UNSW Submission – Productivity Commission Consultation on Five Productivity Interim Reports

UNSW welcomes the opportunity to contribute to the Productivity Commission's consultation on its five interim reports and supports the underlying ambition to build a more dynamic and resilient economy. Australia's universities play a critical role in achieving these goals by generating knowledge that delivers lasting national benefit, developing a skilled workforce, fuelling innovation through research and development and strengthening sovereign capability.

This submission presents a suite of practical, nationally-focused recommendations aligned with the five consultation focus areas and the Government's broader economic reform agenda.

Executive Summary

The Productivity Commission should consider the following as part of its consultation:

1. Fuelling innovation by uplifting Australia's R&D capabilities

1.A. Building a cohesive and integrated R&D system aligned to national needs

- Recommendation 1 (supports Pillars One, Three & Five): Develop a National Collaboration Framework to coordinate government and industry R&D investments and increase coordination to maximise impact. This should include alignment between the Strategic Examination of R&D and recommendations from the Australian Research Council's (ARC) National Competitive Grants Program review, to ensure coherence across Australia's research funding landscape.
- Recommendation 2 (supports all five Pillars): Government to support the full cost of the nationally-aligned research it commissions. Under this proposed model, the Department of Education would retain responsibility for the ARC and associated programs under its remit; the Department of Health and Aged Care would be responsible for the National Health and Medical Research Council; the Department of Defence would maintain responsibility for defence-related research; and the Medical Research Future Fund would cover indirect costs associated with its grants.
- Recommendation 3 (supports Pillars One, Two & Five): Promote capacity building and structured knowledge exchange between researchers, industry, and government to drive innovation and accelerate the adoption of emerging technologies that strengthen Australia's economic resilience and global competitiveness. Practical examples include:
    - Support existing programs like the Trailblazer Universities Program to accelerate research commercialisation.
    - Recognise formal knowledge exchange in workplaces through skill badges and government incentives.

- Expand support for industry PhDs to address the projected shortfall of 12,000 PhD-qualified researchers by 2031 – thus increasing absorbative capacity in the workforce. Ability to absorb and then utilise knowledge across changing workplaces will be critical in achieving productivity gains that are possible with new technologies.
- Embed scientific expertise in policymaking via advisory bodies, including a cross-sector Chief Technology Officers' Circle.

1.B. Strategic government support to generate long-term impact

- Recommendation 4 (supports Pillar One): Provide long-term, sustainable program funding to support predictable planning and foster research excellence.
- Recommendation 5 (supports Pillars One & Three): Position research infrastructure as a strategic national asset to significantly enhance Australia's innovation capacity and improve return on investment.
- Recommendation 6 (supports all five Pillars): Government must be a leading user of Australia's research. Government has an important role to play in promoting our world-leading research expertise, with a view to attracting greater industry participation and wider public appreciation.
- Recommendation 7 (supports Pillars One, Two, Three & Five): Targeted investment in mission-driven innovation centres that de-risk late-stage development and encourage private sector investment in applied research. Noting the stated desire of government to reach R&D investment of 3 per cent of GDP, it should be recognised that government has an important role to play to de-risk R&D for industry, in addition to incentivising investment.
    - Australia should draw on lessons learned from the Trailblazer program and successful international models, such as the UK's Catapult Network, to establish centres that focus on national priorities and drive translational impact.
    - Such programs should purposefully support the transition of research from discovery to translation readiness, as they pass through Technology Readiness Level (TRL) stages 4-7.
    - Sustainability is crucial in grants programs and the research they support, beyond the initial investment, so that promising models and pilot programs can be expanded.

1.C. Attracting capital and deploying investments into the R&D ecosystem

- Recommendation 8 (supports Pillars One & Two): Supporting SMEs to spur greater R&D investment and collaboration with ecosystem partners:
    - Introduce an R&D Tax Incentive (R&DTI) collaboration premium to reward partnerships between industry and research institutions.
    - Introduce an R&D levy on large businesses, which can be claimed back through the R&DTI (the difference between the levy and the R&DTI paid out could be reinvested by government in SME-specific innovation, and research schemes on an industry sector basis, in consultation with those industries).
    - Offer SMEs an instant tax write-off for the difference between a PhD salary and an undergraduate salary to encourage SMEs to hire PhD graduates.
    - Create a national broker network to link SMEs with universities for technology development and diffusion.
    - Develop a national researcher directory to connect industry with research expertise.

