



12 October 2020

Email: ERAElReview@arc.gov.au

Dear Sir/Madam

Re: Curtin University submission on the review of Excellence in Research for Australia (ERA) and the Engagement and Impact Assessment (EI)

Thank you for inviting Curtin University to provide a submission on the review of Excellence in Research for Australia (ERA) and the Engagement and Impact Assessment (EI).

Curtin University is a dynamic, research-intensive University that has quickly achieved national and international stature. Curtin was ranked in the top one per cent of global universities in the 2018 Academic Ranking of World Universities and we are widely recognized for our focus on solving real-world problems. Curtin has participated in all ERA assessments and the more recent introduction of the EI assessment and thanks the ARC for the opportunity to provide detailed feedback and suggestions on core aspects of both assessment processes.

Curtin has provided specific commentary against the questions posed in the Consultation Paper. Please find a copy of the University's complete response attached. Should you require any additional information regarding the content of this submission, please contact my office at dvc.research@curtin.edu.au.

Yours sincerely

A handwritten signature in black ink, appearing to be 'C. Moran'.

Professor Chris Moran
Deputy Vice-Chancellor, Research

Q	Question text	Form response	Consolidated position
Section 3—Excellence in Research for Australia			
ERA Policy			
Value of ERA			
Q3.1 a	<p>To what extent is ERA meeting its objectives to:</p> <p>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.</p>	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <p>Please explain your answer.</p>	<p>A moderate amount</p> <p>A key perspective on this is that universities can take the next ERA/EI as an opportunity to highlight and showcase the real and profound contributions of the sector, and the return to the greater community on its investment in research and the university sector.</p> <p>There has been some discussion about whether there is a continued need for the ERA as an assessment exercise, when there are other international rankings and other lower cost but limited scope analyses that could be conducted. There is also sentiment that the ratings confirm what is already known about research strengths at Australian universities, for example from previous ERA rounds, international rankings, and from analyses of citation data outside of the ERA processes. However, ERA does allow institutions to prepare and provide their information in a manner which accurately reflects their research position.</p> <p>Feedback from the research community is that they do not see evidence that people or organisations outside of academia use the ERA results to inform decision making or to foster innovation but that the results are referenced significantly within the university research sector.</p> <p>Due to the high cost for universities to participate in ERA (for example costs associated with administrative staffing, researcher time, enabling infrastructure and software, external supplier subscriptions, and purchasing peer review content), as well as the unique and unexpected impacts of COVID-19, it has been suggested that the ARC consider ways to reduce the administrative burden of the ERA/EI assessments.</p>
Q3.1 b	<p>To what extent is ERA meeting its objectives to:</p> <p>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.</p>	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <p>Please explain your answer.</p>	<p>A moderate amount</p> <p>Some feedback has suggested that the ERA overlaps in part with subject-level global rankings such as the ARWU and QS. Other feedback about identifying opportunities for developing areas is covered in Q3.1d</p>
Q3.1 c	<p>To what extent is ERA meeting its objectives to:</p> <p>c. Identify excellence across the full spectrum of research performance.</p>	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <p>Please explain your answer.</p>	<p>A moderate amount</p> <p>Overall, the implementation of ERA since 2009 has assisted in the improved research rankings across universities in the country.</p> <p>There are some concerns around ERA’s ability to meet this objective, given the disparity between the outcomes in citation assessed and peer review assessed areas. Peer review areas consistently rate lower than citation assessed areas, and some have suggested this points to possible methodological issues with assessment – or possible methodological issues with the citation assessment, as one possibility is that these areas might be experiencing artificial inflation of their results while the peer review areas show a more realistic assessment of quality.</p> <p>The traditional output assessment model focuses on one aspect of academic workload, activity, and performance. While income and other measures, and institutional context (staffing profiles, explanatory statements) are part of the background for assessment, it is</p>

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			unclear how much they are used in the assessment process. It is unclear whether it is possible to get a 5 rating on outputs with little institutional support or non-publication outputs/inputs in the system? If so, what does that say about research excellence in Australia? If not, then how can institutions ensure that their assessment fully reflects the environment and context supporting research? Are there ways in which the assessment could incorporate those other crucial aspects of academic life and scholarly excellence into the assessment?
Q3.1 d	<p>To what extent is ERA meeting its objectives to:</p> <p>d. Identify emerging research areas and opportunities for further development.</p>	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <p>Please explain your answer.</p>	<p>A small amount</p> <p>The ERA submissions might provide a good view on emerging areas in terms of staffing and output volume/performance growth over time. However, with limited publicly available transparent data around institutional submissions, that knowledge is not shared with the sector – it is difficult to see whether a rating is due to a large and well established research environment in a particular discipline, or whether it is due to excellence in a smaller emerging area, or to be able to track that across rounds.</p> <p>Some feedback has suggested that emerging areas can be “lost” in the assessment as a low score (a 1 or 2 rating), as the ERA process does not necessarily differentiate between an emerging area and a low performing area. Emerging areas are also likely to have a greater proportion of T&R academics rather than RO academics, which can limit an area’s research productivity in terms of research outputs. The ERA structures do not necessarily incentivise universities to invest in and grow emerging areas, and might actually lead to institutions supporting these areas less in favour of more established areas with higher ERA ratings.</p>
Q3.1 e	<p>To what extent is ERA meeting its objectives to:</p> <p>e. Allow for comparisons of research in Australia, nationally and internationally, for all discipline areas.</p>	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <p>Please explain your answer.</p>	<p>A moderate amount</p> <p>Feedback from researchers has focused on the limitations of the rating scale for comparisons, the lack of institutional UoE level data, and the assessment against international but not national benchmarks. There was also feedback about the risk of a small number of highly cited papers skewing the results, without clearly taking into consideration the UoE size, composition, or the demonstration of capacity and capability.</p> <p>Another concern is that the international benchmarking uses an Australian assessment structure (FoR codes) that are not widely used internationally, limiting the kinds of international comparison that can be conducted outside of specific citation analysis.</p>
Q3.2 Q3.2 a	<p>The ERA objectives are appropriate for meeting the future needs of its stakeholders.</p> <p>a. If you disagreed with the previous statement, what should the primary purpose of ERA be going forward?</p>	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <p>Please explain your answer.</p>	<p>Agree</p> <p>The existing ERA objectives are appropriate for meeting future needs. However, given the implicit role of ERA in shaping the research sector and guiding university and researcher behaviour, there is an opportunity to make explicit the desired behaviours and strategic directions that the ERA process could encourage. After a decade of ERA shaping the research landscape in Australia, it is worth considering what the next ten years could look like and how ERA could respond to and lead the way through future challenges and opportunities. ERA and EI have considerable power in informing and driving how universities respond to ongoing and new issues within research specifically and the community more broadly. For example, there could be focused attention on increasing diversity in staffing and amplifying minority voices, decolonising research methodologies and research structures that limit opportunities for Indigenous and Torres Strait Islander researchers, promoting Open Science practices, and responding to emerging paradigms like data publishing.</p>
Q3.3a	<p>What impacts has ERA had on:</p> <p>a. the Australian university research sector as a whole</p>	<p>Please explain your answer</p>	<p>Feedback from the research community has suggested that the ERA has impacted the strategic directions of universities, with consequences that can be viewed as both positive and negative. For example, there has been a focusing of investment and support towards areas of existing strength rather than growing emerging area, with performance criteria for staff focussed on high publication rates, citation metrics, and the ability to attract funding. It could be argued that this coincides with Australian universities going up in global rankings.</p> <p>Some feedback has highlighted a perception that universities are investing in senior researchers with publication records that would benefit ERA outcomes and have questioned the impact on early-mid career researchers. This would need to be explored further to determine whether this perception is evident in the data.</p>

