

7 October 2020

**ERA EI Review public consultation  
Submission from UWA**

The University of Western Australia (UWA) welcomes the opportunity to provide feedback to the *ERA EI Review Consultation Paper 2020*. We are committed to an improved ERA and EI process for the sector. External to the feedback detailed below, UWA advertised the opening of the public consultation to our academic community using our Research Announcement email list and encouraged individual responses to the Australian Research Council.

For the feedback provided below, we undertook a targeted communication to UWA staff who have helped compile or assess ERA submissions. These staff were asked to provide written feedback to the research office. Three were received: one from a citation analysis academic who has compiled at least three ERA submissions at the 2- and 4-digit level and two from ERA panellists, both in citation analysis, one of whom has also compiled a UWA ERA submission when not undertaking ERA panellist duties. These written responses were included in addition to a discussion where UWA's Associate Deans of Research, Research Office, and Library staff were represented, some of whom have served as ERA panel members within peer review and/or have compiled ERA submissions at the 2- and 4-digit level on behalf of UWA. UWA has formulated this feedback using the questions provided within the *ERA EI Review Consultation Paper 2020*. We do not provide responses to all questions and some questions have been combined, however references to the questions covered by each response is provided in square brackets.

Feedback is as follows:

**3.2.1 Value of ERA**

ERA is considered to be a valuable national stocktake of disciplines, which does identify excellence. Larger institutions are represented by other mechanisms that qualify excellence – such as various international rankings, however, ERA remains a mechanism by which small to medium institutions are recognised for research excellence within Australia. However, ERA does not identify emerging areas of research or opportunities for further development. The ERA guidelines mitigate against identification of emerging research, since these are likely to be small and across multiple FoRs. In addition, the retrospective methodology limits its capacity to meaningfully identify emerging research. One of the strengths of ERA is that it allows for comparison of research in Australia,

however, it does not allow for international comparison. This is particularly true within peer review where the usage of International peer reviewers is very low and benchmarking is almost entirely lacking. A more diverse representation of expertise in peer reviewers – with a target of 50% International reviewers - should be considered by the Australian Research Council. [Q3.1]

Overall consensus was that the ERA objectives are not appropriate for the future needs of stakeholders because its underlying methodologies have enabled the sector to subvert the sector outcomes. For larger universities, international rankings carry more weight for international recruitment and collaboration. Smaller universities have a lower proportion of their total research assessed in comparison with middle and larger universities. There is a lack of transparency and adequate feedback around evaluation. [Q3.2]

ERA has highlighted that there is a quality divide in Australia between citation analysis and peer review disciplines. ERA has shaped the university research sector in citation analysis, but has failed to do so in peer review, thus contributing to an existing divide. Individually, researchers in citation analysis disciplines have increased citation behaviours. To individual universities, the exercise represents a burdensome use of staff resources to satisfy the submission requirements. The lack of transparency, expert coverage and, at times, inconsistent ratings received from peer review point to this being a priority issue to be addressed as an outcome desired from the review. [Q3.3]

ERA outcomes are used as reputational indicators to market to students, recruit staff and to make general statements of quality and strength of the research environment in grant applications. They are used in EQUIS and AACSB evaluations for the purpose of national comparison. [Q3.4] ERA could be made more valuable by addressing the underlying methodological failings. Specific suggestions around this are addressed in later responses. [Q3.6]

### 3.3.2 ERA methodology at a glance

The overall strength of the ERA methodology is that it considers the full spectrum of research by including non-traditional research outputs and that, unlike rankings, ERA acknowledges research outside of Elsevier and Clarivate publication providers. However, excellence within Australia has been strongly correlated with indexation in Elsevier and Clarivate, including within peer review where publications in international journals are highly regarded and US focussed. Australia produces excellent research on Australia but may be overlooked due to under representation within top indexed journals. [Q3.8]

Reliance on census date means that an institution's rating can reflect work done elsewhere and strategic appointments may be undertaken to inflate citation metrics or enhance publishing profiles. Overall, the submission process is burdensome to the sector, which reduces the overall perceived value of the exercise. [Q3.9]

### 3.3.3 Citation analysis methodology

The citation analysis method is a practical option that has shaped the sector, albeit with guidelines that have introduced the opportunity to undertake optimisation. In comparison with the peer review methodology, citation analysis provides ratings that are, in the main, reproducible using alternative metrics so that panel decisions can be understood – thus providing the opportunity for institutions to improve their on citation based outputs. The discipline-specific approach to evaluating research quality is reported to work well within panels, but panels differ greatly in their outcomes, and there is no transparency around whether panels assess similarly across disciplines. Citation analysis is a methodology that provides greater opportunity for automation since the majority of the submission is adequately represented within indexed journals. The overall benefit of automation is to introduce greater standardisation and reduce opportunity for optimised collections. [Q5.8] UWA would strongly support the increased automation of harvesting the citation analysis submissions through greater use of ORCID and DOI. [Q5.8] Additionally, the Australian Research Council should use the ORCID identifier to standardise allocation of Person ForRs by automating based on the underlying publications attached to an ORCID [Q3.10-14; Q5.8]