- Launch pre-seed funding programs to help SMEs and universities collaborate in early-stage commercialisation.

- Recommendation 9 (supports Pillar One): Supporting large businesses to spur greater R&D investment and collaboration with ecosystem partners by:
  - Introducing an R&DTI collaboration premium to reward partnerships between industry and research institutions.
  - Applying a concessional taxation rate of 10% for income derived from R&D activities completed in Australia (similar to the UK Patent Box initiative).
- Recommendation 10 (supports Pillar One): The Government should develop a national strategy to better leverage philanthropy - including the growing influence of Family Offices and High Net Worth investors - as a key source of funding for bold, high-risk research. This strategy should include policy frameworks that encourage collaboration between public research institutions and private donors, alongside targeted tax incentives for philanthropic contributions to R&D.
- Recommendation 11 (supports Pillars One & Five): Reforms should be implemented to support Australia's superannuation sector to invest in high-risk, high-reward domestic R&D. This would require appropriate regulatory adjustments, accompanied by public co-investment and innovation-led procurement to reduce risk and incentivise participation. Australia can leverage learnings from the UK's Mansion House Compact, which aims to better utilise institutional capital for national innovation and commercialisation outcomes.

1.D. Building stronger links to international innovation ecosystems and networks

- Recommendation 12 (supports all five Pillars): Deepen global collaboration through targeted bilateral and multilateral agreements that expand research networks and market access.
- Recommendation 13 (supports Pillar Five): Join Horizon Europe to connect Australia to the world's largest collaborative research and innovation program.

1.E. Better regulation and public processes to support an efficient and competitive R&D ecosystem

- Recommendation 14 (supports Pillars One & Two): Undertake a comprehensive regulatory stocktake to remove barriers to research and innovation and reduce the compliance challenges for research grants and institutions to enable researchers to focus on innovation and discovery. Pursuing efficiencies in regulation and compliance will support faster innovation cycles and help to build an adaptable future workforce:
  - Introduce targeted system reform policies to overcome disconnects within a sector.
  - The need for government oversight to enable the joining up of systems and accessing of secure data (particularly across health, education, environment sectors).
  - Support ATEC to prioritise the Universities Accord recommendations aimed at reducing regulatory burden.
  - Improve efficiency through greater data sharing, shared services, and potential mergers (e.g. TEQSA and ASQA).
  - Review the *Higher Education Support Act* to reduce complexity and streamline fragmented programs and reporting.
- Recommendation 15 (supports Pillar One): Restrict R&DTI eligibility to domestic R&D activities to strengthen local capability and skills.

- Recommendation 16 (supports Pillar One): Simplify R&DTI administration to make the scheme more accessible and effective.

2. Building a skilled and adaptable workforce

2.A. Building a coordinated, long-term strategy for Australia's skilled workforce

- Recommendation 17 (supports Pillars One & Two): Build a unified, fully funded, and harmonised post-secondary education system to position Australia's future workforce for success.
- Recommendation 18 (supports Pillars Two & Five): Establish a more equitable funding model for lifelong learning programs and micro credentials across areas of strategic importance to empower workers to upskill and reskill in response to emerging industry demands,
    - Targeted programs should be designed in close partnership with employers to ensure training is directly relevant to workforce needs and delivered flexibly to support participation by individuals at all career stages. This could be funded through a HECS-style scheme, extending FEE HELP to short courses and micro credentials, providing vouchers, or issuing a lifetime learning levy for large businesses.
- Recommendation 19 (supports Pillar Two): Encourage more affordable and accessible work-related training:
    - Support the OECD's recommendation for the tax deductibility of training be extended beyond training that is directly related to current employment.
    - Support the use of tax deductions and tax credits, particularly in SMEs.
    - Use the power of government procurement to drive behavioural change.
    - UNSW strongly endorses the trial of financial incentives and welcomes the opportunity to participate in a pilot program.
- Recommendation 20 (supports Pillars One & Two): Introduce targeted incentives for employers to expand work-integrated learning opportunities, strengthening the connection between education and industry and improving graduate employability.
- Recommendation 21 (supports Pillars One, Two & Three): Unlock labour force participation gains with targeted investment in mid-life skills.
- Recommendation 22 (supports Pillars One, Two & Three): Build on the efficiencies that the National Skills Passport aims to deliver to systematically improve Recognised Prior Learning and create a common currency for recognition.

