Innovative Research Universities

Breaking the impasse: an effective process to assess Engagement and Impact – IRU submission

The way ahead

The strong support for measuring the value of university research for end-users has been hindered by the lack of a viable way to do so. Discussion is caught between the difficulty of ascribing meaning to an array of data sets, many of which are highly subject to manipulation, and the lack of breadth in an assessment of particular case examples.

Previously, in its policy statement 'Measuring Research Value for End Users', the IRU argued that judgment by a panel of relevant people is crucial to creating a plausible rating of performance with the panel working through the data and individual examples put forward. That proposal still lacked clarity about the focus of the assessment.

At page 15, the Australian Research Council (ARC)'s consultation paper gets to the essence of how to resolve the impasse through its proposal that a "focus on the processes or approaches to impact used by universities may be more appropriate". Under this approach, to make an assessment, the panel would consider a set of information about how the university is engaged with end-users as well as evidence of the value of those interactions for the end-users. The inclusion of short vignettes highlighting individual and verifiable impact stories would work as exemplars demonstrating the pathways to impact.

The approach would move away from the researcher-centric attempt to track individual research outputs over a period from idea to application. **If Excellence in Research for Australia (ERA) assesses the value of the research as judged by fellow researchers, an engagement and impact measure should focus on the value for end-users.**

To be meaningful, this engagement and impact measure must rise above a set of data indicators to encompass a knowledge-based judgement of the value of research for end-users.

A number of iterations over different rounds will probably be necessary until an optimal measure is developed.

Overview

The IRU submission to the ARC Engagement and Impact Assessment Consultation Paper covers:

- the purpose of creating an assessment of engagement and impact with end-users;
- the importance of having a focus on end-users in designing the assessment;
- key aspects for the assessment process;
- amendments to the proposed principles; and
- a response to the various questions the Consultation Paper poses.

Why assess engagement with end-users and evidence for its impact

It is important to remember that the assessment is part of a suite of Government measures to stimulate industry demand for research.

The consultation paper in Section 3 is clear that the objective of the exercise is to stimulate industry and other end-user research, with the expectation of greater use of research to Australia's medium term economic benefit. The focus is business use of research but the case applies also to other end-users including Government and the significant nonprofit sector, each of which contribute to our economic wellbeing, as well potentially from direct population take up of research outcomes. In our

response, we will refer to end-users generally while understanding the Government focus on business end-users as the area most needing further stimulus.

This means that the core outcome should be greater take up of research, achieved through strong incentives encouraging take-up. The final measure needs to be robust with ratings that make sense.

The experience of previous research measures and past assessments of teaching quality is that universities respond to such ratings. They will work to improve low ratings and to retain high ones. The engagement and impact assessment need not seek a very high level of precision that the process cannot justify and which is not necessary to stimulate university and researcher support for industry driven research.

The importance of having a focus on end-users in designing the assessment

A focus on end-users is essentially absent from the consultation paper, a major gap in its analysis and proposals.

Rather, the emphasis is on universities demonstrating what they have done, to be assessed against largely university-driven concepts of what matters both of which avoid the test of whether it works for the end-users.

To strengthen the link with end-users, and raise the importance of having an impact and not just being seen to engage, the final process needs to confront the challenge of putting the focus on value for end-users and including effective end-user input. One other challenge is determining the right timeframes given the various instances when it takes a while until end-users become aware of the value.

This requires:

- data sets about end-user involvement that go beyond dollars invested such as information about returning for further research outcomes;
- structuring the research for the assessment against an end-user classification rather than a discipline structure;
- involving end-users in the assessment process.

The next section explores the elements of the assessment process needed for it to be effective.

Key aspects for the assessment process

Process for assessment

The consultation paper is quiet about the process for assessment in its emphasis on the potential data and other inputs that might be used. The ARC's advice that 'use of existing ARC Systems to the greatest possible extent' (4.1 dot 6) means that a panel based process of assessment is envisaged but that the panels would not be, or not necessarily be, the same as those assessing ERA ratings.

The IRU strongly supports the need for Panels to decide the ratings based on information available to the Panel.

It is very clear that the data sets available will provide indicative information but on their own will demonstrate little about the level (engagement) and especially the value (impact) of the activity. It is unlikely that any future data sets will provide a convincing proxy. The process also needs to avoid one or two one-off major successes, especially in financial terms, overwhelming an effective assessment of how well the university is doing across the breadth of the cluster.

The Panel process also provides the parallel with ERA that will give the outcome greater credibility and similar standing. A key challenge for the panel process will be consistency of approach across different areas.

The structural basis for the assessment

A threshold question is whether to group the basis of the assessment by a discipline based grouping, as drives ERA, or to use an Industry classification or whether the outputs can or will be measured against a range of dimensions. An option for an industry classification is the Australian and New Zealand Standard Industrial Classification (ANZSIC) that the Chief Scientist used in his report *Australia's STEM Workforce* (2016).

