


Working for business.
Working for Australia



Engagement and Impact Assessment Consultation Paper

June, 2016



Australian
Chamber of Commerce
and Industry

**WORKING FOR BUSINESS.
WORKING FOR AUSTRALIA**
Telephone 02 6270 8000
Email info@acci.asn.au
Website www.acci.asn.au

CANBERRA OFFICE
Commerce House
Level 3, 24 Brisbane Avenue
Barton ACT 2600 PO BOX 6005
Kingston ACT 2604

MELBOURNE OFFICE
Level 2, 150 Collins Street
Melbourne VIC 3000
PO BOX 18008
Collins Street East
Melbourne VIC 8003

SYDNEY OFFICE
Level 15, 140 Arthur Street
North Sydney NSW 2060
Locked Bag 938
North Sydney NSW 2059

ABN 85 008 391 795
© Australian Chamber of Commerce and Industry 2016

This work is copyright. No part of this publication may be reproduced or used in any way without acknowledgement to the Australian Chamber of Commerce and Industry.

Disclaimers & Acknowledgements

The Australian Chamber of Commerce and Industry has taken reasonable care in publishing the information contained in this publication but does not guarantee that the information is complete, accurate or current. In particular, the Australian Chamber is not responsible for the accuracy of information that has been provided by other parties. The information in this publication is not intended to be used as the basis for making any investment decision and must not be relied upon as investment advice. To the maximum extent permitted by law, the Australian Chamber disclaims all liability (including liability in negligence) to any person arising out of use or reliance on the information contained in this publication including for loss or damage which you or anyone else might suffer as a result of that use or reliance.

Summary

The Australian Chamber believes that harnessing our innovation potential is vital if Australia is to build on its current advantages and sustain prosperity into the future. Innovation allows us to increase our competitiveness, create high quality jobs and achieve greater value for what we make and export. To fulfil this potential, we must address the most significant deficit in our current innovation system - collaboration.

The overarching purpose of any changes to the measurement of university performance should be to develop a culture of collaboration. Shifting the measurement of research performance away from publication and citation and towards impact and engagement is essential in encouraging collaborative relationships to develop and ensuring that there is mutual benefit for both researchers and businesses pursuing them more regularly.

Positive benefits of innovation can be achieved by businesses of all industries, all sizes, and of all stages of their lifecycle. Any measurement of engagement and impact must not implicitly deter researchers from collaborating with a willing industry partner.

The definitions of 'engagement' and 'impact' proffered by the consultation paper are broadly agreeable. However, additional emphasis should be placed on the fact that engagement is generally between a researcher and an individual business as opposed to a nebulously defined 'industry', and that the impact of research is more accurately measured at the level of one or more individual businesses as opposed to the macro 'economy'. Furthermore, the impact of research is made through the dissemination of new information, not just its application.

The Australian Chamber considers student researchers of all levels have an important role in developing a culture of collaboration. Students should be encouraged to engage in industry-research collaboration at the earliest possible point, for the mutual benefit of the student, the research organisation and industry.

As identified in this submission, the Chamber believes achieving a single system of measurement that can accurately and effectively evaluate the engagement and impact of both applied and pure research may not be possible. Utilising different sets of parameters to measure the impact and engagement of these two types of research streams should be considered to ensure neither is discouraged.

Table of Contents

1	Background	5
2	Creating incentives to collaborate	5
3	Innovation must be inclusive	6
4	All research disciplines cannot be accurately measured using a single system	6
5	Feedback Questions	7
5.1	Question 1: What definition of ‘engagement’ should be used for the purpose of assessment?	7
5.2	Question 2: What definition of ‘impact’ should be used for the purpose of assessment?	8
5.3	Question 3: How should the scope of the assessment be defined?	9
6	Conclusion	9
7	About the Australian Chamber	10

1 Background

The Australian Chamber believes that harnessing our innovation potential is vital if Australia is to build on its current advantages and sustain prosperity into the future. Innovation allows us to increase our competitiveness, create high quality jobs and achieve greater value for what we make and export. To fulfil this potential, we must address the most significant deficit in our current innovation system - collaboration.