2.B. Position Australia at the forefront in the race for global research talent

- Recommendation 23 (supports Pillars One & Two): Establish targeted Masters conversion programs and streamlined recognition pathways to equip temporary and permanent residents with accredited skills in priority sectors.
- Recommendation 24 (supports Pillars One & Two): Streamline and better integrate skilled visa pathways with migration and workforce planning to attract and retain global talent, strengthen Australia's workforce, and enhance international competitiveness.

These recommendations are an investment in Australia's future that will deliver a return to that nation's economic competitiveness and resilience. UNSW stands ready to partner with government, industry, and the broader community to create long-term prosperity for all Australians.

Introduction

Australia's declining productivity growth is one of the most pressing economic challenges of this generation. Productivity growth has stagnated in the past decade, and it is now at its lowest level in 60 years. At the same time, investment in R&D has steadily declined as a share of GDP for 15 years. The Treasurer has correctly identified that Australia's lull in productivity is because Australia's economy "is not dynamic or innovative enough".

Reversing the trend of declining productivity will require coordinated effort of both government and industry to revitalise Australia's industrial base and strengthen R&D capacity. To achieve this, the Government must first create the conditions for businesses of all sizes to innovate, scale and compete globally. Alongside these actions, building a skilled and adaptable workforce will be essential to ensuring Australia can drive sustainable, inclusive growth.

1. Fuelling innovation by uplifting Australia's R&D capabilities

Australia's ambition for a *Future Made in Australia (FMIA)* hinges on our ability to rebuild and modernise our industrial base. This requires transforming our national R&D system into one that is mission-driven, industry-aligned, and globally competitive. As a global top 20 university - with leading expertise in areas such as quantum technologies, artificial intelligence, clean energy, defence, and health - UNSW is committed to helping shape a high-performing, mission-driven R&D ecosystem that delivers long-term national benefit.

Importantly, R&D drives productivity by fuelling innovation, importing processes and creating new technologies that help businesses do more with less. It offers first mover advantages to become a leader in any given industry, in turn creating jobs in Australia. Every dollar invested in R&D adds $5 to our economy.

The decline in gross domestic expenditure on R&D in recent decades has largely been driven by a decline in business sector investment, along with reduced R&D expenditure by government agencies. By contrast, universities have lifted and increased higher education expenditure from 0.40% of GDP in 2000 to 0.61% in 2024 (above the average for OECD countries).

It is important to acknowledge the current inadequacy of investment, both public and private, in Australian R&D, as highlighted also by the Australian Universities Accord. While peer OECD nations are investing around 3 per cent of GDP in R&D, Australia lags significantly behind at just 1.68 per cent. The urgency of addressing this gap is further amplified by growing economic and geopolitical uncertainty, with the Commonwealth Treasury identifying low R&D investment as a risk to Australia's sovereign capability. Indeed, realising the ambition of lifting R&D investment closer to the OECD average of 3 per cent is likely a fundamental precondition of achieving a FMIA.

UNSW recognises that there is no quick fix to addressing Australia's low R&D intensity. International experience shows that increasing national R&D expenditure to levels above 3% of GDP requires sustained effort over decades. Analysis of leading R&D nations indicates that it has taken on average, 20 years of consistent investment, policy stability, and strategic coordination to reach this level, although this has been achieved faster and at a higher level in countries where a clear mandate has been set, such as in Israel and South Korea. Australia must take a similarly long-term, whole-of-government approach, underpinned by bipartisan commitment and deep collaboration across sectors.

Collectively, universities, industry and government must ensure that productivity and innovation gains are distributed equitably across communities and regions. Targeted collaboration, inclusive funding settings, and coordinated workforce planning will be essential to avoid concentration of opportunity and to maximise national benefit. A high-performing R&D system must serve not only economic goals but also social, cultural and national interests.

1.A. Building a cohesive and integrated R&D system aligned to national needs

Recommendation 1: Develop a National Collaboration Framework to coordinate government and industry R&D investments to maximise impact. This should include alignment between the Strategic Examination of R&D and recommendations emerging from the current review of the ARC's National Competitive Grants Program, to ensure coherence across Australia's research funding landscape

Developing a National Collaboration Framework to align federal and state government, and industry R&D investments is critical to maximising the productivity gains from public investment. A coordinated national approach would strengthen alignment across jurisdictions, improve transparency, and enable research institutions and industry to engage more effectively with government priorities that drive economic growth and national competitiveness.