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Q3.3b	What impacts has ERA had on: b. individual universities		<p>Feedback from the research community has highlighted the idea that ERA has focused university investment on areas of research strength. Universities are supporting research groups and teams within these areas, including significant funding for postdoctoral roles and HDR projects. It could be argued that the outcomes of this focussed approach are improved ERA ratings and international research rankings.</p> <p>Some specific feedback received from the research community is on the impact on staffing profiles, as institutions attract and retain staff to improve competitiveness. Mature publication records and high cites are measures that have been shown to favour senior male academic careers. Academic seniority and productivity are positively correlated, with senior researchers tending to have a greater number of grants (e.g. ARC DPs), more research students, and more collaborations, and therefore greater visible research productivity. There is less incentive for universities to invest in and support the development of young researchers and watch them progress, with more incentive to “purchase” senior and established researchers. These “research stars” can cause inequality within the institution in that a disproportionate amount of resources are given to them. The effect of this is that resources are not available to grow junior researchers and develop internal talent. This can also have an adverse effect on research culture at an institution, with segmentation of staff based on work function. There are often salary bonuses and packages given to “research stars” that are inflated compared with the award wage of T&R staff and, as the metrics assessed favour senior male academics, this practice contributes to the gender pay gap.</p>
Q3.3c	What impacts has ERA had on: c. researchers		<p>Feedback on the impacts on researchers is largely related to the increased demands on researchers via: volume and metric based performance criteria; the changes in employment conditions offered i.e. the move to Teaching Only and Professional positions; the effects on career trajectories; and the narrowing of opportunities as a consequence of greater investment and focus on areas of existing research strength. Some feedback was also received about the administrative burden of participating in the ERA process for researchers providing their discipline expertise, reducing the time available for conducting research.</p>
Q3.3d	What impacts has ERA had on: d. Other?		<p>Feedback was received that discussed the impacts on women in research, and how the ERA does not incorporate a relative to opportunity factor to the assessment. On average women have lower publication rates than men for myriad structural and systemic reasons, and these inequities are reflected in and compounded by the focus in STEM on metrics and the recruitment strategies driven by those metrics.</p> <p>ERA NTRO and other emerging non-traditional research output types are less well understood or consistently assessed, as reported in the DASSH analysis of NTRO peer review.</p> <p>There is also a feeling that ERA information and outcomes are not often used outside of academia, with government, industry, and current and future students rarely referencing ERA outcomes.</p>
Q3.4	How do you use ERA outcomes?	Please describe	<p>ERA outcomes are used to review the quality of output against strategic investment in the institution. This is both a forward looking and retrospective exercise. The outcome comparisons across institutions are also reviewed to ascertain Curtin’s progress in the sector. The underlying methodology of ERA has been included in more specific activities around recruiting research talent and university promotions.</p> <p>Curtin also uses ERA outcomes for internal reporting, and marketing. Researchers refer to ERA outcomes in grant applications as an indication of research environment and quality/excellence.</p>
Q3.5	ERA outcomes are beneficial to you/your organisation.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<p>Neither agree nor disagree</p> <p>Curtin uses ERA outcomes as one of the range of research assessments and rankings available. The ERA provides a different view of Curtin’s research capacity, activity, and performance from international rankings, provides a point of broad comparison against other Australian universities, and focuses attention on these issues within a consistent framework. However, if the ERA were suspended, there are other ways in which the sector could continue to access some of the activity and performance analyses highlighted by the ERA. Not all of the information compiled and aggregated through the ERA process is accessible through other means, and there would be gaps that could not be filled. However, for the STEMM areas, there are many citation-based analyses available.</p>

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Q3.6	Do you have any suggestions for enhancing ERA’s value to you/your organisation?	Please explain your answer.	<p>Some feedback has suggested incentives be tied to the ERA (i.e. funding) as a methods of rewarding and encouraging research excellence. However, this might also result in a more skewed funding model that could act as a disincentive to emerging research areas, discourage potential growth in areas without a traditional ERA strength and inaccurately support the needs of the research community more broadly.</p> <p>Further suggestions relate to policy, and whether the ERA outcomes could be more clearly aligned to policy and decision-making processes for the research sector.</p> <p>Better alignment of the input (resourcing) requirements with benefit would improve the literal return on investment to institutions.</p> <p>Other feedback has raised the idea of making more data available to give context to the ERA ratings and increase its utility for comparison and benchmarking.</p>
ERA Methodology			
Methodology at a glance			
Q3.7	The current methodology meets the objectives of ERA.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<p>Feedback has indicated that the ERA methodology has certainly provided an evaluation framework for comparison across the sector. The assessment metrics are valued within the sector, but the degree to which they provide assurance to, or are understood by industry or business is queried.</p> <p>Since inception the ERA methodology has enhanced the focus on quality of outputs across the sector, and the improved performance of institutions since the first ERA indicates that the methodology has been a driver for change to a degree. The current methodology, however, does not account for research quality on the basis of career progress and level, so the degree to which the improved performance is impacting on the development of EMCRs vis a vis, the recruitment of successful senior researchers with existing quality outputs has been raised.</p> <p>Ongoing queries around the transparency of the ERA remain. The significant role for universities in the current methodology leads to a range of questions around how institutions have compiled their outputs, inclusions/exclusions and how their outputs have been allocated. How the thresholds might impact on emerging fields should be considered, and whether a selective assessment (similar to the REF) would more appropriately account for the objective of identifying emerging areas and opportunities. There is also a lack of transparency and questions around consistency in the peer review assessment, could improving guidelines or training for reviewers be considered?</p> <p>There is current uncertainty around how the new Indigenous Studies code can be assessed against international comparisons, and whether citation analysis is feasible for the STEMM-oriented 4-digit codes. There is no current method to determine international rankings for the Indigenous research outputs. The ERA method normalises the score by the pool of journals represented in the Field of Research. For Indigenous research the research output would go across a very wide range of specific Indigenous research journals, but also others such as public health. So it may not be valid to use the same benchmarks for international Indigenous comparisons.</p>
Q3.8	What are the strengths of the overall methodology?	Please describe.	<p>The current process provides a universal approach across institutions and in general, encourages quality over quantity. The methodology encourages institutions to build on emerging areas and consolidate strengths, whilst allowing researchers to interrogate institutional capabilities and discipline strengths. It also build analytical capability and skill within institutions that helps with other crucial benchmarking and quality analysis activities, and is a transferable skill which is crucial for the economy. The current methodology ensures an active focus on quality research output (not just letting another system do it for you), and enables periodical review and reset periods for the analysis of institutional performance and priorities. To that end it encourages a deep dive into researcher activity.</p>

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Q3.9	What are the weaknesses of the overall methodology?	Please describe.	<p>The current methodology is resource intensive for universities, both for professional and academic staff. The requirement to capture, verify, compile and code all outputs within the reference period has required universities to invest heavily in this space with systems and personnel in order to maximise outcomes. The administrative burden and costs of assessing research excellence in the current methodology are high. ERA is not helpful in international comparisons as it is Australian based only. If another country wished to carry out benchmarking against Australia, they would have to understand and copy ERA, this is considered highly unlikely.</p> <p>Some perennial criticism of the ERA methodology is the potential for selective FoR allocation to maximise citation performance, the belief that universities can “buy in” star researchers for their publication track record, and that peer review areas are disadvantaged by the peer review assessment method.</p> <p>Feedback also suggests that the focus on output quality (citations, outlet) as the predominant measure of research excellence deprioritises other research activities that contribute to the research environment, both at the researcher level and at the institutional level. As the EI has highlighted the necessary role of institutional support and intentionality in the approach to creating an EI culture and enabling mechanisms, it is worth considering whether the ERA method would benefit from a similar showcasing of institutional strategy and support mechanisms.</p>
Citation analysis methodology			
Q3.10	The citation analysis methodology for evaluating the quality of research is appropriate.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<p>Agree</p> <p>Citation analysis has its well-known and often discussed limitations. However, feedback has generally been supportive of citation analysis as an appropriate if flawed way to assess research performance in the areas where journal publishing is the dominant or a growing channel for communication research. Specific limitations, strengths, and possible alternatives are discussed in the following responses.</p>
Q3.11	Does the discipline-specific approach of reevaluating the research quality (citation analysis <u>or</u> peer review for specific disciplines) continue to enable robust and comparable evaluation across all disciplines?	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<p>Neither agree nor disagree</p> <p>Some HASS areas, particularly Business, Economics, and Information Sciences, have suggested that citation analysis would be an appropriate assessment method for those disciplines. One suggestion is to run citation analysis alongside peer review for these disciplines in the next ERA to evaluate whether the outcomes are comparable.</p> <p>There is significant concern around extending peer review as an assessment method for all UoEs, due to the intensive labour requirements and potential for bias in the method.</p>
Q3.12	What are the strengths of the citation analysis methodology?	Please describe.	The major strength of citation analysis is that the outcomes are reproducible, and the methodology is transparent. There is a level of trust in the citation methodology, which is crucial for the use of outputs and recognition of results across the sector and externally.
Q3.13	What are the weaknesses of the citation analysis methodology?	Please describe.	<p>With this methodology results depend on the database used and these are proprietary.</p> <p>One criticism of the citation analysis approach is that confounding factors such as self-citation, negative citation, and cooperative citation networks undermine the idea of citation rates as a proxy for quality.</p> <p>Assessing based solely on journal article metrics ignores other traditional output types and the range of non-traditional output types. It results in a very limited focus for those disciplines, and incentivises only one type of research output.</p> <p>The focus on citation metrics also influences the way that disciplines with traditionally lower citation rates or more diverse publishing practices are viewed within the institution, and the perception of whether their research outputs are valuable.</p>
Q3.14 Q3.14a	Can the citation analysis methodology be modified to improve the evaluation process	<div>Yes/No</div> <div>Please describe.</div>	Yes

