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Australian Government
Department of Education, Skills and Employment

National Priorities and Industry Linkage Fund: Final report

10 December 2020

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Foreword from the Chair

There is no doubt that 2020 has been a year of significant disruption. Our world has changed dramatically in a short space of time. Trends that were evident prior to COVID-19 have accelerated, including the need for more targeted post-secondary education and ongoing skills development.

Now more than ever, public universities must critically prepare and support our graduates to succeed in the future workplace, to drive innovation and new businesses, to support open and rigorous public debate and to ensure excellent research solves pressing real-world challenges. To deliver on this mandate, universities must engage and partner with industry, the community and governments in new and different ways and more completely than we did in the past.

On 1 July 2020, you announced the working group to provide advice on the design and implementation of the National Priorities and Industry Linkage Fund (NPILF), introduced as part of the Job-ready Graduates package of reforms to higher education. On behalf of the working group, I am pleased to submit our final report which sets out the NPILF framework.

From the outset, it was important to define the NPILF as an opportunity to support universities in the evolution they are already undertaking. Our aim was to incentivise behaviours and mindsets that are responsive to the policy intent of supporting increased collaboration and new, innovative approaches to industry engagement. This report, and the proposed framework, addresses the core priorities of work-integrated learning, STEM-skilled graduates and industry partnerships in a way that generates impact, is transparent and collaborative, measurable and provides for flexibility – the key principles of NPILF. Importantly, the framework acknowledges the multiplicity and diversity of approaches towards industry engagement, the varied missions and strengths of universities, the needs of industry and communities, as well as the challenges and risks that come with innovation.

To support the NPILF's development, the working group has undertaken extensive consultation with representatives from universities, higher education bodies, industry and business, including small to medium enterprises. A written consultation process generated 68 submissions in response to the consultation paper. It was gratifying to see the high-level of interest and engagement across sectors and the shared commitment to improving the job-readiness of Australian graduates.

I would like to take this opportunity to offer my deep appreciation to the working group members: Professor Helen Bartlett, Professor Barney Glover, Professor Eeva Leinonen, Professor David Lloyd, Professor Brian Schmidt, Professor Deborah Terry and Professor Alex Zelinsky. Their advice and insights were instrumental in developing the NPILF. I would also like to extend my thanks to the department for its dedication and professionalism in supporting this important work.

I am confident the NPILF will speed the evolution of engagement across Australia.

Professor Attila Brungs
Vice-Chancellor and President of the University of Technology Sydney

Executive summary

The Minister for Education appointed a working group of university Vice-Chancellors to provide advice on the design and implementation of the National Priorities and Industry Linkage Fund (NPILF), introduced through the Job-ready Graduates Package of reforms to higher education. The Government determined that the NPILF will prioritise:

- increasing the number of internships, practicums and other innovative approaches to work-integrated learning
- increasing the number of STEM-skilled graduates and improve their employment outcomes
- developing partnerships and collaborations with industry.

The aspiration of the fund is to:

- ensure Australia has the skills and capacity to meet today's workforce needs and drive future economic prosperity for the nation
- support universities as they respond to this evolution by introducing high quality, diverse and innovative approaches
- support connectivity between universities and industry as the post-secondary education system evolves.

Industry is broadly defined as business, government and the community sector as all play a critical role in our national prosperity and wellbeing.

Intention of framework

Unlike the performance-based funding (PBF) model which is heavily focused on performance, the NPILF seeks to incentivise behaviours and mindsets that are responsive to the policy intent of increased collaboration, supporting new and innovative ways for universities to engage with industry. It also aims to increase support of lifelong learning, which will provide new learning and skills for individuals in today's workforce. In so doing, the design of the fund takes into account the multiplicity and diversity of approaches towards industry engagement, the varied missions and strengths of different universities, the needs of both industry partners and universities and also the challenges and risks with developing innovative or high risk-high reward approaches.