Efforts to strengthen Australia's R&D system should be purposefully aligned with the implementation of the Australian Universities Accord and other key reforms and policy reviews, including the Strategic Examination of R&D (SERD), and the ARC Review. A unified policy direction across research, education, and workforce development would ensure these investments are mutually reinforcing. Furthermore, having consistent policy settings over time is critical for incentivising investment in R&D.

This measure directly supports **Pillar One** of the Government's productivity agenda and could also be tailored to advance **Pillars Three and Five**, by strengthening digital capability and deepening workforce skills through research-led collaboration.

Recommendation 2 (supports all five Pillars): Government to support the full cost of the nationally-aligned research it commissions.

Under this proposed model, the Department of Education would retain responsibility for the ARC and associated programs under its remit; the Department of Health and Aged Care would be responsible for the National Health and Medical Research Council; the Department of Defence would maintain responsibility for defence-related research; and the Medical Research Future Fund would cover indirect costs associated with its grants. State governments, industry, and philanthropic organisations would be expected to fully fund their own research agendas, including associated overheads, without reliance on Commonwealth contributions or cross-subsidisation by research institutions.

Because this research is commissioned by government departments, it is necessarily aligned with the strategic priorities of the nation. The cost of this proposal is approximately $1.2bn per annum. When considered within the context of a $700bn federal budget and a $2.8tn economy, this represents a relatively modest investment. However, the cost of inaction risks long-term consequences for Australia's national security and economic prosperity.

Recommendation 3: Promote capacity building and structured knowledge exchange between researchers, industry, and government to drive innovation and accelerate the adoption of emerging technologies that strengthen Australia's economic resilience and global competitiveness

Universities are continuing to generate new knowledge, and ensure that education and research are relevant, accessible and aligned to national needs. This includes equipping the workforce with skills to adapt and thrive in emerging industries - particularly in areas like critical technologies, advanced manufacturing, and clean energy. UNSW sees a clear role for the sector in fostering agility, problem solving and interdisciplinary expertise, which are vital in supporting future economic competitiveness. For example, UNSW's Innovation Hub pioneers a flipped approach that convenes diverse expertise to solve problems presented by industry. This approach encourages clarity on problem definition and design methodologies, with a commitment to delivering solutions at scale and at pace.

Building stronger partnerships between researchers, industry, and government is critical to turning new discoveries into practical solutions that deliver measurable economic benefits. Targeted support in capacity building and structured knowledge exchange allows Australia to share expertise, align priorities, and accelerate the adoption of emerging technologies. This will enhance labour dynamism, build the necessary skills base, and increase job quality and satisfaction, which will in turn lift productivity, enhance sovereign capability, and strengthen economic resilience. Stronger partnerships will also help Australia to compete more successfully in an increasingly technological global market.

Practical examples to support increased partnership between researchers, industry, and government and to directly support **Pillars One, Two, and Five** of the Government's productivity agenda include:

- Supporting existing initiatives such as the Trailblazer Universities Program to accelerate research commercialisation.
- Formal knowledge exchanges included in workplace recognition, with badging for skill acquisition, supported by government incentives.
- Embedding science and technical expertise in public strategy and national policymaking, including a dedicated Chief Technology Officers' Circle across sectors.
- Opportunities to support more industry PhDs, especially as recent analysis warns that Australia faces a shortfall of 12,000 PhD-qualified researchers by 2031 – thus increasing absorbative capacity in the workforce. Ability to absorb and then utilise knowledge across changing workplaces will be critical in achieving potential productivity gains with new technologies.
- In the US, the National Renewable Energy Laboratories have a megawatt-scale Power Hardware-in-the-Loop facility for academics and manufacturing partners to test energy technologies at full power. We could do something similar in Australia with a concerted national effort. We have an opportunity to bring together the power system expertise and infrastructure to support the achievement of net zero.

1.B. Strategic government support to generate long-term impact

Recommendation 4: Provide long-term, sustainable program funding to support predictable planning and foster research excellence

Much of the public funding for R&D in Australia is short-term and project-specific, driven by diverse (sometimes uncoordinated) portfolio priorities, which makes it difficult to sustain work on complex, long-term challenges. Sustained and predictable, long-term funding for research will enable innovation centres and precincts to build capability, attract global partnerships, and deliver outcomes at scale. By ensuring continuity of funding, the Government can create the conditions for high-impact research to translate into real-world solutions; driving productivity, competitiveness, and national resilience – all of which directly supports **Pillar One** of the productivity agenda.

