

Response to the consultation on National Priorities and Industry Linkage Fund (NPILF)

30 October 2020

The 2019 report [Preparing for Australia's Digital Future](#) identifies recommendations of relevance to this discussion paper: Encouraging digital leadership in Industries; Fostering research and industry partnerships for our digital future; Safeguarding and strengthening our digital workforce and capability pipeline; Ensuring whole-of-government action for our digital future; Delivering research sector reforms. We invite the NPILF stakeholders to take a closer look at the recommendations of the report, which demonstrate a close alignment with NPILF and highlight the central role of Information and Communication Sciences in a (digitally) competent future workforce.

It is pleasing to see the recognition of the emerging requirements of future graduates to *have the capabilities, adaptability and experience they will need in a challenging labour market*. We welcome the breadth via *broad education [...], which can enable new graduates to adapt to future workforce needs*.

The paper should consider a broader definition of new programs or initiatives that can synergistically combine required skills and capabilities, enabling university-industry partnerships and engagement, including but not limited to enhanced skills in innovation and connection to research translation. A vibrant ecosystem of university-industry networks creates the important nexus between a university's two core functions (teaching and learning) with research. We welcome the improved view of *industry-university partnerships* and propose a broader view of industry-university partnerships that provides Australian graduates not only the skills to succeed in the workforce, but attributes, vision and foresight to be future leaders, successful in working for as well as creating new companies.

Schemes that encourage knowledge exchange in science and technology between industry and academia should be supported. An example of international best practice for this is the [Industry Fellowships](#) offered by the Royal Society as part of their [Science and Industry Programme](#). The Fellowships encourage industry to invest in collaborative projects with academia and support the mobility of research between the sectors.

The paper's definition of work-integrated learning adopts low-level skill developments and does not sufficiently address sufficiently new or emerging opportunities for graduates to engage in projects with Australian industry, such as access to university research competencies via collaborative projects. Teaming industry and academia to jointly develop programs that enhance innovation-ready graduates is critical, as is research-integrated learning, on the basis that new jobs and industries are enabled by R&D. We encourage a scheme that allows innovative methods for graduates to engage in activities that will deliver a multiplicative effect of the investment by addressing systemic issues in building the nation's innovation capacity.

We also welcome both the recognition of the lack of suitably profiled data on the nature and the extent of university-industry collaboration and the benchmarking exercise in line with international studies. We concur that a study similar to UK's Higher Education and Business & Community Interaction Survey will provide the necessary data and be ideal to be repeated periodically, towards lifting the Australia's competitiveness index profile.

Response to specific principles

Principle 1: We appreciate the flexibility for universities to arrive at innovative and differentiated programs depending on their teaching and research profiles and the importance of measuring the impact of the Job-Ready program via a workable and cost-effective and transparent reporting.

Reporting should provide reflective feedback from students, university and industry perspectives so that there are sufficient incentives to learn and adapt.

Principle 2: A minimum of 10 and up to 15 indicators (e.g. five indicators under three categories) may provide the flexibility to capture programs across a diverse university sector.

We note the risk of the fund being directed to managing indicators and meeting reporting obligations rather than actually bringing about a change in university-industry linkages.

Principle 3: Given the focus on graduates and Australian industry, it is important to recognise the employability of research graduates (Master's to PhD) and articulation of the value of transferable skills to industry as a potential opportunity to enhance student experience by placing them in industry-university collaboration. Some metrics could be expanded to cover this aspect.

Principle 4: Incentives could preferentially focus on new style programs that proactively support university-industry collaboration and enable immersion and exposure to business problems and solution development, such as APR.Intern and the [Royal Society's programs](#).

We propose to strengthen STEM+ with specific metrics pertaining to digital skills (beyond literacy). This is critical to ensure and promote the sustainability of digital infrastructure, bridge the emerging digital divide and plan for a digitally enabled society of the future.

Principle 5: Data collection is important and needs to be repeated at an (optimum) interval of three to five years.

Principle 6: There may be a risk of re-enforcing institutional silos, whereas a genuine shift towards meaningful and impactful university-industry linkages would need cross-institutional initiatives and metrics.

Principle 7: Additional program overload on universities should be minimised and majority of funding directed towards programs instead of overheads, i.e. universities could allocate funds to the direct cost of running programs instead of diverting them to cover indirect costs.

Principle 8: WIL could be improved to consider more innovative placements to enhance the impedance matching between industry and university in research value creation.

Principle 9: WIL opportunities can encompass everything from job simulation to internships. Business and industry, however, must be encouraged to work with the university sector to create these activities, which should be an integral part of educational program design, delivery and assessment to be effectively measured.

Principle 10: Additional government initiatives (and funding) could encourage the development of WIL opportunities by business and industry to bridge the academic/industry divide, support the creation of job opportunities for graduates and develop and encourage better long-term research connections and collaborations.

Principle 11: There are significant enabling resources needed to provide linkages to SMEs that may not have the capacity to properly benefit from the activities. Some funding could be used to create 'innovator' schemes to work with industry.

Principle 12: Graduates need to not only be prepared for the jobs of the present but must also possess the flexibility of mind, resilience and ability to adapt their skills or learn new skills so that they are prepared for the jobs of the future, and thus cross-disciplinary and multi-disciplinary placements should be prioritised.

Principle 13: There are significant enabling resources needed to provide linkages to SMEs that may not have the capacity to properly benefit from the activities.

Principle 15: The [Carnot](#) network in France is a good example of WIL.

Principle 17: It is recommended that changes and associated activities be phased in cycles of development, testing and adoption to ensure successful long-term job outcomes and enduring industry partnerships and collaborations.