One of the intended outcomes of the framework is the development and sharing of university best practise approaches to industry engagement. This will enable business, community groups and universities to see models and approaches that have worked for others, speeding the evolution of engagement across Australia.

Summary of framework

Universities provide a three-year plan consisting of metrics and case studies under each priority

Plans will comprise nine metrics and case studies (six for the pilot phase), which reflect the priorities of work-integrated learning, STEM-skilled graduates and industry partnerships. The metrics provide an opportunity to determine three-year quantitative targets while the case studies provide an opportunity to highlight activities, programs and strategies being undertaken to support the priorities. Three metrics or case studies can be placed against any priority area at the discretion of the university and are intended to enhance the individual missions, distinctive strengths and communities of each university and their partners.

The NPILF will operate on a three-year timeline and includes a pilot and annual touch points

The NPILF operates on a three-year reporting cycle. An initial learning year will take place in 2021 and a pilot will be implemented from 2022-24. The NPILF will be fully implemented in 2025. Annual touch points will provide accountability toward continued engagement with NPILF.

Full funding is guaranteed during the pilot

In 2025 the allocation of funding will be consistent with the assessment of the six measures of the pilot. Where a university does not receive their full allocation, the remaining amount will be evenly distributed among universities that achieved 6/6 from the pilot.

The pilot period is critical to the fund's success

The report outlines the design of the fund in addition to the key policy objectives, which drive performance in each priority. Additional work is required with the sector to establish the definitions of the NPILF metrics, as well as the process of assessment by the department. The pilot period provides an opportunity to further this important work.

National Priorities and Industry Linkage Fund

Under the Job-ready Graduates Package of higher education reforms, the $900 million National Priorities and Industry Linkage Fund (NPILF) will incentivise universities to support enhanced university engagement with industry to produce job-ready graduates. From 2021, the NPILF will operate through Part 2-3 (Other grants) of the *Higher Education Support Act 2003* (HESA).

The purpose of this report is to provide advice about the design and implementation of the fund. The advice has been agreed by all working group members:

- Professor Attila Brungs, Vice-Chancellor, University of Technology, Sydney (Chair)
- Professor Helen Bartlett, Vice-Chancellor, University of Sunshine Coast
- Professor Barney Glover AO, Vice-Chancellor, Western Sydney University
- Professor Eeva Leinonen, Vice-Chancellor, Murdoch University
- Professor David Lloyd, Vice-Chancellor, University of South Australia
- Professor Brian Schmidt AC, Vice-Chancellor, Australian National University
- Professor Deborah Terry AO, Vice-Chancellor, The University of Queensland
- Professor Alex Zelinsky AO, Vice-Chancellor, University of Newcastle

Setting the scene

The job-ready graduate

The development of a job-ready graduate is more complex than ever before. The types of jobs and the nature of work are increasingly more global, complex and connected. Automation and the uptake of artificial intelligence can rapidly replace the skillsets of an existing workforce, requiring a lifetime commitment to education. Graduates require a range of skills to future-proof them against robotic redundancy and enable their success in a future of multiple careers.

The job-ready graduate needs to be prepared for the future of work, have enhanced STEM-skills and have the professional skills which make them confident to apply their course knowledge. The challenge of COVID-19 means that our graduates also need to be resilient, entrepreneurial and willing to engage with such complexity.

Driving long-term change

Our institutions play an important role in driving the settings to enable this change. It is therefore important to provide a space for universities to be innovative and creative in their approach to engagement and building job-ready graduates. Innovation is an important driver of economic growth and can be supported by a strong culture of collaboration between universities, industry, business (including small to medium size enterprises), government and the wider community.