### 3.3.4 Peer review methodology

The peer review methodology is flawed and does not achieve evaluation that is useful to the sector. Current methodology does not allow for feedback to institutions that enable improvement across the sector, and this is very visible within ERA outcomes. The core strength of peer review is that it evaluates all types of research, including non-traditional research outputs, however, these are time consuming for institutions to collect, evidence and submit; for panels to review; and for the ARC to report against. [Q5.8] Portfolios, in particular, are difficult to characterise in SEER and our repositories. [Q5.8] Repository requirements represent a realised cost to the sector. [Q5.8] The quality and calibre of Peer Review is problematic, with overdependence upon volunteers of early career academics. This is compounded by a lack of international Peer Reviewers. UWA proposes five modifications to improve the peer review evaluation process within ERA:

1. That the ARC commit to achieving targets of around 50% international peer reviewers – previous rounds have had negligible input from international academics.

2. That the ARC enforce a larger pool of level D and E academics from which to pick Australian peer reviewers and panellists by making ARC funding contingent upon being put within the pool.
3. That the ARC commit to improving the transparency of the peer review evaluation. Lack of expert coverage during peer review places greater pressure upon panel members and places the evaluation at risk of confirmation bias and/or conflict of interest. The ARC should commit to publishing the number (not identity) of peer reviewers who access each 4 digit FoR as a transparency mechanism that will ensure the peer review process is properly project managed. Further, publishing the volume and breadth of outputs that were assessed in order to produce each rating is another fundamental transparency that the ARC can easily achieve.
4. That the ARC create criteria for peer review that assist the assessment for nationally significant research using the San Francisco Declaration on Research Assessment. This would reduce confirmation bias around journal and institution perception, and assist the framework of peer review.
5. That the ARC enact a third mixed methodology for disciplines where a proportion of the submission is covered by indexed journals. These disciplines: computing, education, economics, business and finance, history and archaeology, and architecture, could have citation metrics provided to the panel, with an indicator of what proportion of the submission is covered by indexed journals. Panels, with this extra information, would also conduct a standard peer review. [Q3.15-18]

### 3.3.5 Contextual indicators

Volume indicators, research income and publishing profiles remain relevant to ERA. Although ERA aims to rank excellence rather than size, in peer review there are very few small units of assessment that attain a 5. Within citation analysis panels, quality is considered harder to maintain in larger sized units of assessment. Applied measures are more appropriate within the Engagement and Impact (EI) assessment, noting that they have more relevance to citation analysis disciplines. Similarly, research reports should no longer be restricted to certain units of assessment but they should be removed from ERA and put into EI. [Q3.19-21]

### 3.3.7 ERA low-volume threshold

The low threshold of 50 provides simplicity within submission guidelines and the ability to undertake citation analysis in a minimal sample, and ensures that panels have a manageable number of submissions. However, it has become a source of optimisation across the sector and results in smaller institutions having a lower proportion of their total research assessed. If the period under assessment in ERA2023 is greater than 6 years, then the ARC have the opportunity to retain the low-volume threshold at 50 but will realise a greater proportion of total research being eligible. In citation analysis, the low-threshold volume should be dictated by the ability to soundly undertake metric analysis, but peer review disciplines need not be tied to citation analysis decisions. Improvements can be enacted by providing transparency around non-assessed FoR: publishing the relative citation indexes and Hi-Lo ratios for all FoR, regardless of whether they are assessable or not will show optimisation. The current strategy of using 2-digit ratings which include non-assessable FoR do not shed enough light on low threshold optimisation. [Q3.25-26]

### 3.3.8 ERA staff census date

UWA strongly supports a move to using byline rather than census date as inclusion criteria. We note that byline is more appropriate within citation analysis disciplines since NTRO's may not have bylines. Some publishers limit the number of bylines that can be listed and academics frequently have multiple. Note that the ARWU had to modify their approach to HiCi's to stop people being claimed by multiple institutions. Publication systems and processes would have to be adapted to ensure academics comply with byline requirements. Nevertheless, a move to byline would reduce inter-institutional transfers and other perverse behaviour. [Q3.27-30]

