

Knowledge Commercialisation Australasia (KCA) submission to the Inquiry into Funding Australia's Research

Dr Tim Boyle, KCA

Dr Erin Rayment, KCA

Dr Alastair Hick, KCA

Dr Dean Moss, KCA

Knowledge Commercialisation Australasia (KCA¹) is the peak body leading best practice in industry engagement, commercialisation and entrepreneurship for research organisations. It represents a significant majority of the commercialisation offices of public sector research organisations across Australia, and works with similar bodies globally including the US, Europe and the UK to develop best practice in commercialising research, particularly at an early stage. This involves activities from licensing technology to existing companies, academic consulting to industry, conducting sponsored research and spinning out new companies and increasing a combination of these.

KCA is highly supportive of the approach to review the efficiency, effectiveness and coherency of Australian Government funding for research. One significant issue that has hindered the development of a vibrant and successful research funding system has been the constant change in policy settings and programs over more than a decade at both a State and Territory level, and Federally. This is particularly of importance when considering the maximisation of impact of funding, including the delivery and translation of research outcomes into tangible and realisable benefits which create societal impact and public benefit.

Our universities and publically funded research agencies are being encouraged and incentivised to engage more with industry by Government and this is welcomed. There is increasing evidence that this is happening on an institution wide basis, but there is an opportunity to develop and adopt best practice across the whole sector through judicious intervention which cannot be separated from the dual funding system.

Training Support for Knowledge Transfer Practitioners

KCA is particularly focused on the translation of research and proposes an evidence-based approach to the dual funding model. This is critical when reviewing the funding of research translation and commercialisation activities, as they are currently fragmented across agencies. Due to this, there is currently a skills shortage within the knowledge transfer sector and there is an urgent need to upskill practitioners to achieve the desired impact outcomes and for organisations to meet the incoming ARC Impact metrics. When recently discussing this skills gap with representatives from the Department of Education and Training, we were advised that the required training should be funded by universities from their research block grant allocation. However, it is not clear to universities on how this block funded appropriation should be used in relation to training and upskilling of their knowledge transfer staff to maximising the impact of research funding.

Recommendation 1

Provide guidelines to universities and federally funded research agencies on how the research block funded grant appropriation should be allocated to upskilling knowledge transfer employees.

¹ See <https://www.kca.asn.au/>

Proof of Concept Funding

A noted gap in the commercialisation of intellectual property from universities and associated medical research institutes is access to proof-of-concept funding. The transition from block or competitive grant funded research to commercial licensing and venture backed start-ups is again noted as being the greatest barrier to successful commercialisation. Intellectual property as a tangible outcome of competitive grant funded-research is inherently immature and the investment market will generally not invest at this early stage. However, while there are few grant schemes beyond ARC Linkage and NHMRC Development that target the establishment of commercial proof of concept, the timeframe of these grants is not suited to most commercial opportunities in this setting. The Accelerating Commercialisation scheme under the Entrepreneurs' Program and some State-based schemes offer some support in this area, but again the timeframes are often not conducive to the majority of opportunities arising from public funded research. As a result, investments at this stage which bear the greatest risk fall to the university and their technology transfer and commercialisation offices to fund. Dedicated proof-of-concept funds are not at scale, and are only available on at best, an *ad hoc* basis across some universities. The net result is a significant number of commercial opportunities from grant-funded research are not commercially progressed.

Access to proof-of-concept funding remains a significant barrier to the effective commercialisation of university and associated-medical research institutes intellectual property. The creation of a National Proof-of Concept Scheme which was light touch and locally administered would be a very desirable intervention with considerable, quantifiable benefit to the National innovation landscape. An excellent example of such a scheme is the NZ Pre-Seed Accelerator Fund² where decision making is effectively devolved to the local level of approved commercialisation entities which have pre-approved decision making processes with matched funding provided by the institutions. These can be individual commercialisation offices, or networks in order to gain scale. This program has been successfully run since 2003 and has delivered both the flexibility required for individual opportunities as well as accountability through approved investment processes. It is noted that a secondary effect in the way these funds are operated is the skill building in commercial opportunity assessment that occurs at the local level. A review of the performance of the Pre-Seed Accelerator fund in 2014 showed that it had created 460 high-technology jobs, \$188 million of external investment into research organisations and potential export earnings of \$3 billion³.

It should be noted that without adequate proof of concept funding the desired translation research outcomes and impact/public benefit from Australian Government funding of research will not occur.

Recommendation 2

Establishment of a devolved proof of concept funding scheme separate from institutional block funding, similar to the NZ Pre-Seed Accelerator Fund, to enable rapid, local decision making for advancing opportunities to the point at which they can be commercialised.

Third Stream Funding for Capability and Capacity Building

The third area of need in regards to realising the benefits of Australian Government funding for research exists around improving capability, and increasing the capacity of commercialisation offices

² See <http://www.mbie.govt.nz/info-services/science-innovation/investment-funding/current-funding/pre-seed-accelerator-fund>

³ <https://www.kiwinet.org.nz/Investment/PreSeed10YearReview>

of universities and medical research institutes. There are skills gaps across the innovation ecosystem that could be addressed with sufficient training, but that training requires funding, both to be developed and delivered, and then attended. The size of commercial teams also requires attention, with many of our Australian commercial offices being significantly under resourced, some only having a team of two people to service an entire institution around commercialisation, industry engagement and student entrepreneurship. Without training and access to funding independent of institutional funding, we will continue to see the same outputs, and without a critical mass of experienced commercialisation teams, we will not see the step change in success from our technology transfer and commercialisation offices that we all desire.

The UK addressed this same issue with the introduction of bipartisan supported third stream funding in their Higher Education Innovation Fund.⁴ This fund has been in place for more than a decade, and has facilitated the development of a vibrant knowledge exchange sector in UK Higher Education Institutions, and has enabled each Institution to develop a strategy that is unique to its context and goals. There is also a vibrant practitioner led training and professional development system in the UK through PraxisAuril⁵, which runs a range of professional development courses to upskill commercialisation and knowledge exchange staff in all areas from commercialisation through business development and industry engagement. This enables practitioners to progress through to recognition as a Registered Technology Transfer Professional (RTTP). RTTP was developed by the Alliance of Technology Transfer Professionals (ATTP)⁶ as a globally recognised professional designation. KCA is a founding member of ATTP, and is supportive of practitioners working towards earning RTTP recognition. KCA also developed a world first skills framework for commercialisation practitioners with funding from the Professional Services Council⁷ that has attracted significant interest globally. However, in order to fully utilise this framework, new courses need to be developed and delivered, and currently there are insufficient resources to do this. Further to this, many research organisations do not have the funds to support the professional development of their commercialisation practitioners.

An Australian third stream funding program for our university and federally funded research agencies would help to address these capacity and capability issues by developing a critical mass of well-trained commercialisation professionals with the skills necessary to translate the high quality basic research in the Australian research system.

Recommendation 3

Establishment of system wide third stream funding for supporting the development of additional commercialisation capacity and development and delivery of worldwide recognised training and support for developing best practice in commercialisation.

⁴ See <http://www.hefce.ac.uk/ke/heif/>

⁵ See <https://www.praxisunico.org.uk/>

⁶ See <http://attp.info/>

⁷ See <https://kcaincorporated.wordpress.com/2016/09/09/world-first-career-framework-for-technology-transfer-professionals-published/>