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	<p>while still adhering to the ERA Indicator Principles?</p> <p>a. If you answered ‘Yes’, please describe how the methodology could be improved.</p>		<p>In the years since the first iteration of the ERA, there have been shifts in the way that citation and publication metrics are used, as well as the growth of alternative attention metrics in response to researchers finding new non-traditional ways of disseminating and communicating research. There are opportunities for exploring how these ideas can be utilised to describe and assess research performance with a more holistic view and encourage desirable behaviours in for example open science and science communication.</p> <p>Automation and model building methods could be more robust and save a great deal of time, money and improve the transparency of the data and associated institutional processes.</p>
<i>Peer review methodology</i>			
Q3.15	<p>The peer review methodology for evaluating the quality of research is appropriate.</p>	<p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Neither agree nor disagree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree.</p> <p>Please explain your answer.</p>	<p>Agree</p> <p>Feedback has been supportive of peer review as a method of assessment, but there is concern regarding the resource intensive nature of peer review and potential for subjective assessment and bias.</p>
Q3.16	<p>What are the strengths of the peer review methodology?</p>	<p>Please describe.</p>	<p>The strength of the peer review assessment method is that assessors can rate the quality of outputs based on the outputs themselves, rather than proxy measures of quality.</p>
Q3.17	<p>What are the weaknesses of the peer review methodology?</p>	<p>Please describe</p>	<p>Criticisms of the peer review method include the lack of transparency and feedback from the process. Universities do not receive any indication of the review outcomes for individual outputs or feedback about what was considered excellent or what was considered lacking. The criteria for peer review assessment and how they are applied are not widely known or understood. This ‘black box’ process means that universities and research disciplines have little to go on for how to improve performance and rating outcomes, or to understand the ratings that they received. Peer review disciplines have consistently underperformed compared to citation analysis disciplines, raising concerns over the assessment methods. In Australia, many disciplines have limited numbers of experts so peer review includes significant ‘human complexities’.</p>
Q3.18 Q3.18a	<p>Can the peer review methodology be modified to improve the evaluation process while still adhering to the ERA Indicator Principles?</p> <p>a. If you answered ‘Yes’, please describe how the peer review methodology could be improved.</p>	<p>Yes/No</p> <p>Please describe.</p>	<p>It has been suggested that increased training and reinforcement for peer reviewers could be beneficial, as there is a concern that peer reviewers might be grading on a curve rather than assessing outputs individually. Subconscious bias and comparisons between universities might be influencing outcomes. There is also evidence that anonymity in peer review in the wider academic context can influence review outcomes, and a perception in some researchers that there is a corresponding issue in ERA peer review. It would be worth considering how the ERA peer review process can help to reduce the possibility of bad faith or overly critical reviews.</p> <p>More transparency around the peer review process and criteria would help increase confidence in the outcomes.</p>
<i>Contextual indicators</i>			
Q3.19	<p>The volume and activity indicators are still relevant to ERA.</p>	<p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Neither agree nor disagree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree.</p> <p>Please explain your answer.</p>	<p>Strongly agree</p> <p>These indicators provide a valuable context for understanding the research environment supporting and contributing to research excellence. Institutional UoE level volume and activity data would help the sector gain a deeper understanding of the research landscape. Research community feedback has suggested that it would be beneficial to know the volume of contributing researchers to a UoE to be able to gauge the research capacity at universities. Information about multi-disciplinarily of researchers would also be beneficial, knowing the proportion of researchers who cross 4- and 2-digit FoRs.</p>
Q3.20	<p>The publishing profile indicator is still relevant to ERA.</p>	<p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Neither agree nor disagree</p>	<p>Disagree</p>

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		<input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	<p>Given the wide breadth of publishers and changes to publishing practices, as well as moves away from that traditional closed access high risk publishing model, the benefits of the publisher profile are unclear. For journal articles, is a wide variety of journals more of an indication of <i>excellence</i> than a narrower profile (that might show highly specialised or geographically relevant research foci)? Or does a diverse list of outlets indicate a less cohesive research program, and is that necessarily an indication of the level of research excellence?</p> <p>There has also been feedback suggesting that the ERA journal list is overly restrictive, has been interpreted as prescriptive and narrowed the scope for what might be considered 'valuable' publications, and does not incentivise publishing in emerging or specialist journals. This can disadvantage emerging fields and local specialisations and perpetuates the citation power of larger generalist outlets. Some areas propose that the ERA journal list is an unnecessary cost to the ARC and does not necessarily benefit the sector.</p>
Q3.21	The research income indicators are still relevant to ERA.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	<p>Neither agree nor disagree</p> <p>Feedback on whether research income is appropriate for the ERA assessment has been mixed. One view is that the ERA assesses outputs, and so information about inputs is irrelevant and should not be considered. Another perspective is that the amount of income earned is not a direct or complete measure of research excellence, as the ERA definitions do not include in-kind contributions, or the specific infrastructure income excluded in the HERDC specifications.</p> <p>The opposing viewpoint is that research income provides valuable context to the research environment to inform the interpretation of a discipline's research outputs. There is also an argument to be made for the value of research income data outside of the specific ERA process, and it could be used for other informational purposes if the institutional and UoE amounts were made publicly available. It would be a valuable insight into discipline-specific trends in research income.</p>
Q3.22a	The applied measures are still relevant to ERA. a. Patents.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	<p>Disagree</p> <p>There are so few patents in the ERA data that their value as an indicator of research excellence is not clear, particularly in the absence of other information about the business value of those patents in the marketplace, and the interaction of patents with the UoE's scholarship. Some have proposed moving patents from ERA to EI to inform evaluation.</p>
Q3.22b	The applied measures are still relevant to ERA. b. Research commercialisation income	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	<p>Disagree</p> <p>This indicator might be better placed in the EI assessment as an engagement indicator. However, some feedback has suggested that there is disagreement within the research community about whether research income and research commercialisation income is a proven proxy for impact.</p>
Q3.22c	The applied measures are still relevant to ERA. c. Registered designs	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	<p>Disagree</p> <p>There are few of these across the sector, the value of the indicator as a measure of research excellence is not clear.</p>
Q3.22d	The applied measures are still relevant to ERA. d. Plant breeder's rights	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	<p>Disagree</p> <p>There are few of these across the sector, the value of the indicator as a measure of research excellence is not clear.</p>
Q3.22e	The applied measures are still relevant to ERA. e. NHMRC endorsed guidelines	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree	<p>Disagree</p>