As has been consistently recognised, although ranked highly for the production of quality research, Australia is the lowest ranked OECD country when it comes to collaboration between the research and industry sectors. As the key representative of industry, the Chamber understands the important role we can play to create an environment which brings together all parts of the innovation ecosystem to overcome these challenges.

In 2014, the NSW Business Chamber developed a report titled *Thinking Business: Industry-Research Collaboration*. This report, developed in consultation with over 100 businesses and research institutions, made six recommendations to address the barriers to industry-research collaboration:

- Establish good practice forums on corporate engagement and commercialisation
- General guidelines for engaging with companies and researchers
- SME capability development workshops
- Work integrated learning forums
- Creation of a marketplace for research expertise, and
- Supporting and consulting for Government reform

While responsibility to collaborate ultimately sits between business and researchers, the report confirmed that government has a vital role to play in establishing a framework where collaboration is actively incentivised and encouraged. The primary roles that the Federal Government must play include setting a fiscal policy that encourages business to grow and invest locally, funding research institutions, more effectively measuring their performance, incentivising business-research relationships, and making finance available to those whose collaborative innovation will drive the economy forward.

2 Creating incentives to collaborate

The overarching purpose of any changes to the measurement of university performance should be to develop a culture of collaboration. A current barrier to effective industry-research collaboration is the differing (and sometimes misaligned) motivations, expectations and cultures driving industry, research organisations, individual staff, and individual researchers.

Industry feedback suggests that the most effective way to overcome these differences is to build strong personal relationships between individual businesses and individual researchers. While it sounds simple, this is a complex and difficult undertaking. As a first step however, shifting the measurement of research performance away from publication and citation and towards impact and

engagement is essential in encouraging these relationships to develop and ensuring that there is mutual benefit for both researchers and businesses pursuing them more regularly.

For industry, particularly SME's, financial capacity provides a major disincentive towards undertaking collaborative opportunities. Government policy that assists these businesses build capacity to invest in research collaboration (that otherwise would not occur) through incentives should be pursued. Opportunities to look at adjustments to the R and D tax incentive that better support these businesses undertake research should be part of this discussion.

3 Innovation must be inclusive

The measurement of engagement and impact must not favour collaboration with a type of business or a particular sector. Innovation must not become the sole purview of large companies and corporations in the ICT sector. Positive benefits of innovation can be achieved by businesses of all industries, all sizes, and of all stages of their lifecycle. The innovation that can be affected by Government must be seen in its broad term – changing or creating more effective processes, products and ideas – rather than just the 'big-I' innovation, such as the development of a new app or focusing on start-ups and incubators. The current focus on the big end of town risks missing opportunities that could make each business more efficient or effective and contribute more to the economy.

Larger companies are generally better at industry-research collaboration than smaller businesses. They have the funds, resources, relationships and experience to set up a research partnership. The NSW Business Chamber report, *Thinking Business: Industry-Research Collaboration* identified the primary barriers dissuading SMEs from engaging in collaborative research. Along with misaligned cultures, motivations and expectations, these included their lack of internal resources to fund and manage a project, difficulties finding an appropriate researcher to work with and a lack of awareness of government support programs. Often, the perceived deterrent is worse than the reality, and businesses become more willing to engage in subsequent collaborative projects. The assessment could give a higher weighting to a university's engagement if it is with a business who has never engaged with research before.

4 All research disciplines cannot be accurately measured using a single system

The Australian Chamber understands that there are some research disciplines that have a higher potential to produce commercial outcomes than others. Attempting to evaluate the impact of different research types across all faculties using a single set of criteria and methodology risks understating the positive impact of 'business-oriented' research.

There is value to be gained by business from the full range of research disciplines. However, there are divisions to be found between those that have an immediate practicable output and those that may have a secondary or longer-term benefit, and between applied and pure research.

Generally, industry-research collaborations in the STEM disciplines can be designed and conducted with a clear objective in mind, for example, researching a solution to an engineering problem. At the conclusion of this type of research a business can implement the findings relatively quickly. The productivity improvements can be easily measured and the impact of the research can be evaluated. Research in the social science disciplines or pure research should not be discounted or discouraged, but when applicable to business, the impact can be very different and should be measured accordingly.

The value of research that has less direct impact and longer time lags between conceptualisation, project completion and implementation should not be discounted.