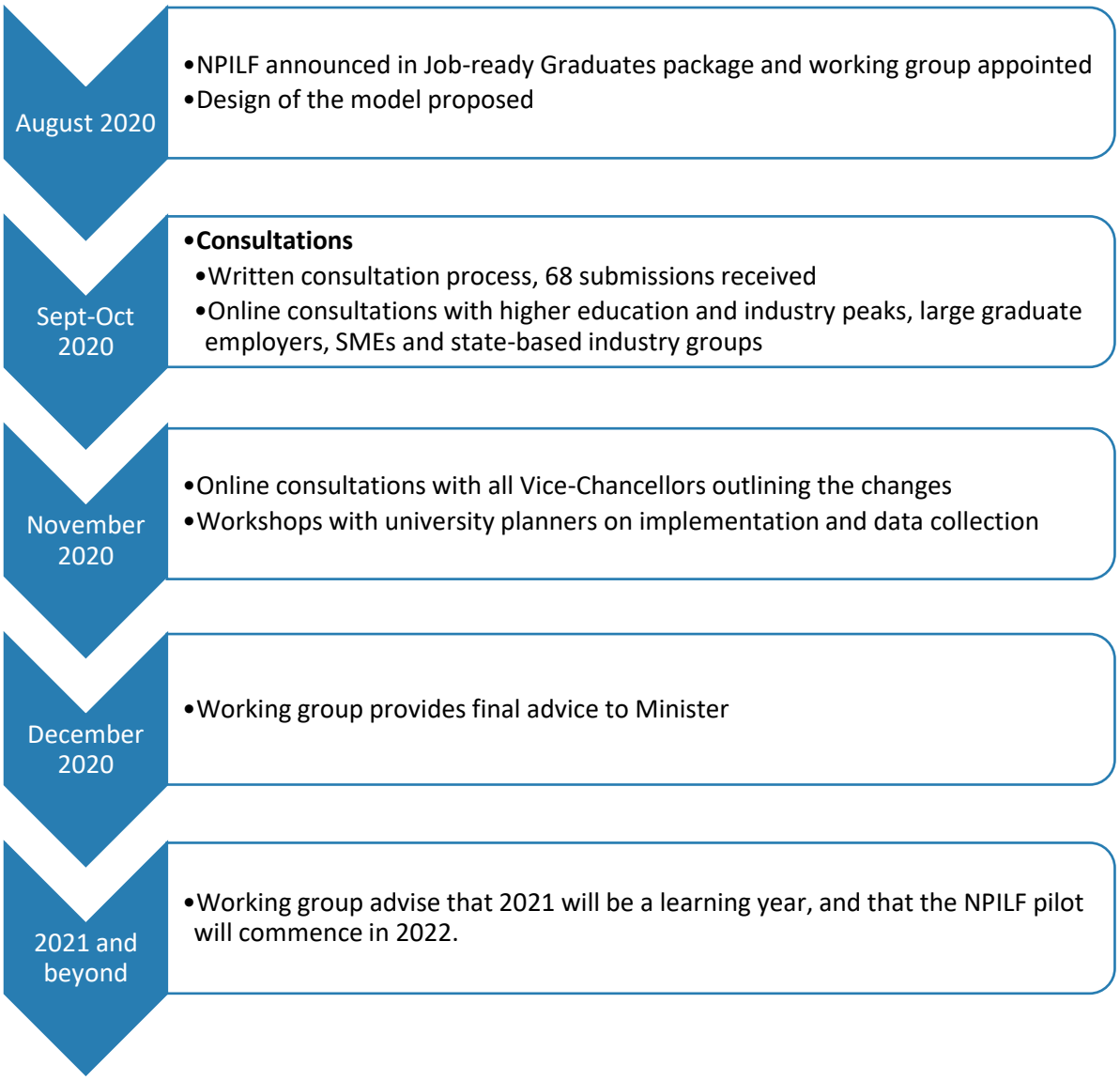
University-industry partnerships and collaboration across teaching, learning and research is critical to ensuring graduates leave the higher education system with the skills and experience they need to both succeed in and shape the workforce. The diversity of Australia's university sector means that every institution will have different ideas about how this can be best achieved, as articulated through their missions. This is not a weakness but a strength of the sector and should be celebrated and shared.