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		<div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>There are few of these across the sector, the value of the indicator as a measure of research excellence is not clear.</div> <div>This indicator might be better placed in the EI assessment as an engagement indicator.</div>
ERA rating scale			
Q3.23	The five-band ERA rating scale is suitable for assessing research excellence.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree</div> <div>Much of the feedback from the research community has suggested that the 5-point scale is no longer nuanced enough to describe research excellence in a way that allows meeting the ERA objectives of national comparison and national stocktake. Some feedback has suggested a finer-grained rating scale to allow differentiation between 4s and 5s. Alternatively, a sixth ‘hi-cite’ category could be considered.</div> <div>Feedback has also suggested providing greater transparency around the final ratings, how they were arrived at, and the interaction of non-assessed 4-digit FoRs with assessed 2-digit UoEs.</div> <div>A recommendation is to include a ‘plus’ to the ranking as an indicator of volume. I.e. if the volume is greater than 250 the rating could be 3+, 4+. 5+ etc. to indicate critical mass of quality.</div>
Q3.24 Q3.24a	<div>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?</div> <div>a. If you answered ‘Yes’, please explain how the rating scale can be modified to identify excellence.</div>	<div>Yes/No</div> <div>Please explain</div>	<div>Yes</div> <div>Feedback has suggested that the current scale is largely appropriate, but could benefit from differentiation at the higher end, particularly given the high proportion of 4s and 5s across the sector. Some have suggested a 7-point scale to accommodate this.</div> <div>Another possibility is assessing and providing ratings for UoEs against national benchmarks as well as international benchmarks? This would continue to meet the objective of international comparison and universities could continue to be assessed against world standard and allow a different view of the sector in terms of performance relative to the national landscape. The potential negative and unintended consequences of this approach would need to be carefully considered.</div>
ERA low volume threshold			
Q3.25	The ERA low-volume threshold is appropriate.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Agree</div> <div>The low-volume threshold is an appropriate measure. Very low volumes might result in scores that are skewed on the basis of very few outputs. However, some consideration should be given to how the thresholds impact on potential emerging areas, and the current methodology which does not allow for differentiation of outputs for career stages.</div> <div>Some analysis on whether there is a quality bias in the below threshold codes may be useful for further consideration.</div>
Q3.26	Are there ways in which the low-volume threshold could be modified to improve the evaluation process?	<div>Please describe</div>	<div>Given that the correct assessment procedure is opaque, it is difficult to say if a different method should be used. If assessment looks carefully at distribution statistics then, as long a sample is big enough to estimate the distribution, it should suffice.</div> <div>A suggestion has been to propose different thresholds for different FoR levels to help smaller and emerging areas maintain a presence in the assessment, but helping to stop those smaller high performing areas skew levels. The question arises on volume, however, and whether the same rating from different volumes in submissions requires addressing. More transparency in submissions across the sector would assist with this consideration.</div> <div>Reporting the volume for scored and under threshold FOR codes could be recommended for transparency, or at least the percentage of total outputs not reported.</div>
ERA staff census date			

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Q3.27	What is the more appropriate method for universities to claim research outputs – staff census date or by-line?	Please explain your answer	The question of whether a census date or by-line approach is more appropriate depends on whether the intention of the ERA is to assess the retrospective output of a university (by-line) or to use the output track record of current staff to give an indication of the present and future capacity for research excellence.
Q3.28	What are the limitations of a census date approach?	Please describe	From a process point of view, by-line based reporting can make it easier to capture data and identify missing outputs, as well as making comparison and exploratory benchmarking across universities easier. A by-line approach also gives a completer picture of the university’s activity and performance during that reference period and would reduce the effects of short-term strategic recruitment on ERA assessments. Some feedback has suggested there are broader concerns about the flow on effects of short-term strategic recruitment, if universities do not commit to investment to support and grow those staff and research groups, limiting opportunities. Equally, it may be problematic to bias against recruitment focused on building long term capability and/or strength.
Q3.29	Would a by-line approach address these limitations?	Yes/No Please explain your answer	Yes The by-line approach grounds the assessment firmly in the historical context of the university and describes past research excellence, assuming it includes all outputs regardless of whether the authors are currently at the institution. The census date approach, although it uses historical data, can be seen as more forward-looking, assessing the track record of current staff to give an indication of the future potential of the research area.
Q3.30	What are the limitations of a by-line approach?	Please describe	For non-harvestable outputs (e.g. HASS and NTROs), a by-line approach would require unis to collect comprehensive data on an ongoing basis rather than targeted collections specifically for ERA purposes. As people leave, their non-harvestable data if not yet collected leaves with them.
ERA interdisciplinary research and new topics			
Q3.31 Q3.31a	ERA adequately captures and evaluates interdisciplinary research. a. If you disagreed with the previous statement, how could interdisciplinary research best be accommodated?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer. Please describe	Disagree Feedback has suggested that the ERA has the capacity to capture multidisciplinary research through information about outputs that are split across more than one FoR code. However, assigning multiple FoR codes does not necessarily capture whether the research is interdisciplinary. Introducing criteria to identify interdisciplinary outputs that is not just a split across codes may be necessary. It is also worth exploring whether interdisciplinary is a proven indicator of research excellence and so integral to the assessment process, or whether it is a valuable and key piece of information to collect for other purposes.
ERA and Indigenous research			
Q3.32a	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.	Yes Curtin is likely to meet the threshold for FoR45 at 2-digit level, assuming the threshold is 50 outputs.
Q3.32b	My institution would meet ERA low-volume threshold in Indigenous studies at: a. Four-digit?	Yes/No If you answered ‘yes’, please list which ones.	Yes Curtin is currently planning the implementation of the new FoR45 codes and how to accurately identify outputs that would fall under the codes. At this stage, it is unclear how many of the 4-digit codes would meet threshold (assuming 50 outputs), but we are currently anticipating significant volume in: 4501, 4502, 4504, 4505 And possibly: 4503, 4519

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	Q3.33	<p>In ERA, the best approach for evaluating Indigenous Studies is:</p> <p>a. Using established ERA methodology i.e. the low-volume threshold would apply to the Indigenous Studies discipline and its specific disciplines</p> <p>b. For Aboriginal and Torres Strait Islander studies by coming low-volume disciplines into single units of evaluation</p> <p>c. For Aboriginal and Torres Strait Islander studies by combining low-volume disciplines into two units of evaluation (one unit comprising HASS disciplines and one using comprising STEM disciplines)</p> <p>d. Other</p>	<p>Choose one</p> <p>If Other, please describe</p>	<p>Other</p> <p>Curtin is in the process of engaging researcher expertise to guide the appropriate use of the new codes and creation of policy around these questions. It is too early to provide comprehensive comment.</p> <p>However, Curtin does suggests that institutions should be allowed to submit Indigenous research outputs twice. The submission could be in the Indigenous Studies code but also in other FoR codes, not just splitting them. The reasoning for this suggestions is that if they are all split then the low volume thresholds may not be met, hence acting as a barrier in reporting the indigenous elements. With does not meet the intention of the creation of the dedication FoRs.</p>
	Q3.34	<p>What would be the advantages and/or disadvantages of your preferred approach for evaluating Indigenous studies in ERA?</p>	<p>Please describe</p>	<p>Curtin is in the process of engaging researcher expertise to guide the appropriate use of the new codes and creation of policy around these questions. It is too early to provide comprehensive comment.</p>
ERA process				
Collection of ERA data				
	Q3.35	<p>ERA should move to an annual collection of data from universities.</p>	<p><input type="checkbox"/> Strongly agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Neither agree nor disagree</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly disagree.</p> <p>Please explain your answer.</p>	<p>Agree</p> <p>A suggestion is that annual ERA research outputs should be recorded for all research academics (citations at least). These need to be nominated for specific FOR codes annually. This could be done automatically by a database linked to the journal FOR codes. Institutions could then change/reallocate the FOR code but only for that year, with a significant cap on retrospective re-allocations (i.e. 1%). This would account for the fact that the first year of citations not necessarily indicating future citations and therefore creates a transparency in the data manipulation.</p> <p>There are broader pros and cons for moving to an annual collection of ERA data, described in the next response. The possible benefits would also depend on whether the ERA was based on the current census date approach (in which case the annual collection of outputs would include outputs for staff who would not meet the eligibility criteria for the assessment year) or a by-line approach (in which case an annual collection would help ensure a comprehensive collection of outputs for people who were no longer at the university for the assessment year). The collection of research income and applied measures (should they continue to form part of the ERA assessment) would be an additional administrative requirement if collected annually. The proposed method above might mitigate some of this.</p>
	Q3.36	<p>What would be the advantages and/or disadvantages of an annual data collection?</p>	<p>Please describe</p>	<p>Feedback on the annual collection of data has been mixed. One perspective is that if coupled with increased automation through harvesting through DOIs or ORCIDs it could help even out the work of collecting the data by spreading it across the years instead of needing one large data collection effort every 3 or 5 years. One argument is that allocating FoRs annually would assist with improving transparency and consistency.</p> <p>Another perspective is that annual collection would increase administrative requirements, as universities would need to run full and complete publications collections on an ongoing basis, and ensure that the data were fit for purpose, complete, and accurate each year instead of every 3 or 5 years. Harvesting from external suppliers, particularly ORCID, would also limit universities' ability to verify and vouch for the data supplied, or would require extensive infrastructure for harvesting, checking, and working with the external suppliers</p>