A recent working paper from the UK Energy Research Centre studied the timelines from invention to widespread commercialisation of 14 innovations and found that the initial invention, development and demonstration phase took from 4 to 37 years, while the market deployment and commercialisation phase took from 6 to 47 years.¹

A quantitative system of measurement designed to incentivise collaborative commercialisation will not easily take into account these differing factors. It may be more effective to use different sets of parameters to measure the impact and engagement of these two types of research streams to ensure neither is discouraged.

5 Feedback Questions

5.1 Question 1: What definition of ‘engagement’ should be used for the purpose of assessment?

The Australian Chamber broadly agrees with the Australian Academy of Technological Sciences and Engineering’s (ATSE) definition of ‘engagement’ as:

the interaction between researchers and research organisations and their larger communities/industries for the mutually beneficial exchange of knowledge, understanding and resources in a context of partnership and reciprocity.

However, it is important to make explicit the fact that engagement most often occurs between members of the research community and an individual business rather than an industry. Collaboration is most effective when a researcher is able to understand the problem, needs and resources of the singular business with which they are collaborating.

We would therefore amend the definition to read:

*the interaction between researchers and research organisations and their larger communities/industries **and individual businesses** for the mutually beneficial exchange of knowledge, understanding and resources in a context of partnership and reciprocity.*

It must also be acknowledged that a successful ‘engagement’ may take many forms. At a basic level, success is achieved when a business gains a benefit in knowledge, for example a

¹ See <http://www.ukerc.ac.uk/asset/ADA12E92-C1DC-4033-8CFA63AC9EA9FE59.6B438A7E-474E-437E-89025FD302A10A7C/>

collaborative project may help address a business' technical deficiency or bring new scientific knowledge to the business that contributes to solving a specific problem.

However, engaging with a researcher may also help a business conclude earlier that a specific path is not worth pursuing than if the business had proceeded alone. This result, while perhaps not making direct positive contributions to the economy, will have positive benefits for both the business and the researcher or research organisation in the form of resources saved, relationships formed, trust developed, and increased likelihood to engage again in the future. Collaborative research should be allowed to “fail fast, fail often”. To this end, any assessment of the engagement should have a qualitative element focussed on the business who has partnered with the researcher to effectively assess the quality of the engagement undertaken.

5.2 Question 2: What definition of ‘impact’ should be used for the purpose of assessment?

The Australian Chamber broadly agrees with the Australian Research Council's definition of ‘research impact’ as:

the demonstrable contribution that research makes to the economy, society, culture, national security, public policy or services, health, the environment, or quality of life, beyond contributions to academia.

However, as with the concept of ‘engagement’, the impact that research can have on a business can take many forms. Both definitions offered in the consultation paper (those used by the UK Research Excellence Framework and the Australian Research Council) define impact at a macro level – the external flow-on effects outside the business. At the micro level, the business benefits from problem-solving, enhanced efficiency, ability to turn an idea into commercial reality and the development of new knowledge networks.

There is a risk that defining the impact that research could potentially have on industry via its “contribution (...) to the economy” implies that research that will have an economy-wide impact (likely to be pure research) is more worthy of attention than research that focuses directly on solving the problems of a specific business or industry. The impact of research on an individual business must be captured in measurements if we are to encourage research institutions to work directly with businesses to conceive and develop research.

Beyond the direct impact that the application of research may have on a business, there are also valuable benefits to be gained through the creation, development and dissemination of that new knowledge. Through the investment and efforts of government and the private sector, there are expanding avenues through which research can impact upon a business. Government-funded industry-led collaborative partnerships such as the federal government's Industry Growth Centres and the NSW government's Knowledge Hubs are bringing together businesses, research organisations and industry associations to direct research, share information, and address sector specific issues to promote innovation. Geographical clusters are being established around the country proving that bringing diverse members of the innovation ecosystem into close proximity can spur new ideas and collaborative ventures.

