

## Review of the Cooperative Research Centre Programme: IRU Response

Since their establishment in 1990 the Cooperative Research Centres (CRCs) have been an important programme driving the translation of research into practical solutions that support economic growth, healthy communities and a secure environment. The CRCs have provided a valuable platform for universities, industry and other research end-users to work together to address important industry needs and national issues.

The current review comes at a critical time for the CRCs. It is an opportunity to revamp the programme addressing criticisms while retaining the strengths displayed over the past 25 years.

### Supporting industry driven research

The Government has made clear its determination to expand the extent of industry driven research that achieves commercial returns as a critical part of its Industry Innovation and Competitiveness Agenda. This should be done to increase overall Australia's research output and improve the outcomes achieved from it.

The IRU strongly supports the need to increase industry driven research through strengthening the incentives for both universities and industry to interact. In our response to the 'boosting commercial returns from research' consultation IRU will outline options to do so.

The IRU holds that a CRC style program is an important part of the suite of programmes needed to achieve the Government's ambitions. CRCs should be a distinct element that highlights a strong focus on an issue to advantage all with a stake in the area. The CRC approach contrasts with much industry driven research whose emphasis is the need of the particular company involved.

### IRU recommendations

The IRU recommends that the review:

1. support retention of a programme of Centres that bring together a significant set of researchers, including research students, and industry research users to pursue issues and opportunities of importance to that industry;
2. examine the potential of a criterion-based, demand driven funding model for the CRC scheme;
3. design the future CRC scheme as a distinct element within the Government's suite of programmes to support industry driven research and emphasise the importance of supporting a breadth of industries;
4. recommend that the future program include a Government annual grant as the incentive for industry and researcher participation;
5. recommend that Centres focussed on important national issues which draw in organisations using that research, continue to be supported either as a distinct element within the current programme or as an alternative similar scheme.

### **Structure of IRU response**

Against the Government's aim to increase industry driven research, this response explores:

1. the important, valuable attributes of the CRCs (Terms of Reference A);
2. changing the focus of CRC programme from selecting the few best proposals to an intent to support the good proposals (Terms of Reference B, C, E);
3. some of the related issues about CRCs which need resolution in defining a new approach (Terms of Reference B, C):
  - a. the relationship to other programmes with similar aims;
  - b. the role of the programme grant as integral to most CRCs; and
  - c. support for 'public good' issues which also require effective university to end user interaction.

The IRU response does not explore the detailed programme management issues covered in Term of Reference D, which the CRCs and partner bodies are better placed to cover. The crucial test is that the arrangements for the revamped programme are developed consistent with the Government's commitment to reducing unnecessary reporting and contractual requirements.

## 1. The value of the CRC approach

The CRCs are a valuable means to bring together researchers, industry and other research end users to focus on an issue needing solutions of importance to multiple parties.

- The Allen Consulting Group's 2012 assessment of the impacts of the CRC programme found that 'between 1991 and 2017 almost \$14.5 billion of direct economic impacts are estimated to have accrued from CRC produced technologies, products and processes.' This translates to a three to one return on investment in Government funding. The direct economic benefits are most significant for the agricultural sector.
- Further, the Allen Consulting Group assessment found that the benefits of the programme extend beyond economic measures. There are significant benefits to the community through improved health and medical practices and outcomes as well as to Australia's natural environment.
- The programme is notable for involving a large number of universities with the extent of activity fairly evenly spread, which is distinct from all other Government research programmes where some sets of universities including IRU members predominate. This demonstrates the capacity of the approach to reach across Australia and not be contained to large inner city based organisations.
- The Government endorsement of the partnership that forms the CRC gives the body a role as a national leader on the issue to involve all with an interest.
- The sense of a 'centre' helps attract involvement. The Government CRC contribution is important to leveraging industry and other non-researcher involvement. The involvement of those parties ensures universities are attracted.
- The five-year terms, which can be renewed, give a certainty to researchers of funding from Government and industry. Such certainty is often absent from research programs and industry based support. It permits the pursuit of ideas consistent with the CRC's target theme, balancing the expectation of finding solutions for pressing problems with initiating and then following through research to address medium term issues.
- CRCs are the base for an important set of research students, who are gaining industry capability as they conduct their research. The Allen Consulting Group's 2012 assessment of the impacts of the CRC programme found that 'between 1991-92 and 2009-10, approximately 4,400 doctorate and masters degrees by research were awarded to students who had received industry focussed training as part of their studies with the support of a CRC'. The CRC base for research students is one of the few mechanisms to address Australia's low proportion of researchers working in industry when compared to other developed nations.

The positive attributes of CRCs should not be lost in revamping their role and structure as a distinctive part of the Australian research system.

**IRU recommends that the Government retain a programme of Centres that bring together a significant set of researchers, including research students, and industry research users to pursue issues and opportunities of importance to that industry.**

## 2. A new approach to selection

The current CRC application process is onerous, expensive and highly selective.

The discussion paper (p10) observes that the selection process winnows down interest from several hundred parties to formal applications from not many more than ten, only some of which are then selected. In every round there are acknowledged to be many worthwhile bids that are not funded; there are potentially others that did not progress to that level due to the low probability of success.

The Government wishes to stimulate industry driven research. The CRC selection process is designed to push away all but the best and toughest. It does not encourage demand from industry but stifles it. With the a low probability of success and the selection ultimately about comparative standing there is little incentive for industry, particularly smaller companies to take an active part in applications.