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			to correct the information. Allocating FoRs annually has the potential to unintentionally erase emerging areas, as institutional processes for accurately assigning FoR codes could fall victim to the limitations of resourcing, resulting in codes that people are familiar with being assigned to outputs, rather than being able to view the year-on-year trajectory of growing areas and correcting the FoRs to accurately describe them.
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/No Please explain your answer	<p>Yes</p> <p>The ERA would benefit from increased transparency. Publishing help provide context to the ratings and give a fuller picture of the Australian research landscape. It would also help identify emerging areas of strength at universities and give universities another tool for comparison and benchmarking in line with the ERA objective of national and international comparisons.</p> <p>A separate question is whether volume should be published for not assessed FoRs, to give context to those emerging areas that do not quite meet threshold for assessment at 4-digit level but are contributing to the 2-digit assessment.</p> <p>It would also be worth considering publishing volume data for staffing and income indicators. However, there would be additional privacy concerns with these data.</p>
Q3.38	In future ERA rounds, research outputs should be published with their assignment to specific disciplines following completion of the round.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<p>Strongly agree</p> <p>Publishing the output level data with FoR allocations would help meet the ERA objectives around comparison and identifying emerging areas, and enhance the transparency of institutional processes around FoR allocations.</p>
Q3.38a	What would be the advantages?	Please explain your answer	<p>Some of the criticisms over the life of the ERA have been around the inconsistent allocation of FoRs and the potential for selective and beneficial FoR allocation to secure a higher rating. Publishing the output-level FoR information would remove one avenue for this, and would allow the general public to be able to interrogate the information underpinning the assessments. It would also lead to greater accuracy and consistency across ERA rounds, and potentially reduce the administrative burden of FoR allocation for universities, particularly if the data were made available in an exportable or harvestable format with DOI, ORCID, or citation supplier identifiers.</p> <p>Increased transparency around the submission data could also improve confidence in the ERA process and outcomes.</p>
Q3.38b	What would be the disadvantages?	Please explain your answer	<p>Some potential negative outcomes are for individuals or small research groups whose performance could be identified. However, for citation analysis areas, these kinds of data could be derived from the range of citation suppliers and their analytics tools outside of the ERA process. Publishing these data is an opportunity for the ARC to lead in creating and promoting norms of appropriate use of these data in line with best practice e.g. DORA.</p>
Q3.39	What other data do you think the ARC should publish following an ERA round?	Please describe	<p>There is a case to be made for publishing all or as much of the submission data as possible. Much of the feedback from the research community has been about wanting increased transparency of process and outcome.</p> <p>One of the objectives of the ERA is national comparison. Publishing the submission data, or totals and subtotals, would allow universities to position their performance in relation to contextualising factors such as size or staffing profile. Publishing components such as the Explanatory statements and income by FoR would also help universities self-assess against the sector, and would increase the usability of the ERA outcomes across other use cases.</p>

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			The ARC should provide a request for institutions to submit a list of excluded papers based on professional outputs and include this in available information.
Section 4—Engagement and Impact Assessment			
EI Overview			
Q4.1a	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?	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <div>Please explain your answer.</div>	<div>A small amount</div> <div>While the Assessment has overall contributed to raising the profile of EI in the higher education sector, there is little to no evidence that it has contributed to encouraging greater collaboration between Universities and research end-users.</div> <div>Research end-users define research impact differently and primarily focus on outcomes and innovation. Varying definitions also mean varying measures and indicators for success.</div> <div>For example, most ASX-listed businesses are responsible for reporting against a number of international impact standards and indices. One of the most widely utilised standards is the UN Sustainable Development Goals (SDGs).</div> <div>The Times Higher Education Impact Rankings has potentially addressed some of these definition and indicator challenges by developing a methodology that assesses a University’s contributions per each SDG. Within 2 years participation in the rankings has dramatically increased and gained a media reach of over 2 billion people.</div> <div>This ranking was launched after ARC EI 2018 but should be an important driver when considering the role of ARC EI 2024.</div>
Q4.1b	Considering that EI is a new assessment, to what extent is it meeting its objectives to: b. Provide clarity to the Government and the Australian public about how their investments in university research translate into tangible benefits beyond academia?	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <div>Please explain your answer.</div>	<div>A small amount</div> <div>Research is often a non-linear process and can take decades to create impact. ARC EI 2018’s methodology is primarily focused on long-term impact. Capturing multi-dimensional and complex impact is difficult particularly in finding causal links. In particular the linear model of change used in ARC EI 2018 methodology is difficult to apply in a co-design scenario where knowledge and information flows continuously.</div> <div>To provide clarity to the Australian government and general public on research translation more consideration should be given to articulating these complexities and communicating the role and importance of outputs and outcomes towards achieving impact.</div>
Q4.1c	Considering that EI is a new assessment, to what extent is it meeting its objectives to: c. Identify institutional processes and infrastructure that enable research engagement?	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <div>Please explain your answer.</div>	<div>A small amount</div> <div>ARC EI 2018 overall did raise the profile of EI and impact evaluation. This has led to more robust conversations at our institution and continuous improvement of EI best practices.</div> <div>If the Assessment is meant to be primarily retrospective in nature, it is difficult to identify and create causal links between past institutional processes and infrastructure that enable engagement and impact. A retrospective exercise also has limitations in its capability to provide real-time learning for both the institutions and the ARC itself.</div> <div>More emphasis on both standardising and analysing the reporting of output and outcome data and narrative could provide richer insight on this critical research translation/knowledge exchange stage. A similar approach has been used by Canada Foundation for Innovation who designed the approach to measure the links between what happens at an institution and wider society.</div>
Q4.1d	Considering that EI is a new assessment, to what extent is it meeting its objectives to: d. Promote greater support for the translation of research impact within institutions for the benefit of Australia beyond academia?	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div> <div><input type="checkbox"/> A small amount</div> <div><input type="checkbox"/> Not at all.</div> <div>Please explain your answer.</div>	<div>A small amount</div> <div>Further clarification is sought on this objective. If the word “support” means the promotion of EI best practice, the Assessment has created a platform for strategic planning and discussion. Due to limitations of its methodology there is some concern that there could be more effective mechanisms to create this same effect.</div>
Q4.1e	Considering that EI is a new assessment, to what extent is it meeting its objectives to:	<div><input type="checkbox"/> A very large amount</div> <div><input type="checkbox"/> A large amount</div> <div><input type="checkbox"/> A moderate amount</div>	<div>A small amount</div>