The Australian Chamber would therefore amend the definition to read:

*the demonstrable contribution that research makes to the economy, **an individual business**, society, culture, national security, public policy or services, health, the environment, or quality of life, **through the creation, development, dissemination or application of new or specialised knowledge** beyond contributions to academia.*

5.3 Question 3: How should the scope of the assessment be defined?

Successful industry-research collaboration is not dependent on the prestige of the researcher or research institution. If a collaborative project is producing results, businesses are generally unconcerned by where the help came from. Their primary concerns centre around finding and building a relationship with a relevant researcher, being able to collaborate within their resources, understanding the risks of a research partnership, having a clear path to completion, and having an understanding of ownership of any generated intellectual property.

Undergraduates, postgraduates and doctorate level researchers can all play an important role in industry-research collaboration, so students must be accounted for in the measurement of a university's level of engagement and impact.

Universities that promote industry engagement at the earliest stages of a researcher's education should be rewarded. For businesses, particularly SMEs, collaborating with a university through students is a relatively cheap way to conduct a smaller discrete research project while having the skills and esteem of the organisation behind them. Participation in internship programs, placements and similar types of arrangements present a reduced-risk foray into industry-research collaboration.

For participating students, they are able to gain valuable real-world experience, a greater understanding of the issues, incentives and factors that drive industry, and contacts in an industry of interest, all which provide greater prospects for future employment. For research organisations, there are the added benefits of cheaply expanding their network in industry, testing research theory in a commercial environment and producing better quality graduates, all of which may assist in steering the direction of future research.

6 Conclusion

The overarching purpose of any changes to the measurement of university performance should be to develop a culture of collaboration. Shifting the measurement of research performance away from publication and citation and towards impact and engagement is essential in encouraging collaborative relationships to develop and ensuring that there is mutual benefit for both researchers and businesses pursuing them more regularly.

Positive benefits of innovation can be achieved by businesses of all industries, all sizes, and of all stages of their lifecycle. Any measurement of engagement and impact must not implicitly deter researchers from collaborating with a willing industry partner.

The definitions of ‘engagement’ and ‘impact’ proffered by the consultation paper are broadly agreeable. However, additional emphasis should be placed on the fact that engagement is generally between a researcher and an individual business as opposed to a nebulously defined ‘industry’, and that the impact of research is more accurately measured at the level of one or more individual businesses as opposed to the macro ‘economy’. Furthermore, the impact of research is made through the dissemination of new information, not just its application.

The Australian Chamber considers student researchers of all levels have an important role in developing a culture of collaboration. Students should be encouraged to engage in industry-research collaboration at the earliest possible point, for the mutual benefit of the student, the research organisation and industry.

As identified in this submission, the Chamber believes achieving a single system of measurement that can accurately and effectively evaluate the engagement and impact of both applied and pure research may not be possible. Utilising different sets of parameters to measure the impact and engagement of these two types of research streams should be considered to ensure neither is discouraged.

7 About the Australian Chamber

The Australian Chamber of Commerce and Industry speaks on behalf of Australian business at home and abroad.

Our membership comprises all state and territory chambers of commerce and dozens of national industry associations. Individual businesses also get involved through our Business Leaders Council.

We represent more than 300,000 businesses of all sizes, across all industries and all parts of the country, making us Australia’s most representative business organisation.

The Australian Chamber strives to make Australia a great place to do business in order to improve everyone’s standard of living.

We seek to create an environment in which businesspeople, employees and independent contractors can achieve their potential as part of a dynamic private sector. We encourage entrepreneurship and innovation to achieve prosperity, economic growth and jobs.

We focus on issues that impact on business, including economics, trade, workplace relations, work health and safety, and employment, education and training.

We advocate for Australian business in public debate and to policy decision-makers, including ministers, shadow ministers, other members of parliament, ministerial policy advisors, public servants, regulators and other national agencies. We also represent Australian business in international forums.

We represent the broad interests of the private sector rather than individual clients or a narrow sectional interest.