### 3.3.10 ERA and Indigenous research

Using ANZSRC 2020 field of research codes UWA will meet threshold at 2-digit and most likely at a few 4-digit codes too, however, we are still currently modifying systems with the 2020 codes and are yet to undertake mapping of 2008 codes into 2020. It is anticipated that UWA will submit within clinical medicine, public and allied health and potentially environmental science, and education. Note these fields will have a high level of indexed journal articles, however, UWA considers peer review to be the most appropriate mechanism to evaluate this unit of assessment since it will encompass a huge diversity of research with significant overlap with other fields of research. It may be that indigenous research would benefit from a mixed methodology review as discussed in 3.3.4. [Q3.32-34]

#### 3.4.1 Collection of ERA data

UWA strongly supports the annual collection of ERA data. This method would necessitate the adoption of byline as the inclusion criteria and may lose some publications due to an annual cut-off date, however, this will reduce the capacity for optimisation across the sector. An annual collection would mean ERA were budgeted for annually instead of on a project basis. [Q3.35-36]

#### 3.4.2 Publication of ERA data

Volume of outputs should be published within the National Report since this is a reflection of presence within a field. With respect to publishing discipline assignment – sunlight is the best disinfectant. This decision should be publicly stated within the guidelines and will cause a shift in apportioning behaviour with examination of apportionment strategies after publication. Peer review will benefit most from publication of discipline assignment against outputs since they will be able to reflect on publication outlet profile within highly rated submissions. Peer review has higher use of single authorship and so it will be easier to identify *post-hoc* where academics have contributed to the overall discipline rating, and this in itself may be a mechanism by which peer review disciplines are able to reflect and improve ratings between rounds. [Q3.37-38]

However, as the sector is made more transparent about their submission processes, so too should the ARC be around their evaluation process. In citation analysis, all contributing metrics used by the panels to achieve the rating should be published alongside the rating. In peer review, the ARC should tally the number and relative level of the peer reviewers per publication in each 4 digit unit of assessment. There should be greater transparency around whether units of assessment were assessed by accessing the publications from the repository or via the research statement alone.

### 4.1 *EI overview*

EI was considered to successfully show that the higher education sector translates research into meaningful and substantial impact that has changed our global, Australian and local communities. The exercise demonstrated that the diversity of impact was far broader than conceived in the original evaluation and that the engagement and approach evaluations are not fit-for-purpose. UWA recommends that these be revised. The EI evaluation does not encourage collaborations, with few impact case studies featuring impact arising from collaborative, cross-institutional research. Instead they heavily feature home-grown research impact, which is not reflective of true activity in the sector. The exercise successfully demonstrated where processes and infrastructure

enabled research engagement and also where the sector could improve. EI provided greater recognition of engagement as a part of the academic workload and has allowed this dimension to be included in internal appraisals and promotions. However, funding schemes are progressively using impact and engagement within track records, which may provide a greater driver for supporting translation of research impact. [Q4.1-4.3]

UWA displays its case studies on the website and has a team resourced to increase the culture of research impact and engagement throughout UWA (regardless of inclusion as an EI outcome in future rounds) but the EI submission provided a rationale to academics for required behaviour change. It should be noted that the required behaviour change was the recording of engagement activities within our systems to evidence their engagement and impact, rather than the adoption or increase of engagement activities. UWA's submission regarded highly rated impact studies as more important than a highly rated approach. The methodology of the engagement section as a mechanism to directly compare within FoR and across the sector was flawed (see 4.3.1), and therefore the outcomes from the exercise were not highly regarded. [Q4.4-6]

## 4.2 *EI definitions*

The definitions of engagement and impact are fine *per se*, however, the definition of a research end user is needlessly restrictive, especially since the ARC use a pathway framework to qualify the definition of impact. Publicly funded research organisations (CSIRO, AIMS, ANSTO, NMI, DSTO etc) should all be included in engagement metrics for research income as they still result in engagement and are used by universities to strategically enact pathways to impact. Other higher education providers and affiliates should not be excluded. This specifically excludes the role of continuing professional education to the sector, which often keeps industry based professionals up to date on research that directly affect their roles in the community. Similarly, academic institutions collaborate with higher education institutions in developing nations which can empower governments, both Australian and in developing nations, to make use of a resource or skills sector and thereby improve economic development. Examples like these are excluded under the end user definition but have legitimate and lasting impact arising from research. [Q4.7-9]