The design of the NPILF reflects the importance of being flexible, collaborative and measured. The metrics and case studies enable the measurement of institutional activities against the aspirations and priorities of the fund. The case studies themselves can be programs that are a demonstration of best practice or more innovative and seek to turn the dial. The case studies will lift the sector as a whole by allowing institutions and businesses to learn from each other and share the ideas and activities that have a track record of success, in addition to encouraging growth by pushing the boundaries and trying new things, without fear of failure.

Timeline

In preparing this advice, the working group conducted a broad consultation process across sectors, jurisdictions and different roles within the university community, refer **Figure 1**.

Figure 1: NPILF consultation and implementation timeline



Priorities

The working group recommends clear definitions to support the Government's priorities. These will be revised for currency at the completion of the pilot:

1. Increase the number of internships, practicums and other innovative approaches to work-integrated learning

Work-integrated learning (WIL) has been long cited as beneficial for students, employers and universities. In particular, the positive correlation between WIL and graduate employment outcomes is the reason this priority is a cornerstone of the fund. While a high baseline for WIL exists across the sector, and the Tertiary Education Quality and Standards Agency (TEQSA) assure the quality of WIL activities, there remains barriers for some cohorts and areas for improvement that are to be addressed under this priority.

The focus on WIL opportunities may require non-traditional approaches to meet demand and innovative approaches in line with the changing nature of work. Recognising a broad interpretation of 'industry', NPILF acknowledges WIL across start-up, entrepreneurship, community and service-learning environments (such as the Carnegie model), among other traditional methods. However, quality and authenticity must not be lost as scale increases and assessment remains critical to implementation of WIL. For the purposes of this fund:

> **Work-integrated learning** refers to student experiences of work within curriculum (or as co-curricular), undertaken in partnership, through engagement with authentic and genuine activities with and for industry, business or community partners, and which are assessed.

2. Increase the number of STEM-skilled graduates and improve their employment outcomes

The priority of 'STEM-skilled' moves away from exclusively core STEM fields. It seeks to increase the STEM-skills across all disciplines with the aim to ensure today's graduates are adaptable to future workforce needs, while appreciating that STEM-skills are not exclusive to STEM. With globalisation and technological advances changing the nature of work, the number and variety of occupations requiring STEM skills and advanced STEM literacy is increasing. It is predicted future workers will spend more than twice as much time on job tasks requiring science, maths and critical thinking than today. NPILF recognises core STEM fields in addition to the fields of Allied Health and Architecture and Building. For the purposes of this fund:

> **STEM-skilled** refers to the skills expected to be gained from tertiary-education subjects of science, technology, engineering and maths, such as critical thinking, creativity, collaboration and problem-solving. The concept considers both broad education in discipline content as well as the scientific method.

3. Supporting universities for the development of partnerships and collaborations with industry

Increasing graduate numbers alone is not enough to support economic recovery, particularly in a post-COVID environment. Improving university-industry engagement in teaching, knowledge

transfer and research is critical to ensuring graduates leave the higher education system with the capabilities, skills and experience needed to succeed in the workforce; and innovation across industry based on cutting-edge knowledge. This requires universities and industry to embed mutual engagement in their day-to-day operations. For the purposes of this fund:

> **University-industry engagement** refers to partnerships between universities and industry (encompassing business, government, NGOs and the wider community) through teaching, learning and research, which provide for the mutually beneficial exchange of knowledge and resources.