A limited role in the application process means that industry input into identifying the major challenges that research could help address is also constrained, undermining a focus on potential commercial outcomes.

Rather than an excessive focus on identifying the 'best dressed' applicants to win the prize the program could be refocussed to identify the 'well dressed' through an open, criterion-based assessment that endorses all applications meeting suitable benchmarks.

To ensure Government funds are well targeted, the criteria for success would focus on addressing clear industry needs for innovation, developing industry capacity to respond, commercial outcomes, and progress towards goals. Centres which achieve over their initial term would be eligible for renewal; those which do not would be removed from the program.

This would transform the CRC programme into a form of demand-driven industry research support.

The approach would have a fiscal impact through supporting a greater number of Centres. The outcome should be a greatly enhanced return on the investment through the outcomes from the Centres.

***The IRU recommends that the review examine the potential of a criterion-based, demand driven funding model for the CRC scheme.***

## 3. Addressing issues with the CRC programme

### **The CRC relationship to other programs encouraging industry driven research**

The future role of the CRCs needs to be congruent with other programs, ensuring that they make a coherent set.

- A range of programmes and schemes encourages industry driven research, including the Research and Development Tax Incentive, the Joint Research Engagement research block grant, and the ARC Linkage programme. The annual budget for the CRC programme is significantly smaller than each of these.
- The Government has brought together industry support programmes into the Entrepreneurs' Infrastructure Programme (EIP). It has also announced five Industry Growth Centres (IGCs) in predetermined industry sectors as part of the Industry Innovation and Competitiveness Agenda.

IRU in its response to the 'boosting commercial returns from research' consultation will outline options to improve the broad incentives for universities and for industry to stimulate industry driven research. CRCs should be a distinct element that highlights a strong focus on an issue to advantage all with a stake in the area. The CRC approach contrasts with most industry driven research whose emphasis is the need of the particular company involved.

The relationship of a CRC program to the five IGCs needs development.

- A possible relationship to consider is the IGCs as support for key areas that offer great potential for Australia and Australian business, receiving priority funding and treatment, with the CRCs supporting a range of other areas where a coherent case is made for action. Such a relationship would allow some targeting of Government effort while still supporting breadth, ensuring Australia is better positioned to take advantage of whatever new unexpected industry opportunities emerge over the coming decade.
- The alternative is to align CRCs within the IGC framework. This could create a powerful nexus between the overarching, whole-of-industry focus of the IGCs and the usually more specific concerns of the CRCs with greater opportunities for distinct CRCs to share knowledge, expertise and resources under the IGC framework.

However, there is a risk in aligning CRCs too closely to the predetermined sectors of the IGCs. This may reduce the flexibility of the Government's industry driven research funding programme to support emerging industries and opportunities. Had a Government 20 years ago focussed industry driven research support on a small number of sectors these would very likely be different to those chosen today.

***The IRU recommends that the review design the future CRC scheme as a distinct element within the Government's suite of programmes to support industry driven research and emphasise the importance of supporting a breadth of industries.***

### **The need for the programme grant**

The Government grant is an important signifier of being a Government endorsed Centre of focus for the industry. It is crucial to getting university and industry bodies to participate.

Governments often create bodies for which they provide funding to support initiation of the organisation but which in theory will not be required on an ongoing basis. In many cases the organisation does not achieve self-funding standing. The CRC programme is an example of this, with few relinquishing the need for a grant while remaining a CRC.

One problem is that if a CRC does achieve self-funding it risks losing its CRC status. The Department of Industry confirm that a CRC that ceases to receive funding can ask for permission to retain the CRC title. This should be encouraged where the body continues to operate consistent with CRC objectives.

It would be better, and more realistic to consider the grant as an incentive to form a Centre targeting industry outcomes and expect it to be ongoing for all operational Centres.

***The IRU recommends that the future program include a Government annual grant as the incentive for industry and researcher participation.***

### **Supporting the achievement of outcomes with less direct commercial use**

A regular issue about the CRC program is whether all Centres should target strictly commercial outcomes for the industry partners as against supporting some centres whose partner research end-users are service providers or agencies seeking to improve health outcomes or reduce environmental harm. The latter can have important impacts that improve economic outcomes.

In supporting the Government's drive to strengthen industry driven research we should not lose the value of the other CRCs.

For example, several CRCs currently operate in the medical and environmental sectors. These CRCs are vitally important in translating research into practical solutions in these fields. The innovations developed by these centres work to ensure the healthy population and secure environment that underpin a stable economy.

The industry participants in these CRCs include health services providers, government agencies and non-government organisations which provide essential services to the broader economy.

The Government could ensure support for this type of CRC through a separate stream of the revamped CRC programme, allowing the criteria and funding to be shaped to the purpose of each stream, or through an alternative programme.

This issue will continue to recur as the Government considers how to strengthen the outcomes of many programs which support commercially focussed research outcomes. The need to encourage demand driven research from Government Agencies and non-profit bodies remains but the approaches taken may gain from some differentiation. It is an issue that IRU will consider further in its response to the 'boosting commercial returns from research' consultation.

***The IRU recommends that Centres focussed on important national issues which draw in organisations using that research continue to be supported, either as a distinct element within the current programme or as an alternative similar scheme.***

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