To stimulate industry-led R&D, a more effective mix of grants and tax incentives is needed. These incentives must be accessible and attractive to companies of all sizes, from startups and SMEs to large enterprises. One proposed approach is to increase the value of tax incentives for businesses that partner with universities on research aligned to national priorities. This would not only incentivise collaboration but also direct investment toward areas of greatest strategic importance.

Recommendation 5: **Position research infrastructure as a strategic national asset to significantly enhance Australia's innovation capacity and improve return on investment**

The global research landscape is shifting. Countries are asserting control over their scientific assets and research. If Australia does not invest in its own digital research infrastructure now, we risk becoming dependent in a world where science is increasingly strategic. Much of Australia's research system depends heavily on foreign digital infrastructure (whether it be through cloud services, international publishing giants, foreign-owned data platforms, and software for scientific research).

Building sovereign digital infrastructure to control and retain value from Australian research would help promote domestic innovation, while also supporting our FMIA priorities.

UNSW underscores the critical importance of research infrastructure as an enabler of world-class research and industry collaboration. Australia has made significant progress through the development of the National Collaborative Research Infrastructure Strategy (NCRIS) and Australian National Fabrication Facility. A strengthened national infrastructure network- NCRIS "on steroids"- would provide the research community and industry with the facilities and tools needed to accelerate innovation, de-risk commercialisation, and attract global partnerships.

UNSW supports the development of a globally connected infrastructure network, particularly in areas of national significance. This includes leveraging international partnerships, such as those developed under AUKUS Pillar II, to ensure that Australia has both access to, and a stake in, cutting-edge facilities and capability development. To maximise impact and avoid duplication, infrastructure planning should be undertaken with a clear focus on collaboration, enabling institutions and industries to share resources, expertise, and data.

This includes fast-tracking efforts to finalise and implement the National Digital Research Infrastructure (NDRI) Investment Plan. The 2021 National Research Infrastructure Roadmap identified the need for an increased focus on NDRI. This was in recognition of Australia's NDRI as fundamental to the research and innovation effort as well as in the provision of critical support for government decision-making. Technological developments, such as quantum computing and AI, also show the need for an increased focus on NDRI. We support the Government's recent work through the NDRI Strategy and Investment Plan, and encourage the implementation of the plan to be fast-tracked as a matter of national strategic priority to support **Pillars One and Three** of the productivity agenda.

Recommendation 6: Government must be a leading user of Australia's research. Government has an important role to play in promoting our world-leading research expertise, with a view to attracting greater industry participation and wider public appreciation.

The fact there is considerable support for the role of government in setting expectations and leading by example cannot be understated. For example and from the lens of the higher education sector, by positioning itself as a primary consumer of university-led research, the Government can help bridge the persistent gap between academic inquiry and policy application. This creates opportunities for more strategic alignment between publicly-funded research and national priorities, enabling universities to contribute more directly to evidence-based policy-making. It also incentivises institutions to engage in mission-driven research with tangible public outcomes, reinforcing the relevance of academic work beyond traditional scholarly metrics.

