

The University of Queensland's Submission to the National Priorities and Industry Linkage Fund Consultation

The University of Queensland (UQ) welcomes the opportunity to provide feedback to the National Priorities and Industry Linkage Fund (NPLIF) consultation paper. UQ's Strategic Plan outlines our commitment to supporting our students to develop their employability. In alignment with the priorities of the NPLIF we are increasing the availability of work integrated learning, as well as providing a growing number of cocurricular and extracurricular experiential learning opportunities. We are also focussed on incorporating stronger collaborative partnerships with industry into our teaching and learning activities, both within and beyond the classroom (noting that our definition of industry includes the community sector and government). We therefore welcome the intent of the NPLIF and have provided feedback to the specific questions outlined in the Consultation Paper.

Principles

1. Do the principles provide clear guidance on what is expected of an indicator?

The principles outlined in Table 3 of the consultation paper are clear and help differentiate between demonstrators and innovators. However, as outlined in our response to question 4, it will be difficult and resource intensive for the sector to report on many of the proposed metrics with accuracy.

Tiered Indicators

2. How many indicators (i.e. 10, 12, or 15) might universities need to meet, to achieve the outcomes of NPLIF, while also accounting for university missions?

3. Do the indicators provide enough flexibility to meet the varied needs of business?

We are pleased that the proposal provides flexibility, recognises unique institutional contexts, and is designed to encourage universities to be innovative and take risks. We also welcome the mix of quantitative and qualitative measures and understand the need for universities to provide a plan for each of the three priorities.

However, we are concerned that a framework containing 12 indicators each year is formulaic and introduces a significant reporting burden that could inhibit action. We also believe an approach that requires new plans each year does not reflect the longer timeframes required to scale up WIL initiatives across a wide range of courses, increase access to STEM-related learning across the curriculum, and grow sustainable and long term partnerships with industry. The requirement for a new plan each year is likely to encourage the reporting of short term/small scale activity that can be easily achieved in a 12-month period. Given the average length of an undergraduate degree is now over four years, it will not be possible to demonstrate how initiatives have enhanced graduate outcomes within 12 months.

We believe there would be greater value in asking universities to produce 3-5 year plans. These are more likely to elicit ambitious plans which show how the university's employability strategy is being scaled across the organisation. This will give some time to demonstrate impact and outcomes, with annual progress reporting able to provide assurance of direction of travel and identify milestones that have been met.

4. Do you agree with the metrics listed? Which are the most valuable? Would you add other metrics?

The consultation paper states that NPILF reporting will not be onerous but many of the proposed metrics will require significant resource to collect. To ensure accuracy and provide comparable data, the metrics will need to be tightly defined and the collection of this information systematised across the sector.

For example, how is 'curriculum' defined in the metric '% of the curriculum that is co-designed by industry'. Will this be measured at the unit of study level or the course level? What is the definition of co-designed? We do not currently have IT systems or businesses processes set up to systematically collect this information from our unit and course co-ordinators. This will require significant investment in the development of our curriculum management system and academic/professional time to pull these data together at the university level.

Similar issues exist across many of the other metrics. If the Government wishes to standardise and determine the metrics included in NPILF reporting, we would advise that a working party be formed with institutional and departmental staff with expertise in university statistics. Some of the reporting on the embedding of WIL and STEM+ skills may need to be incorporated into the HEIMS student collection, building on the work that was done to collect data on end-user engagement by HDR students. It is worth noting that the 2017 national audit of WIL was very resource intensive and, although only tasked with collecting data on WIL activities, collected a myriad of experiences that met different criteria as the definition was self-determined.

An interim approach could require universities to set SMART KPIs that are directly linked to their specific initiatives, rather than ask them to choose from a pre-defined list of metrics that are measuring institution wide changes.

5. To be able to measure industry linkages, is there an appetite to create a new system of data collection?

UQ is developing mechanisms to measure and report on industry linkages under our Industry Partnership Framework but the diversity of these partnerships makes this a complex undertaking. Some industry partnerships are managed at a university/faculty level through comprehensive formal agreements and contracts. Others may be informal and managed through individual relationships (e.g. between an academic and a professional connection they have within industry). Developing systems and coding frameworks to reflect the breadth and depth of these relationships can be challenging. These data would also be self-reported, with associated audit and voracity issues if effective comparisons are desirable.

If the Government has an appetite to develop a national collection this could be a significant undertaking.