NPILF principles

The working group support the adoption of clear guiding principles to support implementation. The four principles are:

Impact	Transparent and Collaborative	Flexible	Measureable
• *Improve student outcomes* • *Promote institutional behaviour change* • *Encourage innovative practice with a tolerance of failure*	• *Share best practice and lessons learned across the sector* • *Provide mutual benefits to university, industry and community* • *Use best available reporting*	• *Account for university missions and diversity* • *Encourage use of local expertise and influence to respond to local circumstances and the needs of community*	• *Demonstrate improvement or behaviour change internally* • *Develop a mature data-base across the sector* • *Embed evaluation of activities and the fund into practice*

Framework

The working group propose a framework upon which the NPILF will be allocated to universities. The framework asks universities to highlight their commitment to the three priorities by submitting an NPILF plan, which outlines the metrics and case studies they have chosen to be measured against at the end of the three-year cycle.

Metrics and case studies

Universities will submit an NPILF plan to the department comprising nine activities, refer **Table 1**:

- Three metrics – one per priority
- Three case studies – one per priority
- Three metrics or case studies – from any priority

Table 1: Metric and Case study combination to make nine

	WIL	STEM-skilled	Industry partnerships
Required	1x Metric and 1x Case study	1x Metric and 1x Case study	1x Metric and 1x Case study
Flexible	3 metrics or case studies	from any priority	

Nine activities overall, including the opportunity to focus efforts in line with a university's mission and strategy, aims to balance the framework's ambitions to be both measurable and impactful, with the importance of being flexible for the university sector.

Metrics

Universities will choose their metrics from the themes listed in **Table 2** and will establish an appropriate target that reflects a positive outcome for their university, taking into account their mission, previous performance and local circumstances. There is no requirement for universities to choose the same metrics for each cycle and there is no one metric that is required to be chosen by all universities.

For example, the target may be a proportionate increase or maintenance of top performance and may focus on a particular equity group, faculty or known barrier. The target will state the data source to be used and the anticipated outcome (proportional growth, overall increase, maintenance of top performance).

The establishment of a target alongside each chosen metric champions the importance of both performance and self-improvement, against an institution's own missions, goals and priorities. It affirms that NPILF is not intended to be the introduction of a national data set. It ensures universities

are not simply compared across the sector or against sector averages, while also accounting for maintenance of top performance.

Table 2: List of metric themes that a university can select a target against

WIL	STEM-skilled	Industry partnerships
• Work-integrated learning • HDR students undertaking internship/placement • Work experience in industry (WEI) units • Co-designed courses*	• STEM graduate employment outcomes • STEM graduates • STEM-skilled graduates • Equity groups undertaking 'core' STEM courses (excluding health/architecture)	• Industry-linked programs, collaboration or partnerships • Research income from industry • Shared facilities, infrastructure or co-location by industry partners • Graduate employment outcomes overall • Co-designed courses* • Academic workforce actively from industry

Green highlighting represents data already collected by Government. Remaining metrics are internally collected and likely to differ in exact measure across institutions.
**'Co-designed courses' could be a demonstration of either the WIL or Industry partnerships priority.*

The definition of each metric is critical to ensuring a model that is fair and not easily gamed. The definitions are being established by the department in conjunction with university planners. The pilot provides an opportunity to test the metrics to ensure they are robust and fit for purpose.

Case studies

Universities will provide at least three case studies in their plan. Each case study will be a submission that outlines the activity, program or strategy that universities are undertaking in line with a particular NPILF priority and importantly, will require both quantitative and qualitative evidence to demonstrate outcomes.

Case studies will be developed by each university in line with their missions and may vary greatly in what they are trying to achieve. The case studies are a key aspect of the framework to enable universities to meet their missions, in addition to encouraging new and innovative programs, while also providing a platform for the sharing of best practice. The NPILF framework is deliberately designed to encourage innovation and new ways of university industry engagement.

Case studies may be activities that:

- demonstrate best practice or are an expansion of a program with a track record of success and are likely to be effective such as a start-up or entrepreneurship program
- are highly innovative by nature and seek to 'turn the dial'. These are likely to be pilot programs implemented on a smaller scale but indicate potential to be scaled up such as a new virtual WIL program.