The question tests the willingness to step beyond the researcher-centric zone which universities and their staff best understand to bring to bear an end-user perspective. The constant reference to fields of research codes throughout the consultation paper can lead to the assumption that those codes will drive the shape of the assessment. ARC advises that industry classifications can have a role, without spelling out the relationship that would be required across the two.

A discipline classification may appear easier to use. However, for many universities its use in ERA is already a problem, both splitting up the research some individuals do across multiple codes and drawing together the research of people from distinct parts of the university into a given discipline category.

An end user focus based around an industry classification should be trialed to test its value and challenges. One issue likely to arise is the different interpretation of some of the likely inputs as they present for different disciplines.

Whichever approach is taken, the number of groups needs to be contained: in a discipline classification the 2 digit fields should be sufficient; similarly an industry classification should focus at a higher level grouping.

Distinguishing engagement and impact

The paper holds these two as distinct looking to 'measure' engagement (which is seen as more quantifiable) and 'assess' impact (5.2), through a two-part process.

There is some relation to the earlier mentioned IRU 2015 proposal which proposed a simple three point scale:

1	No evident level of activity worth rating
2	Evidence of effort and activity (This would align with the Paper's concept of 'engagement'.)
3	Evidence that the activity is done well to the benefit of end users (This aligns to the paper's concept of 'impact'.)

From this, an incremental process could flow:

- first, the assessment process determines if there is sufficient evidence of engagement with end users to justify a positive rating;
- secondly, the assessment process will determine whether the value of the engagement supports a rating that the research has a notable level of impact.

Indicators and data

The Consultation Paper has a strong preference for identifying data sets that can be used in an efficient way to measure engagement and, with less confidence, impact.

The harsh reality is that nearly every data item and indicator considered in this area is subject to a high level of dispute, interpretation and, for many, easy manipulation. There will be a challenge of combining the various indicators proposed in a formulaic way. One potential method would be factor analysis.

Hence, a crucial early decision will be whether to pursue

- the indicator road with the hope that a set will emerge amenable to a light touch assessment, where the common point per submission is the presence of the same precise sets of information

  as against

- looking to structure a means to capture the available data grouped to demonstrate activity and its value, where the common point per submission is the presence of a commonly structured set of relevant information (but not necessarily the same set of information).

The IRU argues that the second is both more plausible to achieve and will provide a much more nuanced reading of the activity of each area within a university. It may involve more work for universities and puts more onus on the Panels to consider the evidence before making a judgement. An exercise done well is worth the effort against a less intensive but essentially valueless alternative.

The focus of assessment

The IRU supports the process proposed at page 15 of the consultation paper for a "focus on the processes or approaches to impact used by universities may be more appropriate". Under this approach, the panel would consider a set of information about how the university is engaging with end-users and evidence of the value of those interactions for the end-users to make an assessment.

The timeframe is thus a recent period that would update from assessment to assessment, with some overlap, as with ERA, but aiming to incorporate more recent information to target the assessment at the level of recent activity. This avoids the weakness of tracking the use of particular research results over a long period which cannot always be done meaning the selection of data would be serendipitous not necessarily representative.

Overview of IRU approach

Bringing together these aspects, the IRU proposal is for an assessment that, assisted by a number of exemplars, focuses on the processes or approaches to impact, and

- is driven by panels allocated to industry based clusters of end users;
- assesses initially the level of engagement, activity involving and targeting end-user direction of and take up of research;
- where a threshold level of engagement is present, assesses secondly the value to the end users of that research to identify whether the level is noteworthy; and
- assesses information grouped under common headings but is not necessarily the same sets of data and information for every submission or every panel.

Amendments to the proposed principles

Against the approach set out in the previous section, the principles listed in the consultation paper require improvements. In some elements they are too driven by the assumption of numeric data items manipulated in a given way.

1. *Robust and objective—objective measures that meet a defined methodology that will reliably produce the same result, regardless of when and by whom the principles are applied.*

The proposed IRU approach creates an objective framework for the assessment that should allow for similar outcomes against a suitably broad rating scale.

2. *Internationally recognised—while not all indicators will allow for direct international comparability, the indicators must be internationally recognised measures of research engagement and impact. Indicators must be sensitive to a range of research types, including research relevant to different audiences (e.g. practitioner focused, internationally relevant, nationally- and regionally-focused research).*

A complex set of expectations. Against the reality that there are few other systems assessing engagement and impact, the potential to create a novel approach may mean other countries will follow the Australian lead. The assessment of evidence approach we recommend should be replicable.

3. *Comparability across disciplines—indicators will take into account disciplinary differences and be capable of identifying comparable levels of research engagement and impact.*

One of the statements that presumes a discipline basis to the assessment. Each area of university research ought to believe that the proposed system will rate them fairly.

4. *Not disincentivise interdisciplinary and multidisciplinary research—indicators will not disincentivise universities from pursuing interdisciplinary and multidisciplinary research engagements and impacts.*

The double negative principle of 'not disincentivise' interdisciplinary and multi-disciplinary, should be reversed into actively recognising relevance of interdisciplinary and multi-disciplinary research from an end-user perspective.