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	e. Identify the ways in which institutions currently translate research into impact?	<input type="checkbox"/> A small amount <input type="checkbox"/> Not at all. Please explain your answer.	Please refer to related feedback in 4.1c.
Q4.2	The EI objectives are appropriate for the future needs of its stakeholders.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Neither agree nor disagree Please refer to related feedback in 4.1a.
Q4.3a	What impact has EI had on: a. The Australian university sector as whole?	Please describe	As a whole, an increase in conversation and planning has occurred around EI. With a coinciding requirement to provide impact statements for ARC, NHMRC, CRC and other competitive funding schemes, it is too early to conclude which assessment has had a greater impact.
Q4.3b	What impact has EI had on: b. Individual universities?	Please describe	At Curtin, we have increased our institutional support of EI. In our Academic Capability Framework that guides our promotion criteria, we have recognised the role of EI. We have also established an EI Team to lead efforts on building an impact culture, providing resources and tools to researchers and supporting with the communication of research impact (e.g. Research Rumble our annual event series showcasing the outcomes of Curtin research). This team has also established a community of practice to bring together other professional services colleagues who contribute to facilitating, enabling or measuring EI activity.
Q4.3c	What impact has EI had on: c. Researchers?	Please describe	Mixed Overall, our research community is highly motivated and driven by making an impact outside academia. Due to varying definitions and methodologies for impact between funding bodies and assessments, confusion has occurred amongst the research community around what counts as EI and how to communicate EI. There is also concern amongst the research community that too much emphasis is placed on long-term impact, and not recognising the importance of more immediate and intermediate outcomes as a pathway to long-term impact. This recognition would be more inclusive of research that naturally takes 10+ years to see impact, such as drug discovery and trials. Creating a research talent pipeline is also critical to long-term impact and this type of recognition would also promote greater inclusivity of the research of early-career researchers.
Q4.3d	What impact has EI had on: d. Other sectors outside of academia?	Please describe	We do not have much evidence that ARC EI 2018 has had much impact outside the sector of academia.
Q4.4	How do you, or your organisation, use EI outcomes?	Please describe	We use EI outcomes as both a learning, recognition and engagement tool. As a learning tool it helps us strategically enable and facilitate EI. As a recognition tool it helps us more holistically promote the role of EI as part of our researchers' development. As an engagement tool, it helps us share with the wider community the outcomes of our research and the role it has in contributing to positive change in the world. These EI outcomes are not mutually exclusive of what can be used for the ARC EI Assessment.
Q4.5	The EI outcomes are valuable to you or your organisation.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree	Please refer to feedback in 4.4 and 4.1C.

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		<div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	
Q4.6	How else could EI outcomes be used?	<div>Please describe.</div>	<div>Please refer to feedback in 4.1C.</div> <div>If the methodology was revised to better analyse the conditions under which outcomes are enabled and utilised EI outcomes could provide richer comparative insights for the sector.</div>
EI definitions			
Q4.7 Q4.7a	<div>The current Engagement definition is appropriate.</div> <div>a. If you don't agree, what are your suggested amendments to the Engagement definition?</div>	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div> <div>Please describe</div>	<div>Agree</div>
Q4.8 Q4.8a	<div>The current Impact definition is appropriate.</div> <div>a. If you don't agree, what are your suggested amendments to the Impact definition?</div>	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div> <div><input type="checkbox"/> Please describe</div>	<div>Disagree</div> <div>Inclusion of awareness and attitudinal impact would give recognition to more intermediate impacts that are critical to enable longer-term societal level impact.</div> <div>Recognising and communicating intermediate impacts could potentially:</div> <div>-help raise general awareness of the complexities of the research process for end-users and the general public</div> <div>-promote greater recognition of the enabling environment and pathway to impact</div> <div>-provide recognition of progress towards impact, not just impact itself, which will in turn overall create a positive impact culture</div>
Q4.9	The current end-user definition is appropriate.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree-</div> <div>If one of the objectives is to better understand the enabling environment for impact, excluding some types of end users could result in missed learning opportunities.</div>
Q4.9a	a. If you don't agree, what are your suggested amendments to the end-user definition?	<div>Please describe</div>	<div>The current definitions are too narrow. Refer to 4.9 for feedback.</div>
Q4.9b	b. Are there any end-user categories excluded in the current definition of research end-user that you think should be included?	<div>Please explain your answer</div>	<div>Please refer to 4.9 for feedback.</div>
Q4.10	Are there other key terms that need to be formally defined?	<div>Yes/No</div> <div>If you answered 'yes', please explain your answer</div>	<div>Potentially-some feedback across the sector is to create a more structured approach to impact indicators and narrative sections. If this is taken forward, more formal definitions might be required.</div>

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EI 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
	Q4.12	Are there other ways to classify units of assessment in EI, for example, SEO codes?	Yes/No Please explain your answer
Selectiveness of EI			
	Q4.13 Q4.13a	Should there be more or fewer units of assessment per university? a. How many and why?	<div><input type="checkbox"/> More units of assessment</div> <div><input type="checkbox"/> The same number as in EI 2018</div> <div><input type="checkbox"/> Fewer units of assessment</div> <div>Please explain your answer</div>
EI low-volume threshold			
	Q4.14 Q4.14a	The EI low-volume threshold should continue to be based on the number of research outputs submitted for ERA a. If you disagree, how should eligibility for assessment in EI be determined?	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>
	Q4.15	The low volume threshold is set at the appropriate level.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>
Engagement indicators			
	Q4.16	Overall, the engagement indicator suite for the assessment of research engagement is suitable.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>

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			metrics for engagement such as identification of target end-users, level of activity with target end-users, number and percent of funders involved with projects and end-user satisfaction with engagement activities.
Q4.17	The cash support from research end-users indicator using HERDC data is appropriate for the assessment of research engagement	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Disagree Cash alone is insufficient. However, “return business”, i.e. an institution contracting with the university in a sequence of activities does indicate satisfaction with the value derived from the research and hence indicates actual as opposed to implied impact.
Q4.18	The research commercialisation income is appropriate for the assessment of research engagement	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Disagree Please refer to 4.16 for related feedback.
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	Yes Please refer to 4.16 for related feedback.
Q4.20	Are there alternative metrics that would be appropriate across many or all disciplines?	Yes/No Please specify the metrics	Yes Please refer to 4.16 for related feedback.
Q4.21	Should any of the current Engagement metrics be redesigned?	Yes/No If you answered ‘yes’, which ones and how?	Yes Please refer to 4.16 for related feedback.
Q4.22	The co-supervision of HDR students should be made an engagement indicator in future rounds of EI.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Agree In some areas, engagement with external expertise in HDR supervision has multiple positive potential outcomes, e.g. better translation, employment and future research. However, co-supervision of HDR Students is not necessarily an indicator of engagement across all discipline areas. For example any areas whose end-users might be the non-profit sector, community services or small businesses would not traditionally have the capacity to co-supervise HDR students. There is some suggestion that including HDR within the ERA assessment would be a better indicator of a vibrant research culture.
Q4.23a	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	Yes Patents can be limited indicators for engagement, however do not comprehensively cover all areas of innovation and favour certain disciplines over others.

