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Department of Education, Skills and Employment
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FEEDBACK ON THE NATIONAL PRIORITIES AND INDUSTRY LINKAGE FUND CONSULTATION

Engineers Australia is the peak professional association for engineers, with about 100,000 individual members. Engineers Australia is highly relevant to this consultation process because of its strong understanding of the needs of industry, and as it is the internationally recognised accreditation body for Australian undergraduate engineering qualifications. Engineers Australia was a founding member of the Washington Accord 1989. The Accord is a multi-lateral agreement to recognise the substantial equivalence of AQF 8/9 engineering qualifications as the agreed education base for the profession and facilitates international mobility. Engineers Australia is also a signatory of the Sydney and Dublin Accords, which recognise 3-year (AQF 7) and 2-year (AQF 6) engineering qualifications.

Student engagement with professional practice and university engagement with industry for curriculum design and feedback mechanisms are long-standing and core accreditation criteria. Traditionally, student engagement with professional practice was via a 12-week (paid) industry placement. The 12-week placement was not prescribed, but it represented the norm. The criterion has always had flexibility to include in-curricula and innovative WIL. Overall, the engagement with professional practice criteria continues to serve the profession well as evidenced by positive employment outcomes for engineers. However, the past 5-10 years has seen increasing challenges due to industry being unable to meet demands of a growing student population and administrative complexities (e.g. visa requirements, ESOS Act, TEQSA guidelines, Fair Work Australia requirements and insurances).

COVID-19 constraints have highlighted the need to ensure a wide range of opportunities. Without coordinated action now, graduate outcomes may not meet industry expectations or graduate employment outcomes may decrease. To support universities to manage accreditation requirements, the Engineers Australia Accreditation Board released guidelines that reinforced existing flexibility in accreditation criteria and articulated options available for engagement with professional practice^{i,ii}. These options include short-term placements, in-curricula and co-curricular activities that align well with innovative WIL. The criticality of the need for action on placements was also highlighted in the Joint Statement of Principles for the Higher Education Sector COVID-19 Response, by the Australian Council of Professions and peak higher education representative bodiesⁱⁱⁱ.

Engineers Australia works closely with the Australian Council of Engineering Deans (ACED) to understand the needs of universities and industry. As a member service, we have a team focused on student and tertiary engagement opportunities. The work of the team includes campus activities, student/industry networking events, access to professional development webinars, and an active Jobs Board for internships, placements and graduate positions^{iv}.

Response to discussion paper questions

Engineers Australia supports the Government prioritising STEM related initiatives and the concept of the National Priorities and Industry Linkage Fund. However, while the NPILF promotes partnership and engagement with industry, it is targeted at, and provides funding to, universities. For the initiative to be effective, complementary programs are needed to support and incentivise engagement by industry and professional associations. The following feedback is based on extensive interactions over time with universities, students and industry. Engineers Australia would welcome the opportunity to expand on, or further discuss, the feedback.

1 – Principles: The principles are university-centric. Principles from an industry or student perspective would be valuable, particularly as industry engages with different providers at different times. For example, principles may relate to fair and equitable access for industry or minimising the cost to industry and students. The principles could also specify initiatives or activities precluded such as commercial gain, or payment for access to WIL, placements or students.

9 – Quality of activities: Independent benchmarking through professional accreditation can complement internal university indicators monitoring the quality of WIL. It also considers broader industry needs.

10-11 – Promotion and engagement: Professional associations have strong communities that can, and do, provide valuable networks to develop sustainable relationships between students, universities and industry to promote and engage with WIL. These networks create broader industry/university sector wide partnerships that enable a shared understanding of activities that are effective and practical. The NFILP appears too focused on individual partnerships between a given university and their industry partners, and this may create an equitable access risk.

12 – Beyond the lab: The promotion of the diverse career opportunities in engineering and other professions that benefit from STEM+ skillsets is essential from primary school through to the tertiary education system. In the context of WIL, it is important to define ‘industry’ in the broadest context. For example, Government at all levels employ engineering graduates and WIL/placements should be representative of this. Similarly, there should be opportunities with sole traders, SMEs, multi-national organisations and research or aligned organisations.

13 – Challenges for SMEs: Engineers Australia has seen many challenges for industry, including: understanding the university environment; appreciating expectations/objectives/flexibility of activities; navigating the industrial relations landscape/payment options; and being able to resource (financial and people) opportunities. This last challenge is not addressed in the NFILP, as the funding is directed to support the university. Traditionally, industry has borne the cost of work placements, but changing economic conditions have created limitations.

14 – Sharing of practice: The framework focuses on universities planning, implementing and reporting individually. To further encourage the sharing and evaluation of best practice there is value in directing a portion of the funding to complementary programs that support cross-institutional research. In addition, funding directed to the development of open access resources such as virtual placements would provide greater value.

15 – Exemplars: Engineers Australia would welcome the opportunity to share examples of best practice. The engineering education community have undertaken extensive work understanding this space. Increasingly, we are seeing integrated approaches that enable students to engage, and reflect on, a variety of activities from first to final year. Advanced apprenticeships, coop programs and sandwich courses also provide an integrated approach.

16 – Lifelong learning: Continuing professional development is a core requirement for many professionals, including engineers. The NPILF appears to focus on undergraduates being ‘ready’ to enter industry rather than ongoing development needs.

18 – Other comments: Preparing job ready graduates requires a whole of system approach with roles and responsibilities shared between students, universities, industry *and* professional associations. The NPILF acknowledges the shared responsibility between universities and industry but only incentivises the universities. International examples, such as the French internship model normalises internships by supporting a stipend for industry and students. Current initiatives such as the Government’s Boosting Apprenticeship Commencements wage subsidy or similar could be extended to industry placements.

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ⁱ Existing criteria available in Section 3.4 of https://www.engineersaustralia.org.au/sites/default/files/2019-09/AMS-MAN-10_Accreditation_Criteria_User_Guide-Higher_Education_v2.0.pdf

ⁱⁱ COVID-19 principles available at https://www.engineersaustralia.org.au/sites/default/files/2020-05/AMS-POL-02_Accreditation_Principles-COVID_v1.0.pdf

ⁱⁱⁱ <https://www.professions.org.au/higher-education-sector-covid-19-response/>

^{iv} <https://frontier.engineersaustralia.org.au/jobs/>