Australian Chamber Members

AUSTRALIAN CHAMBER MEMBERS: BUSINESS SA CANBERRA BUSINESS CHAMBER CHAMBER OF COMMERCE
NORTHERN TERRITORY CHAMBER OF COMMERCE & INDUSTRY QUEENSLAND CHAMBER OF COMMERCE &
INDUSTRY WESTERN AUSTRALIA NEW SOUTH WALES BUSINESS CHAMBER TASMANIAN CHAMBER OF
COMMERCE & INDUSTRY VICTORIAN' CHAMBER OF COMMERCE & INDUSTRY **MEMBER NATIONAL INDUSTRY**
ASSOCIATIONS: ACCORD – HYGIENE, COSMETIC & SPECIALTY PRODUCTS INDUSTRY **AGED AND COMMUNITY**
SERVICES AUSTRALIA AIR CONDITIONING & MECHANICAL CONTRACTORS' ASSOCIATION **ASSOCIATION OF**
FINANCIAL ADVISERS ASSOCIATION OF INDEPENDENT SCHOOLS OF NSW **AUSTRALIAN SUBSCRIPTION**
TELEVISION AND RADIO ASSOCIATION AUSTRALIAN BEVERAGES COUNCIL LIMITED AUSTRALIAN DENTAL
ASSOCIATION AUSTRALIAN DENTAL INDUSTRY ASSOCIATION AUSTRALIAN FEDERATION OF EMPLOYERS &
INDUSTRIES AUSTRALIAN FEDERATION OF TRAVEL AGENTS **AUSTRALIAN FOOD & GROCERY COUNCIL**
AUSTRALIAN HOTELS ASSOCIATION **AUSTRALIAN INTERNATIONAL AIRLINES OPERATIONS GROUP**
AUSTRALIAN MADE CAMPAIGN LIMITED **AUSTRALIAN MINES & METALS ASSOCIATION** AUSTRALIAN PAINT
MANUFACTURERS' FEDERATION **AUSTRALIAN RECORDING INDUSTRY ASSOCIATION** AUSTRALIAN RETAILERS'
ASSOCIATION AUSTRALIAN SELF MEDICATION INDUSTRY AUSTRALIAN STEEL INSTITUTE **AUSTRALIAN**
TOURISM AWARDS INC AUSTRALIAN TOURISM EXPORT COUNCIL **AUSTRALIAN VETERINARY ASSOCIATION**
BUS INDUSTRY CONFEDERATION **BUSINESS COUNCIL OF CO-OPERATIVES AND MUTUALS** CARAVAN
INDUSTRY ASSOCIATION OF AUSTRALIA **CEMENT CONCRETE AND AGGREGATES AUSTRALIA** COMMERCIAL
RADIO AUSTRALIA **CONSULT AUSTRALIA** CUSTOMER OWNED BANKING ASSOCIATION **CRUISE LINES**
INTERNATIONAL ASSOCIATION DIRECT SELLING ASSOCIATION OF AUSTRALIA **ECOTOURSIM AUSTRALIA**
EXHIBITION AND EVENT ASSOCIATION OF AUSTRALASIA **FITNESS AUSTRALIA** HOUSING INDUSTRY
ASSOCIATION **HIRE AND RENTAL INDUSTRY ASSOCIATION LTD** LARGE FORMAT RETAIL ASSOCIATION **LIVE**
PERFORMANCE AUSTRALIA MASTER BUILDERS AUSTRALIA **MASTER PLUMBERS' & MECHANICAL SERVICES**
ASSOCIATION OF AUSTRALIA MEDICAL TECHNOLOGY ASSOCIATION OF AUSTRALIA **NATIONAL DISABILITY**
SERVICES NATIONAL ELECTRICAL & COMMUNICATIONS ASSOCIATION **NATIONAL EMPLOYMENT SERVICES**
ASSOCIATION NATIONAL FIRE INDUSTRY ASSOCIATION **NATIONAL RETAIL ASSOCIATION** NATIONAL ROAD
AND MOTORISTS' ASSOCIATION **NSW TAXI COUNCIL** NATIONAL ONLINE RETAIL ASSOCIATION **OIL INDUSTRY**
INDUSTRIAL ASSOCIATION OUTDOOR MEDIA ASSOCIATION **PHARMACY GUILD OF AUSTRALIA** PHONOGRAPHIC
PERFORMANCE COMPANY OF AUSTRALIA **PLASTICS & CHEMICALS INDUSTRIES ASSOCIATION** PRINTING
INDUSTRIES ASSOCIATION OF AUSTRALIA **RESTAURANT & CATERING AUSTRALIA** SCREEN PRODUCERS
AUSTRALIA **VICTORIAN AUTOMOBILE CHAMBER OF COMMERCE**