Allocation methodology

6. **Is the proposed mechanism for allocation appropriate as a mechanism to incentivise new behaviours in the sector? *Could re-allocation be introduced earlier/not at all?***

The formulaic approach to allocating funds seems at odds with a planning and reporting framework that allows universities to set their own goals and targets and self-assess their performance.

Distribution options

7. **Which distribution method (i.e. banded; per EFTSL-rate; base; loadings) makes most sense? Or can you propose another method?**

There is value in setting a nominal fixed base amount to reflect base level activity. This should be combined with a per EFTSL rate to recognise the size of the institution.

Priorities – WIL, STEM-skills and Industry partnerships

8. **Do you agree with the definitions of WIL, STEM+ and Industry partnerships in the context of NPILF?**

We would recommend defining WIL in line with the [National WIL Strategy](#): an ‘umbrella term for a range of approaches and strategies that integrate theory with the practice of work within a purposefully designed curriculum.’ This was developed by the Australian Collaborative Education Network (ACEN) in collaboration with Universities Australia, Australian Chamber of Commerce (ACCI), Australian Industry Group (AIG) and the Business Council of Australia (BCA).

STEM+ is an improvement on the previous narrow focus on STEM but it assumes that only core STEM fields develop graduates with transferable capabilities such as “problem solving, inquiry, digital literacy and creative and critical thinking.” Humanities and social science graduates are also sought after in growth industries as these capabilities are foregrounded in their education.

We believe that the role of higher education is to develop well-rounded adaptable graduates. Rather than STEM+ we would argue that the policy should focus on transferable employability capabilities and mindsets that complement specialist knowledge. In most analyses it is a more interdisciplinary set of capabilities that are key in preparing graduates for careers in the age of automation and machine learning.

The STEM/HASS dichotomy is likely to degrade in the future workforce and the driving requirement of job-ready graduates will be flexibility across critical thinking, technical, and interpersonal paradigms to create more adaptable and future focussed career capable graduates. In this context, the best way we can prepare graduates for the future of work is through encouraging literacy across disciplines and approaches. The World Economic Forum report [The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution](#) (2016) found that “many formerly purely technical occupations are expected to show a new demand for creative and interpersonal skills”¹. This report also highlights the growing importance of an entrepreneurial mindset – a view shared with Foundation

¹World Economic Forum (2018). *The Future of Jobs Report*. Retrieved from http://www3.weforum.org/docs/WEF_Future_of_Jobs_2018.pdf.

for Young Australians², CSIRO Data 61³ and AiGroup⁴, who found that such mindsets are growing in importance, will be key capabilities in the future, and are essential for sustaining future workforces.

9. How does a university measure and maintain the quality of WIL activities? – consider if a current program/framework could be used broadly across the sector.

At UQ we record which units include a WIL component and this allows us to identify where WIL activity is occurring and how many students are engaged in this form of learning.

Quality is maintained through our normal Teaching and Learning feedback mechanisms and relevant accreditation processes. We also produce good practice resources to WIL practitioners (such as [UQ WIL guide to good practice](#)), support communities of practice and provide professional learning for academics who wish to embed WIL into their teaching. We also run a [WIL Knowledge Network](#) that supports academics to share best practice and further embed employability, career development learning, and entrepreneurial education in the curriculum.

10. How does a university promote WIL, and the benefits of WIL (especially new, innovative or 'remote' approaches) to SMEs and large organisations, and is there a role for Government?

We promote WIL through direct engagement with industry by our schools, faculties, and individual staff as well as through a targeted ["business & industry"](#) page. We also have projects underway within Faculties to develop a holistic engagement strategy with SMEs that, if successful, could be rolled out across UQ. As outlined in the [National WIL Strategy](#), government also has an important part to play here in advocating for, and educating organisations on, the value of WIL engagement.

11. How can universities best engage industry, particularly SMEs, with WIL?

Universities can best engage industry by listening to the organisation's needs and responding appropriately, providing support, advice, and creative responses to challenges faces by smaller organisations in relation to human capital and capacity issues. Being flexible with structure and implementation to better align to SMEs' potential, rather than imposing university expectations.

12. How can universities help STEM+ students "think beyond the lab" and expose them to the vast employment landscape they can access?

The UQ [Employability Framework](#) ensures that students recognise that many of the capabilities that are useful in a STEM+ environment can be equally valuable in non-STEM+ based roles, and vice versa. This encourages students to engage in activities that allow them to broaden their perspectives and options, rather than continuing with a narrow view of how and where they can apply their degree-specific knowledge.

