case studies and surveys afterwards.

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

Answer: Several changes to EI methodology may provide efficiencies. These include:

- The EI income data should be sourced from existing HERDC information (where appropriate).
- Consideration could be given to using by-lines on outputs in ORCID/Scopus/Web of Science to identify end users.
- The 'approach to impact' section should be integrated with the engagement component of EI.

Q5.10 ORCID iDs should be mandatory for ERA. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: *Neither agree nor disagree.* The provision of ORCIDs for all eligible researchers would be a significant undertaking, particularly in the HASS disciplines where they are less common, however, complete ORCID coverage may enable automatic harvesting.

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

Answer: The disadvantage of having mandatory ORCIDs is the significant undertaking to have all researchers obtain one. This is less a problem in STEM disciplines where ORCIDs are well-adopted, than in HASS disciplines where they are less frequently used. Obtaining an ORCID must be done by the researcher themselves, rather than a bulk job coordinated by a research office or similar.

If all researchers had ORCIDs, it enables automatic harvesting of outputs data from institutional repositories via an API. This would reduce the burden on institutions preparing for ERA

Q5.11 The automatic harvesting of output data using ORCID iDs would streamline a university's submission process. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Automatic processing of output data from ORCID could reduce the burden on institutions provided there was no additional processing required to assess ERA eligibility, align with journal lists, or requirements to provide PDF copies. There are some concerns around the quality of metadata available in ORCID for harvesting, particularly for non-traditional works.

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

Answer: Mandatory ORCIDs and automatic harvesting of outputs thereof, must reduce the burden to institutions. Given that scant details exist of how the automatic harvest process will integrate with ERA processes such as: assessment of eligibility; provisions of

outputs for peer review; alignment with journal lists; and citation analysis, it is difficult to comment as to whether auto harvest would be an improvement or not.

There would also need to be consideration of the completeness of ORCID profiles. Institutions have comprehensive, curated datasets within research management systems and/or institutional repositories, but not all systems synchronise with ORCID. Therefore, some researchers may have outputs missing from their ORCID profiles or be selective about the works that they add. This could influence the perception of ERA as a comprehensive evaluation of Australian research quality.

In addition, automatic harvesting does not identify FoR codes, which would need to be applied. This could potentially be addressed by supplementing the harvested data with a secondary dataset (matched on DOI) which contains discipline assignments (such as Dimensions). An overarching issue in automatic harvesting is the absence of information relating to whether works meet specific ERA criteria.

Q5.12 DOIs should be mandatory for ERA. *Strongly agree; Agree; Neither agree nor disagree; Disagree; Strongly disagree. Please explain your answer.*

Answer: Agree since it is an automatic link to original articles.

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

Answer: If FoR codes are supplied by the citation provider then DOIs could be a good solution. Multi HEP publications would get the same FOR code and each HEP would only have to supply the DOIs. Institutions could use systems provided by citation provider to do the ERA data analysis and benchmarking.

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.*

Answer: Yes

Institutions could use systems provided by citation providers to do the ERA data analysis and benchmarking.

The Carnegie Community Engagement Classification is being trialled in Australia with a view to it being a mainstream, ongoing assessment starting in 2021. Though Carnegie is not a competitive classification, the data collected could be re-used to inform the EI process. Also, many Australian institutions already participate in the THE Impact rankings. This assessment requires extensive data collection, which could also be re-used or aligned with EI.

It is likely that institutions participating in Carnegie and THE Impact rankings will re-use the data collection for these assessments in their EI submissions, however, a formal process to transfer common data could be investigated.

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

Answer: The accuracy of the article-level FOR classification is the main challenge for citation providers.

It is unlikely that data from Carnegie or THE Impact will be in a format suitable to import directly to EI, however, it is important that the ARC be aware of these other

assessments and acknowledge the sector-wide pressure to participate in a growing number of voluntary evaluations.