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Q4.23b	In your opinion, are any of the ERA applied measures appropriate indicators of research engagement in EI? b. Research commercialisation income	Yes/No Please explain your answer	Yes Research commercialisation income can be an indicator for engagement. However, it does not comprehensively cover innovation and favours certain disciplines over others.
Q4.23c	In your opinion, are any of the ERA applied measures appropriate indicators of research engagement in EI? c. Registered designs	Yes/No Please explain your answer	Yes Registered designs can be limited indicators for engagement, however do not comprehensively cover all areas of innovation and favour certain disciplines over others.
Q4.23d	In your opinion, are any of the ERA applied measures appropriate indicators of research engagement in EI? d. Plant breeder’s rights	Yes/No Please explain your answer	Yes Plant breeder’s rights can be limited indicators for engagement, however do not comprehensively cover all areas of innovation and favour certain disciplines over others.
Q4.23e	In your opinion, are any of the ERA applied measures appropriate indicators of research engagement in EI? e. NHMRC endorsed guidelines	Yes/No Please explain your answer	Yes NHMRC endorsed guidelines can be limited indicators for engagement, however do not comprehensively cover all areas of innovation and favour certain disciplines over others.
Engagement narrative			
Q4.24 Q4.24a	The narrative approach is suitable for describing and assessing research engagement with end-users. a. If you disagree, what alternative approach could be used to replace the narrative?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer. Please explain your answer. If you are suggesting indicators, please be specific.	Disagree If indicators such as those suggested in the Alberta Innovates are utilised, then corresponding changes would need to be made to the engagement narrative.
Q4.25	One engagement submission per broad discipline is sufficient for capturing the research engagement within that discipline.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Neither agree nor disagree If changes are made to the unit of assessments, such as assessing at the discipline cluster level, one engagement submission per discipline cluster is sufficient and would cut down on reporting redundancies.
Q4.26	The engagement narrative needs to be longer.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Agree Capturing detail in the current word count is quite challenging. One suggested approach is to create a more standardised and structured template. This approach could help cut out the need for “filler” contextual narrative and also create the opportunity for more comparative sector analysis across consistent indicators.

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Q4.27 Q4.27a	Additional evidence is needed within the narrative. a. If you agreed, what evidence should be provided?	b. Strongly agree c. Agree d. Neither agree nor disagree e. Disagree f. Strongly disagree. Please explain your answer.	Neither agree nor disagree If more nuanced engagement metrics are measured there is likely less of a need to provide additional evidence within the narrative.
Impact narrative			
Q4.28 Q4.28a	The narrative approach is suitable for describing and assessing impact. a. If you disagree, what alternative approach could be used to replace the narrative?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer. Please explain your answer. If you are suggesting indicators, please be specific.	Agree While the narrative approach is suitable, please see response to 4.13a for related feedback.
Q4.29	One impact study per broad discipline is sufficient for capturing the research impact within that discipline.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Neither agree nor disagree While the narrative approach is suitable, this approach disadvantages universities that choose to focus their activities. They may have great depth in selected areas but can only share one example. There is some concern that one “star” researcher/s’ outcomes and impacts are used to assess a whole broad discipline and this does not necessarily indicate of the whole discipline’s contributions. One suggested model is REF where volume of outputs, FTEs and size of the research group are taken into account.
Q4.30	The impact narrative needs to be longer.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Agree Word count constraints are especially difficult when describing a pathway to impact that takes 10+ years.
Q4.31 Q4.31a	There is a need for additional evidence to be provided within the narrative. a. If yes, what evidence should be provided?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Neither agree nor disagree Please refer to 4.27a for related feedback.
Q4.32 Q4.32a	In your opinion, are there quantitative indicators that could be used to measure the impact of research outcome of academia? a. If you answered ‘Yes’ to the previous question, please name and describe	Yes/No Please explain your answer. Please list and describe.	Yes Please refer to 4.27a for related feedback. CSIRO also has impact evaluation framework and aligning some of these methodologies could have benefits for the sector, individual universities and researchers. However this should be aligned in a way that creates applicability across non-STEM disciplines.

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	the quantitative indicator/s, and the disciplines for which they are relevant.		
Approach to Impact Narrative			
Q4.33 Q4.33a	The narrative approach is suitable for describing and assessing approach to impact. a. If you disagree, what alternative approach could be used to replace the narrative?	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer. If you are suggesting indicators, please be specific.	Agree While the narrative approach is suitable, please see response to 4.13a for related feedback.
Q4.34	One approach to impact narrative per broad discipline is sufficient for capturing the activities within that discipline.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Neither agree nor disagree While the narrative approach is suitable, please see response to 4.13a for related feedback.
Q4.35	The approach to impact narrative needs to be longer.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Strongly disagree Capturing detail in the current format is quite challenging. One suggested approach is to create a more standardised and structured template. This approach could help cut out the need for “filler” contextual narrative and also create the opportunity for more comparative sector analysis across consistent indicators.
Q4.36	There is a need for additional evidence to be provided.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree. Please explain your answer.	Neither agree nor disagree- If more nuanced engagement metrics are measured there is likely less of a need to provide additional evidence within the narrative.
Q4.37	Would there be benefit in combining engagement and approach to impact?	Yes/No. Please explain your answer.	Yes Please refer to 4.13a for related feedback.
EI rating scales			
Q4.38	The engagement rating scale is suitable for assessing research engagement.	<input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neither agree nor disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree.	Disagree The rating scale of 3 possible scores is limited in scale. To gain greater learning insights across the sector it has been suggested for a minimum of 5 possible scores.

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		Please explain your answer.	We also suggest to review this in line with the rating scales for ERA.
Q4.39	The descriptors for the engagement rating scale are suitable.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree</div> <div>Please refer to 4.38 for related feedback.</div>
Q4.40	The impact rating scale is suitable for assessing impact.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree</div> <div>Please refer to 4.38 for related feedback.</div>
Q4.41	The descriptors for the impact rating scale are suitable.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree</div> <div>Please refer to 4.38 for related feedback.</div>
Q4.42	The approach to impact rating scale is suitable for assessing approach to impact.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree</div> <div>Please refer to 4.38 for related feedback.</div>
Q4.43	The descriptors for the approach to impact rating scale are suitable.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	<div>Disagree</div> <div>Please refer to 4.38 for related feedback.</div>
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?	<div>Yes/No.</div> <div>Please explain your answer.</div>	<div>Potentially</div> <div>This question should be considered in the context of finalising the unit of assessment. If we assess at the discipline cluster level submitting an interdisciplinary impact study could be an option. This option could both help showcase interdisciplinary areas and potentially minimise time spent on assessing eligibility criteria.</div>
EI and Aboriginal and Torres Strait Islander research			

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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.	Potentially This question should be considered in the context of deciding the unit of assessment and threshold volume overall.
Q4.46	Should the unit of assessment of Aboriginal and Torres Strait Islander research include engagement in EI 2024?	Yes/No. Please explain your answer.	Yes

Section 5- Overarching Issues Common to both ERA and EI

Frequency of ERA and EI			
Q5.1	How often should ERA occur?	<div><input type="checkbox"/> Every three years</div> <div><input type="checkbox"/> Every five years</div> <div><input type="checkbox"/> Other, please specify</div> <div>Please explain your answer.</div>	<div>Every five years, or annually it if could be automated.</div> <div>A five year cycle with more of the underlying data made publicly available would be a valuable tool for the Australian research sector to view trends and changes over time in terms of not only research excellence (the rating outcomes) but also institutional output volume, research capacity, and changing research foci within the sector. The national aggregation of information does not readily allow for this kind of analysis at the discipline level.</div>
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?	<div>Please explain your answer.</div>	<div>Feedback in support of a longer assessment cycle has suggested that the current three-yearly assessment and overlapping reference periods results in ratings outcomes that are too similar, as it does not allow enough time for the kinds of growth or strategic shifts within a UoE to be visible in the citation or output quality. This also links in with concerns around the cost of the exercise, and whether the resources required to conduct the exercise every three years outweighs the benefits.</div> <div>A potentially negative impact of a longer assessment cycle is that there would be a vacuum of information about the research volume, capacity, and performance of the research university sector in the intervening years, at least at that discipline level.</div> <div>We are unsure how the current 7 year window will be managed (due to the ERA delay of one year). This means three years of old data and four years of new data. Could only using the four years of new data be considered. This would save a high re-calculation of currently allocated data outputs.</div>
Q5.3	How often should the EI assessment occur?	<div><input type="checkbox"/> Every three years</div> <div><input type="checkbox"/> Every five years</div> <div><input type="checkbox"/> Other, please specify</div> <div>Please explain your answer.</div>	<div>Every five years</div> <div>A three year cycle, taking into account recommendations for reference periods that may span beyond that for key indicators. Three year periods would allow institutions to address impact on key trends, whereas a five year period is more likely to span across multiple governments, agendas and other external factors that could change the engagement environment significantly.</div>
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?	<div>Please explain your answer.</div>	<div>From the EI perspective, some feedback has suggested that the reference periods and assessment timelines are too short to allow assessment of the full impact pathway and to showcase fully realised impacts. Some examples given are that it can take 17 years to take a drug to market, the time needed to conduct clinical trials is lengthy, and the commercialisation pathway can take several years. These slow-moving activities might be better suited to a longer assessment cycle.</div>
Q5.5 Q5.5a	ERA and EI should be combined into the one assessment.	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div>	Disagree