Specific strategies include embedding employability, career development learning, and [entrepreneurial education](#) into the curriculum as well as providing extra-curricula activities such as industry innovation challenges to bring together multidisciplinary teams to solve problems for collaborators in key industry sectors. Accelerators and increased opportunities for placements or projects to be undertaken with startups and innovation corporates are other mechanisms.

² Foundation for Young Australians (2018). *The New Work Reality*. Retrieved from <https://www.fya.org.au/our-research/>

³ Hajkowicz SA, Neale N, Cameron L, Horton J, Naughtin C, Bratanova A, Sauer K (2018). *The innovation imperative: Risks and opportunities for Queensland over the coming decades of economic and technological transformation*. A Report by CSIRO Data61 for the Queensland Government Department of Innovation, Tourism, Industry Development and the Commonwealth Games. Brisbane, Australia

⁴AiGroup (2018). *Skilling: A National Imperative*. Retrieved from https://cdn.aigroup.com.au/Reports/2018/Survey_Report_WFDNeeds_Skilling_Sept2018.pdf

13. Are there specific challenges for SME's in engaging with universities that need to be addressed in the framework?

SMEs are time poor and require additional support to understand the range of engagement possibilities with universities. Engagement with industry is likely to require coordination across university faculties – with SMEs seeking expertise from a range of disciplines. This requires central coordination, established processes and incentives for faculties to support such activities, particularly with an intention to scale the numbers of collaborative companies.

14. Does the framework allow sufficient knowledge sharing to enable universities and industry to build on successful models?

We are supportive of using the NPILF to collect and publish information on initiatives and collaborations within the sector. There may be opportunities to link in with the work ACEN already does to share best practice through [case studies](#), online [guides](#), [resources](#), and [projects](#).

Existing practice

15. Does your business or university have good examples of WIL, or partnerships, which can be used as exemplars?

UQ has a wide range of WIL initiatives and partnerships across all parts of the University. Below is a select list of examples to show the breadth and depth of this work.

- [Wonder of Science](#) designed to promote STEM culture in Queensland schools
- [Community Engagement Program](#) in Business, Economics and Law
- [Placement Program](#) within our Bachelor of Engineering/Masters of Engineering
- [Virtual Start Up Adventures](#) providing global learning experiences in innovation and entrepreneurship
- [Activate Internships](#) providing opportunities for students to deliver a business project for a startup, business or non-profit
- [Ilab Accelerator](#) to support new start-ups
- [Boeing Research and Technology Australia co-location](#) at UQ's St Lucia campus
- [Career Development Framework](#) to facilitate industry experiences for HDR students
- [Industry Connect](#) to facilitate holistic research and educational partnerships with industry

16. Does the framework sufficiently address the lifetime of learning challenge facing the workforce?

Adaptability is the key. We argue that the focus on STEM+ may not be a sustainable long-term strategy as the future world of work changes. Many of the capabilities required of graduates such as critical thought, creativity, and communication come from humanities and social science disciplines, and the workforce needs in the fields of Education and Training, and Health Care and Social Assistance are increasing at exponential rates. We also wish to challenge assumptions around WIL placements as a panacea for preparation for future work. More creative approaches to WIL and [embedding](#) employability, career development learning, and entrepreneurial education into the curriculum holistically can produce more impactful sustainable outcomes.

17. Does the 12 month NPILF cycle allow enough time to implement and report on activities

As outlined in our response to question 3, we believe that longer term plans will be more useful than annual plans.

18. Do you have any other feedback or comments?

- The proposed NPILF framework could be enhanced with a greater focus on industry need – which is likely to be broad. SMEs, start-ups, not-for-profit/public sector, and multi-national corporations will have diverse needs and expectations and will want to engage with universities in different ways and for different strategic reasons.
- It is our assumption and expectation that the term ‘industry’ is being used in the broadest sense to include not-for-profits, community, and public sector agencies.
- The place of Higher Degree by Research (HDR) students within the NPILF could be more fully elaborated. Many of the indicators are focussed on coursework programs and are not easily applied directly to HDRs.
- We would like to see greater recognition of the value of research partnerships along with metrics that measure the impact and ongoing returns of these partnerships rather than just the quantity/financial value at the point of contract. Research Partnerships are a critical mechanism through which Universities connect to Industry, Government and Community and align research to high value social and economic problems. Strong research partnerships ensure that researchers have the skills and awareness to connect beyond academia, leading to more relevant research and teaching experiences.