### 4.3.1 Unit of assessment

The ARC need to reconsider the definition applied to the use of 'field of research' within the next engagement and impact exercise. Fields of research are appropriate to use for the characterisation

of the research from which the impact arose. Field of research is not appropriate to characterise where impact has been achieved as a result of research, since, by definition, field of research pertains to methodology of a discipline. As was demonstrated in EI2018, impact was multidisciplinary, crossing many FoRs and applicable to multiple SEO. The ARC should refocus the definition used within the unit of assessment and can do so without subverting the aims of the assessment. The sector has consistently proposed enacting a framework that characterises the research according to the fundamental and translational disciplines and the outcomes according to SEO. To do so is entirely consistent with an impact pathway. [Q4.11-12] The Interdisciplinary impact study should not continue to be included in case studies. [Q4.44] The Aboriginal and Torres Strait Islander Research should continue to be an opt in unit of assessment. [Q4.45-46]

#### 4.3.3 Selectiveness of EI

UWA is undecided on whether one impact case study per unit of assessment is appropriate given it cannot be representative of that discipline as a whole. When balanced against the burden the submission imposes above and beyond the burden imposed by ERA, it is hard to justify extending the scope. EI is not tied to block grant funding and the ARC do not make use of EI outcomes. A volume normalised threshold could be applied to the required number of case studies an institution must produce with an opt in opportunity for smaller universities to showcase impact. [Q4.11-12]

#### 4.3.4 EI low-volume threshold

Using ERA volume as an EI threshold introduces an opportunity to artificially deflate research volume in ERA in order to lead to a reduced workload in EI. One hundred and fifty publications is too low a volume.

#### 4.3.5 Engagement indicators

Cash support from research end users is a restrictive indicator. The full amount should be used. As previously mentioned, the end user definition should not be restricted to exclude CSIRO, AIMS, ANSTO, NMI, DSTO etc. Research commercialisation, patent, registered designs, plant breeder's rights, NHMRC endorsed guidelines and research reports are all ERA subtypes that could be legitimately used within engagement. Grey matter publications aimed at end users, such as policy reports, websites, newsletters, information sheets could be made into indicators. Events aimed at end users are a significant source of engagement for universities. Metrics on co-supervision of HDR students are appropriate but the definition of end user would need to be expanded such that clinically placed HDRs are not considered within academia. [Q4.15-23]



#### 4.3.6 Engagement narrative

The engagement narrative is not suitable for describing or assessing research engagement with end users. Scale is considerably different across units of assessment in ERA, yet the same character limit is applied to all engagement narratives in EI. The result for UWA was that some units of assessment described engagement indicative within a larger strategy whilst others detailed almost every component of engagement within that discipline. Panels cannot compare like with like. The engagement indicators in EI2018 were poor volume indicators. [Q4.24-27]

#### 4.3.7 Impact narrative

The impact case study is appropriate for assessing impact, however, allowing it to be longer or providing a referential evidence section, as per the impact section in NHMRC Investigator Grants would improve case studies and provide panels with the ability to assess claims if necessary. The ERA repository requirement could be extended to allow evidence types against case studies. Taking a quantitative approach to impact should not be pursued since impact is diverse across and within disciplines. [Q4.28-32]

#### 4.3.8 Approach to impact narrative

The ARC should address what they are trying to achieve from the approach section. If it is to drive behaviour change then evaluating the support universities provided up to a decade ago does not achieve that. Approach should be by university, not discipline, and should be comprise a self-assessment of current state with future actions. Subsequent rounds can assess whether the university met those actions. [Q4.33-37]

### Overarching Issues Common to both ERA and EI

ERA should move to an annual automated collection and be assessed every 5 years. [Q5.1] Longer assessment cycles reduce the relevancy of ERA. [Q5.2] EI could also be laid down as an annual cycle, with one or two panels and their constituent FoR being held in each year. Impact is a slow growing outcome so EI potentially has relevance with 5 years between rounds. [Q5.3-4] This places the ARC and universities in a steady state of business as usual and will require continuous resourcing instead of project resourcing. [Q5.6] ERA and EI should not be combined into one assessment but the provision of data in ERA could also supply EI. [Q5.5] Automation of the citation analysis disciplines; greater use of ORCID to capture people; and DOI to capture publications, will all reduce the submission burdens on libraries and research offices. [Q5.6] All aspects of an ERA

submission are time consuming, but particularly so for the population of the repository; the administration of research statements; and the resolution of business rules exceptions across all datatypes – a move to DOI would rapidly reduce this burden. The turnaround time to re-generate XML can be problematic and requires liaising with external divisions within central support causing this part of the submission to take the most time but represent the least effort from the project team. [Q5.8] The most time consuming aspects of an EI submission are in the drafting of the narratives and ensuring that your claims have evidence. [Q5.9]



**Professor Tim Colmer**

**Deputy Vice-Chancellor (Research)**