

9 April 2021

Dear Minister,

This letter represents a submission by the Australian Institute of Physics to the consultation paper “University Research Commercialisation”.

By way of introduction, the Australian Institute of Physics (AIP) is the key professional association for physicists in Australia, representing Physicists in all areas including industry, government, academia and education. The AIP’s core purpose and mission is to provide a forum for discourse on all matters of relevance to physics and related sciences and technology, both within the community and to the broader public. The AIP serves the community through advocacy, provision of scientific and technological advice, the award of several of Australia’s most prestigious physics prizes, the accreditation of Australian physics degrees and through the organisation of numerous international scientific events, including foremost the biennial AIP physics congress usually attracting over 800 delegates. The AIP is a member of Science & Technology Australia, participates in the Committee for Physics of the Australian Academy of Sciences including the decadal plan for physics, and maintains close links to its numerous cognate scientific associations and other national physics associations globally.

This submission was developed by the National Executive committee of the AIP, after seeking the feedback from our members. All parts of this submission can be made public.

The AIP strongly supports the idea of creating stronger links and closer partnerships between Australian industry and universities. As such, the AIP is supportive of the government’s proposal to develop a scheme to foster closer partnerships, and also of several of the specific suggestions.

However, the AIP is clear in its opinion that the value of university research activity is far broader than the scale of the economic return of commercialisation activities. Fostering stronger industry-university partnerships is a welcome goal as long as core academic values are respected, including research independence, academic freedom, commitment to excellence and the close integration of teaching and research, and as long as funding dedicated to this goal is not a substitute for funding fundamental research. The foundation for successful commercialisation is excellent research, hence any attempt at increasing commercialisation should go hand in hand with stronger support for fundamental research excellence.

With respect to the specific questions posed in the consultation paper, the AIP wishes to provide the following commentary for your consideration:

- **Mission-driven research funding approach:** The relevant question is not how missions should be selected, but whether it is necessary to have this step of selecting missions. The big questions and problems facing our society are clear without a government having to stipulate them. To do so, creates unnecessary administrative overhead as well as the risk of excluding projects outside of this narrowing scope. We do not consider that a mission-driven research funding approach is central to the success of commercialising university research e, and we believe that with respect to science policy the government should not ‘pick winners’.
- **Stage-gated scheme design:** The AIP supports the notion of ‘de-risking research projects’ and the need for greater support of promising translational research ideas to a proof of concept stage. This must in particular include measures to enable researchers, often early career researchers (ECRs), to take the risk of ‘having a go’ at attempting to commercialise an idea. The AIP has no clear opinion on whether a stage-gated scheme design is the best. However, the AIP would like to suggest that a central and well-funded part of the scheme should be grants that enable researchers, and particular ECRs, to attempt commercialisation – both by providing funds for it and by mitigating career risk if the commercialisation fails.

- **Incentives for participation:** The AIP expresses some concerns with the statement “The current university system is incentivised to deliver and reward research excellence more than research commercialisation” and with the stated need to change this emphasis. The two (research excellence and research commercialisation) are, in the bigger scheme of things closely interlinked.

The more important step is to ‘de-risk’ commercialisation and innovation projects, particularly for ECRs. Where attempts at commercialising research findings, even if ultimately unsuccessful, have negatively affected other performance metrics (such as publication output), these risks should be genuinely mitigated and the attempts rewarded. However, research excellence should be an uncompromisable criterion for incentives in universities.

- **Industry-University collaborations:** Most partnerships start with a first, often random, encounter of the prospective partners. In an effort to create stronger university-industry partnerships, the government’s scheme should include simple (and low cost) incentives to create such meeting points. Such steps could include funds to hold industry/university meetings, funds for internships or short projects, funds to integrate industry professionals in teaching, and funds (for example, teaching relief funds) for university staff to dedicate time to developing industry relations.

Rather than imposing constraints and burdens on academic staff, it seems wise to focus the efforts to enhance industry contacts and collaborations by junior members of the academic community, including students. Students, both undergraduate and postgraduate, and ECRs are the future assets for the industry both as skilled employee and as prospective entrepreneurs.

Creating opportunities for links between academia and industry is, in our opinion, the better way to create partnerships than diverting academic performance criteria.

In supporting commercialising efforts, it is critical that Australia does not compromise its research excellence, which comes out of fundamental and applied research. It is crucial to recognise that the potential which the government seeks to tap into with the commercialisation scheme is found in this reservoir of fundamental excellence.

The future successes of Australia’s universities – commercial and otherwise – will not make or break with this particular ‘University Research Commercialisation’ initiative. They will depend on the broad university, tertiary education and research strategy that the federal government pursues. The AIP contends that an adherence to a broad guiding principle focusing on excellence in teaching and excellence in research is, a stronger guarantee of maintaining Australia’s internationally recognised excellence in innovation than any scheme specifically labelled to strengthen it.

Close partnerships between academia and industry are at the heart of the AIP’s interest to see Australia’s physics community contribute to our society and economy. As such, the National Executive of the AIP is keen and ready to assist the government in the development of research commercialisation schemes. We thank the Minister for considering the above comments in developing a scheme to enhance University Research Commercialisation.

Kind regards,



Sven Rogge

President of the Australian Institute of Physics

– on behalf of the National Executive –