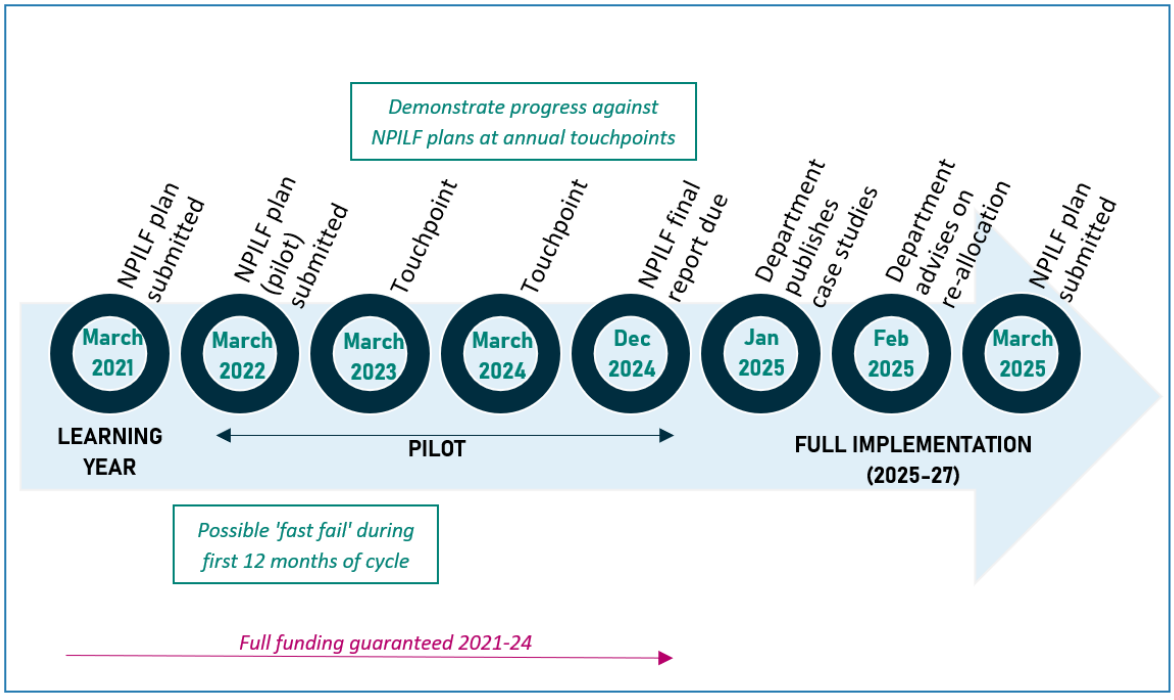
These characteristics of the two types of case studies are critical to the model. In particular, the innovation aspect ensures a failure tolerant design that encourages risk and enables growth. Universities are encouraged to take risk for positive gain and growth, and to create broader behavioural change across the sector.

Where a university does not achieve the expected outcome of any metric or case study, the requirements can still be met provided a university demonstrates with evidence the key learnings from the process. This is what differentiates this NPILF a purely performance-based model.

Reporting and assessment

The reporting and assessment requirements are outlined in **Figure 2**.

Figure 2: NPILF reporting timeline



NPILF plan

The NPILF plans will be submitted and follow a three-year cycle. The three-year NPILF plan will include the metrics and case studies chosen by a university. The three-year timeframe is appropriate for universities to achieve outcomes and see the results of the programs that have been implemented.

The targets (against metrics) and activities (against case studies) will be assessed on entry to determine suitability. The department will agree to an NPILF plan after determining the appropriateness of:

- targets based on current and/or previous performance
- activities to be used for the case studies. These will outline the case study intent, evaluation method and outcomes to be achieved.

The department may request more information or amendments to the plan before agreeing to it to ensure all targets and activities aim to have impact, while being measurable and achievable.

Annual review and fast fail

The annual touchpoints will require universities to submit interim data and progress reports to demonstrate progress against NPILF plans. The annual touchpoints are not tied to funding but provide accountability to ensure that the behaviour change that the fund aspires to is met.