5. *Research relevant—indicators must be relevant to the research component of any discipline.*

One of the statements that presumes a discipline basis to the assessment. Each area of university research ought to believe that the proposed system will rate them fairly.

6. *Repeatable and verifiable—indicators must be repeatable and based on transparent and publicly available methodologies.*

The principle is grounded in a data heavy presumption. The process should be transparent and understood. The ultimate judgement of a panel should be plausible.

7. *Time-bound—indicators must be specific to a particular period of time as defined by the reference period.*

Agree. A reference period covering a recent period of years (e.g. five- ten years) that allows each iteration of the assessment to be based primarily or solely on new information.

8. *Transparent—all data submitted for evaluation against each indicator should be able to be made publicly available to ensure the transparency and integrity of the process and outcomes.*

Assumes a dominance of indicators in the process. The evidence provided should be publicly available.

9. *Behavioural impact—indicators should drive responses in a desirable direction and not result in perverse unintended consequences. They should also limit the scope for special interest groups or individuals to manipulate the system to their advantage.*

The system, including any indicators, should encourage the desired behavioral outcomes. The structure of the assessment should minimize the gain from creative submissions.

10. *Adaptable—recognising that the measurement of engagement and assessment of impact over time may require adjustment of indicators for subsequent exercises.*

The IRU approach presumes a multitude of potential data sets and information. The basis of the assessment should be comparable from exercise to exercise with the potential to reset the benchmarks for effective engagement and for useful impact. Data indicators, such as research income, should be contextualized.

A response to the Consultation questions

1. What definition of 'engagement' should be used for the purpose of assessment?

Engagement is the interaction of the university with each segment of the proposed industry based end user classification. If activity is of a sufficient level, it constitutes 'engagement'.

2. What definition of 'impact' should be used for the purpose of assessment?

Impact is effective engagement that results in a wide range of values for each segment of the classification. If the value is of a sufficient level (combining depth of impact for particular bodies with breadth of impact across multiple bodies), it constitutes 'impact'.

3. How should the scope of the assessment be defined?

The assessment should focus primarily on the processes or approaches to impact.

4. Would a selective approach using case studies or exemplars to assess impact provide benefits and incentives to universities?

Exemplars should be part of the presentation of evidence a university provides for each industry sector.

5. If case studies or exemplars are used, should they focus on the outcomes of research or the steps taken by the institution to facilitate the outcomes?

Assuming 'outcomes of research' means the outcomes for the end-user(s), both are relevant, with the steps being more relevant to engagement and the outcomes more relevant to impact.

6. What data is available to universities that could contribute to the engagement and impact assessment?
    a. Should the destination of Higher Degree Research students be included in the scope of the assessment?
    b. Should other types of students be included or excluded from the scope of assessment (e.g. professional Masters level programmes, undergraduate students)?

The focus is research and its value for end-users. Research students' work can be relevant, but not generally those at lower levels. The destination of students may illustrate the way in which research is presented to end-users and its take up leading to useful outcomes.

In effect, under the IRU approach of common structure but not mandated data elements, universities should include student based information where it advances the evidence for either engagement and/or impact.

7. What are the key challenges for assessing engagement and impact and how can these be addressed?

See the earlier sections of the IRU response.

8. Is it worthwhile to seek to attribute specific impacts to specific research and, if so, how should impact be attributed (especially in regard to a possible methodology that uses case studies or exemplars)?

Consistent with a focus on the "processes or approaches to impact used by universities" the university evidence portfolios should not over emphasise the tracking of particular research but look to show the ways in which research from the university has been of value to the relevant industry sector.

9. To what level of granularity and classification (e.g. ANZSRC Fields of Research) should measures be aggregated?

The classification used should have no more than 50 elements. See Section **The structural basis for the assessment** above.

10. What timeframes should be considered for the engagement activities under assessment?
11. What timeframes should be considered for the impact activities under assessment?

The assessment should capture information from a medium sized period between three to ten years, to allow scope for a sufficient evidence base and a focus on activity that is relevant to the current activities of the university.

12. How can the assessment balance the need to minimise reporting burden with robust requirements for data collection and verification?

The IRU approach is outlined above. The reporting burden needs to be controlled but the overall value of the assessment has priority. The IRU focus is on a portfolio of relevant material selected by the university against a common framework.

13. What approaches or measures can be used to manage the disciplinary differences in research engagement and impact?

See the earlier sections of the IRU response.

14. What measures or approaches to evaluation used for the assessment can appropriately account for interdisciplinary and multidisciplinary engagement and impact?

The assessment should focus on an industry driven classification consistent with a focus on end-user value. Such a focus will not need to distinguish disciplinary differences although the process may choose to include.

Types of engagement and impact indicators

15. What types of engagement indicators should be used?
16. What types of impact indicators should be used?

The evidence should be selected by universities against a common framework to demonstrate its activities and their perceived value for end-users, including information from end-users.

21 June 2016