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	a. What would be the advantages and/or disadvantages?	<div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <div>Please explain your answer.</div>	The extra administrative burden would be unmanageable.
Q5.6	Are there other ways to streamline the processes to reduce the cost to universities of participating in ERA and EI?	<div>Yes/No</div> <div>Please explain your answer.</div>	<div>Yes</div> <div>Feedback about ideas for reducing the administrative burden, costs, and manual handling of data for the ERA and EI submissions have focused on the potential for harvesting and reusing existing data from other systems, such as external citation suppliers, ORCID, and the ARC RMS system. Another idea that was floated is for the ARC to centralise the output and FoR allocation management, administering one dataset of outputs with one set of FoR codes and apportionments, reducing the need for each university with authors on that output to collect, FoR tag, verify, and submit the data separately. This would help alleviate issues around the transparent allocation of FoR codes, and would result in a comprehensive dataset of Australian research outputs that could be used for public benefit. With a particular emphasis on open access, the dataset could be useful for increasing the discoverability of Australian research and particularly the NTRO and non-journal article traditional outputs that cannot be found in the usual commercial databases. This approach could streamline the process for universities and increase cohesion in the exercise.</div>
Q5.7	In your view, what data sources could ERA utilise?	<div>Please explain your answer.</div>	<div>Many suggestions have been made about the potential benefits of harvesting output data from both the more inclusive databases and the subject-specific databases. ORCID is a popular suggestion and Curtin fully supports automation initiatives that support the ERA objectives.</div> <div>When considering automated processes consideration should be given to work required to compile the submissions and the reliability of the information and whether it is fit for purpose under the current ERA specifications. If not, the specifications may need to be revised. For example, ORCID output types do not align with the current ERA output types and eligibility criteria, and creative work NTROs are not well handled by the ORCID type structure.</div>
Q5.8 Q5.8a	<div>In your view, what are the most time-consuming elements of an ERA submission?</div> <div>a. Are there efficiencies that could be introduced?</div>	<div>Please describe.</div> <div>Yes/No</div> <div>Please describe.</div>	<div>From the institutional perspective, the most time-consuming aspects of completing the ERA submission are the data collection and validation processes, including citation supplier ID tagging and data correction, FoR allocation, and matching outlet and publisher IDs to existing data. For institutions with in-house systems to handle data management and XML generation, here is also a time and monetary cost of software development, testing, and troubleshooting against changes to the ERA specifications and business rules. For larger areas, peer review selection and sourcing can be time consuming.</div> <div>Yes</div> <div>There are a range of automation of efficiency options that could be considered and Curtin is supportive of exploring these, but the specifications and requirements for the ERA submission would need to be reviewed with these in mind.</div>
Q5.9 Q5.9a	<div>In your view, what are the most time-consuming elements of an EI submission?</div> <div>a. Are there efficiencies that could be introduced?</div>	<div>Please describe.</div> <div>Yes/No</div> <div>Please describe.</div>	The variation of structures necessitated many different approaches: narratives, forms, metrics, data provision ... details required such as country codes, etc. More automation required.
Utilising technological advances and pre-existing data sources			
Q5.10 Q5.10a	<div>ORCID IDs should be mandatory for ERA.</div> <div>a. What are the advantages and/or disadvantages?</div>	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div>	Agree

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		Please explain your answer.	<p>Some researchers feel very strongly that ORCID IDs should be mandatory and that it would streamline the collection process. If ORCID was mandatory for the ERA process, it would be a clear driver for researchers to create and actively maintain their ORCID presence, with all the associated benefits.</p> <p>However, there are further considerations noted below and above with the mandatory use of ORCID (particularly as a way of harvesting or managing data submission) and aligning the ERA output data with ORCID.</p>
Q5.11 Q5.11a	<p>The automatic harvesting of output data using ORCID IDs would streamline a university’s submission process.</p> <p>a. What are the advantages and/or disadvantages?</p>	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <p>Please explain your answer.</p>	<p>Strongly Agree</p> <p>Curtin strongly supports increased automation and reuse of existing available data wherever possible. There are very real benefits for increased consistency, accuracy and usability of ERA submission data and resulting outcomes through standardising automation and submission processes. When exploring these options the below points should be taken into account to ensure changes result in improved efficiencies.</p> <p>One key consideration is that ORCID does not allow for institutional control over individual records and user profiles, limiting the ability of the university to correct records and fill in gaps. A further point is that ORCID output type structures do not align with the current ERA output type specifications, which should be considered in relation to the data collection process. Additionally, as the records are ultimately controlled by the researcher, universities would not necessarily be able to control whether outputs were submitted under the correct output type. Would universities need to run secondary validation processes within SEER to ensure data integrity? The interaction between the automated data and the current submission requirements would need consideration, for example, ensuring inclusion/exclusion based on the ERA journal list, and consistent FoR assignments. If ORCID was used to automate data submission directly through SEER, then universities would likely need to work within SEER to append those additional pieces of key information. If the intention was to use ORCID as the basis for the institutional submission handled by the institutions themselves, then the impact on process and systems changes to incorporate ORCID data into the collection and validation processes might be considerable. Universities with commercial publication and ERA software solutions would be reliant on the capabilities of the software aligning with the ERA requirements.</p>
Q5.12 Q5.12a	<p>DOIs should be mandatory for ERA.</p> <p>a. What are the advantages or disadvantages?</p>	<div><input type="checkbox"/> Strongly agree</div> <div><input type="checkbox"/> Agree</div> <div><input type="checkbox"/> Neither agree nor disagree</div> <div><input type="checkbox"/> Disagree</div> <div><input type="checkbox"/> Strongly disagree.</div> <p>Please explain your answer.</p>	<p>Strongly Agree</p> <p>Feedback has suggested that DOIs should be required where they exist. Not all outputs have DOIs, and making them mandatory for all outputs would require institutions to either undertake a process for minting DOIs for back publications, or exclude outputs where DOIs do not already exist. One disadvantage of mandatory DOIs is this potential additional administrative burden, which would likely disproportionately fall on areas with NTROs and more locally-focused research expertise where smaller outlets might not already have DOI minting workflows, as well as Library and institutional repository staff. It also might not be possible for institutions to mint DOIs for all outputs, for example for NTROs where authors do not retain copyright.</p> <p>One advantage of requiring DOIs is that they are an easy way to identify open access outputs e.g. via Unpaywall, and can be used to link information to other datasets, e.g. Altmetrics. DOIs can increase the interoperability of ERA data.</p>
Q5.13 Q5.13a	<p>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?</p> <p>a. What are the advantages and/or disadvantages?</p>	<p>Yes/NO</p> <p>Please explain your answer.</p>	<p>Many in the research community, in particular STEMM areas, suggest greater utilisation and reliance on third party citation data such as that from Scopus or Web of Science. If the ARC directly sourced output data from a citation supplier, it could reduce the need for the university to manage and handle the data as an intermediary. This view suggests that it would increase consistency of FoR codes allocation and reduce the administrative burden of the collection and management of data, as well as make it easier to collect and analyse data more frequently (for example annually) and identify and respond to trends more quickly. Some further points to consider around the automating the submission process and relying on external data are discussed further in in the responses to Q5.6 and Q5.7.</p> <p>Another suggestion for reducing resource burden is exploring a selective assessment framework, where a smaller number of outputs are submitted for assessment. The consequences of this kind of approach would need to be thoroughly explored.</p>