The annual touchpoints provide the opportunity for the department to provide feedback and guide universities toward achieving their targets and secure full funding amounts.

While a full report is not required at each touchpoint, it should provide clear progress information and indicate if a university is on track to achieve against the targets. At a minimum, this includes

- interim metric data – this should demonstrate progress toward the end goal
- a progress report for the case study – this should outline what has been achieved and how it will contribute to the intended outcome of the case study.

Fast fail

NPILF aims to drive new behaviours, including the ability to take risks. To encourage a healthy risk culture, a ‘fast fail’ approach will be adopted whereby if a particular program is not demonstrating a benefit or positive outcome a university can request to change their case study. This can only occur within the first 12 months of implementation. A new case study would then be negotiated with the department.

Final report

At the end of the three-year cycle, universities will submit a report against their metrics and case studies which demonstrates the university has implemented the measures outlined in its plan. Quantitative evidence will demonstrate efforts against the metrics, while both quantitative and qualitative evidence will support the submission of the case studies.

The transparency aspect of publishing all case studies will maintain authenticity in the self-reporting.

The final report will directly reflect implementation of the plan and will take into account evaluation (key learnings). In this way, a 'fail' on the case studies would be a fail on being able to present the case, not a fail on the outcome.

Implementation timeline

The first year (2021) is a learning year for the model, where the sector and the department will test the design of the fund. Universities will be required to engage with the fund and select one metric and one case study per priority (total of six). This learning year focuses on putting the mechanics of the model into practice. The activities agreed to in the plan for 2021 are expected to be multiannual, which is in line with the intent of the fund's full implementation design. At the commencement of the pilot in 2022, a university will again select one metric and one case study per priority (total of six). It may choose to roll-over its plan from the learning year and continue with the activities over the commencing three-year period. The pilot will conclude at the end of 2024 and universities will submit their final report at that time.

In the first quarter of 2025 the department will provide advice to those universities that will have a portion of their funding re-allocated. The three-year NPILF cycle will begin in 2025, with a new NPILF plan agreed to for the period 2025-27.

Allocation and re-allocation timeline

There is **no funding at risk** during 2021-24 (learning year plus the pilot).

Allocation of funding

At the beginning of each three-year cycle, assessment and allocation of fund will commence. Therefore, in 2025 a university will be assessed against the six measures from the pilot and funding will be allocated as follows:

Where x represents the number of metrics met, if x < 6, (5 – x) * 10 = percentage reduction

This means

- 100 per of funding to universities who receive 6/6 or 5/6
- A university will lose 10 per cent of funding for very metric or case study not met thereafter

From 2025, nine (total) metrics and case studies will be included as part of the assessment and funding will be allocated as follows:

Where x represents the number of metrics met, if x < 8, (8 – x) * 10 = percentage reduction

This means

- 100 per allocation to universities who receive 9/9 or 8/9
- A university will lose 10 per cent of funding for very metric or case study not met thereafter

For example, a university misses one metric and one case study from their plan (i.e. 7/9) this would result in 10 per cent of funding to be re-allocated. This means that even if a university achieves 0/9, there is a 20 per cent base.

Re-allocation of funding

Re-allocation will occur at the beginning of a new three-year cycle and is based on the previous three years.

The funding penalty is applied to the next three years. However, opportunity is given to a university to bring their funding level back to a full allocation if they decide to work with the department to show improvement.

In the first year, universities will have a portion of their funding re-allocated to universities that achieved 6/6 in the pilot or 9/9 thereafter. In the second and third years, universities will have the opportunity to demonstrate improvements and/or stronger engagement with NPILF (as negotiated with the department) to be able to receive their full funding amounts for those remaining years of the NPILF cycle.

Distribution

2021-23

A banded distribution system will be applied from 2021-23. This is consistent with the legislation. Universities will fall into one of four funding bands, depending on the number of Commonwealth Supported Places (CSPs), refer **Table 3**. These bands are weighted to provide additional support to smaller universities and regional institutions.

Table 3. NPILF Pilot period fund allocation bands

Band Criteria (CSPs)	NPILF funding
0 – 9,999	$3.25 million
10,000 – 14,999	$4.75 million
15,000 – 21,999	$7 million
22,000 and above	$8.75 million

From 2024

The working group recommends an EFTSL + base (at a minimum) distribution model to be applied to universities from 2024.

The way forward

Pilot period

2021 will be a learning year for the sector and the department for the design of the fund. The first metrics and case studies will be negotiated with the department in the first quarter of 2021.

The NPILF pilot will commence in 2022 and continue through until 2024. The pilot provides an opportunity for universities to ensure they have systems in place to be able to meet the NPILF requirements and for the model to be reviewed and evaluated.

The proposed NPILF framework is outlined in this paper. However, the learning year provides opportunity for implementation features to be further considered, especially with regard to the metrics. As a result, the timing of the NPILF and mission-based compacts processes will come into alignment in later years. The department will provide guidance to the sector in preparation for implementation during the learning year.

Recommendations

The working group recommends:

- The Minister approves the proposed framework, to begin implementing in the learning year of 2021 and the pilot from 2022.
- The department to work collaboratively with the sector to provide necessary, additional detail on aspects of implementation, including the metrics and process for assessment.
- That a review be undertaken by the department prior to full implementation in 2024.
- The Minister consider the recommendations outlined in **Appendix A**. While the recommendations are beyond the scope of the working group's task, they complement the aspirations of the NPILF.

Appendix A – Supporting the national priorities beyond NPILF

A number of suggestions were made during the consultation process that fall outside the scope of the working group. While they have not been considered for the NPILF, they are important policy proposals that may interest Government and universities.

To incentivise industry to engage with universities

A theme common to the consultation was that the NPILF provided university incentives but industry incentives would be required to further the policy objectives. It is recommended that compelling incentives and mechanisms to change mindsets and behaviours in industry towards collaboration are considered. Some examples from the consultation include:

- Government could recognise excellence of university-industry collaboration by selecting awards for representatives/organisations from higher education and/or industry, based on NPILF case studies. This would be no extra work or cost to the sector but is a strong promotional activity and aligns with aspiration of the NPILF to drive university-industry engagement.
- Government should explore new, tax-based incentives for industry to take students for WIL experiences. Current initiatives such as the Government's Boosting Apprenticeship Commencements wage subsidy could be extended to industry placements.
- Government could subsidise through tax incentives the employment of PhD level graduates in industry. This would increase knowledge transfer to industry (particularly focussed on STEM), increase workforce skill levels and increase connection of industry back into universities.

To incentivise SMEs to engage with universities

SMEs were identified as a critical component of the Australian industry landscape and a group that would most benefit from appropriate collaboration with universities. This sector however currently faces both the greatest barriers towards engagement and requirement for mindset shifts. Suggestions include:

- Government could establish an SME-student matching platform to supply WIL opportunities. This could also match research ideas; advanced apprenticeship needs or increase cadetships.
- Government could undertake a national promotional campaign targeting SMEs to encourage them to engage with universities. For example, through delivering innovative and flexible WIL on and off campus and research opportunities. Government could use existing communication channels (via ATO, ABN etc) to provide information.

To enhance WIL

- To support strong policy, Government should establish a national WIL data collection.
- Provide public service WIL opportunities and support public service graduate employment.
- Government to fund innovation challenges (suggested by industry) or grants to solve wicked problems by specifically seek to utilise student talent.
- Given learnings from COVID-19 and work-from-home, there would be benefits in developing open access resources for the sector to share on virtual placements.
- Introduce a standardised a framework for WIL administration in universities, including funding committed to training and employing WIL administrative staff.