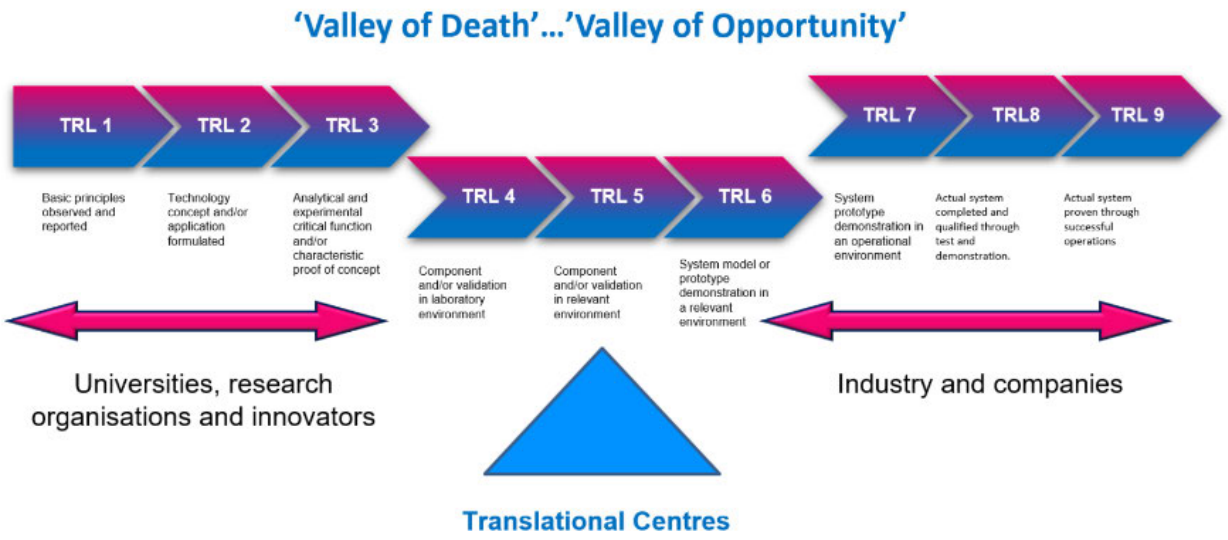
Furthermore, by actively promoting Australia's world-class research capabilities, the government can amplify the visibility and perceived value of university research, both domestically and internationally. This not only enhances public appreciation of higher education's contributions but also strengthens the case for greater industry collaboration. When government visibly invests in and utilises academic research, it signals credibility and reduces perceived risks for private sector partners considering research engagement. These actions would directly support **all five Pillars** of the productivity agenda.

Recommendation 7: Targeted investment in mission-driven innovation centres that de-risk late-stage development and encourage private sector investment in applied research. Noting the stated desire of government to reach R&D investment of 3 per cent of GDP, it should be recognised that government has an important role to play to de-risk R&D for industry and incentivising investment.

There remains a persistent 'valley of death' in Australia's innovation ecosystem, both in accessing capital to bridge early-stage development and in overcoming the barriers to scaling emerging technologies. Supporting nationally coordinated, mission-driven innovation centres is essential to help

bridge the 'valley of death' and the persistent gap between discovery research and commercialisation. Purpose-built centres de-risk late-stage development, catalyse private investment, and position Australia to lead in critical technology domains.

Figure 1: The Research Investment Life Cycle: Overcoming the Valley of Death



Source: Wren, G. (2025). Industry partnerships the Strathclyde way: No 'one size fits all', University of Strathclyde

The Government should draw on lessons learned from the Trailblazer Universities Program and establish an integrated network of innovation centres. These centres should focus on accelerating the translation of research into market-ready solutions, supporting high-growth sectors, and fostering collaboration between industry, universities, and government. Australia can also leverage learnings from successful international models, and such programs should purposefully support the transition of research from discovery to translation readiness as they pass through Technology Readiness Level (TRL) stages 4-7 (of **Figure 1**). Important to this is the sustainability in both grants programs and the research they support, beyond the initial investment, so that promising models and pilot programs can be successfully expanded.

UNSW's SERD submission highlighted global best practice in supporting research commercialisation:

- The Catapult Network (UK) – Network of not-for-profit innovation centres that bridge academia and industry, supporting late-stage R&D by providing shared infrastructure and using targeted public investment to de-risk innovation
- Manufacturing USA Institutes (USA) – 16 public-private partnerships in fields such as robotics, connecting academia corporates and government to rapidly scale and commercialise R&D, while providing workforce training for advanced manufacturing.
- Small Business Innovation Research & Small Business Technology Transfer Programs (USA) – Phased R&D funding for early-stage R&D by small firms, enabling risk managed innovation.
- Industry-on-Campus (Germany) – Co-locates firms with universities to fast-track collaboration.

Centres should be aligned with national priorities - such as clean energy, critical technologies, and advanced manufacturing - to ensure public investment delivers measurable economic, environmental, and societal returns, while strengthening Australia's innovation pipeline. Prioritising mission-driven innovation centres would directly support **Pillars One, Two, Three, and Five** of the productivity agenda.

1.C. Attracting capital and deploying investments into the R&D ecosystem

Recommendation 8: Supporting SMEs to spur greater R&D investment and collaboration with ecosystem partners

SMEs, ranging from local service providers to technology startups with global ambitions, represent a significant but under-leveraged source of national innovation potential. SMEs make up 98 per cent of the 2.6 million businesses in Australia, yet they face greater barriers than large firms in areas linked to boosting productivity (e.g. lower absorptive capacity due to limited resources, fragmented knowledge systems and difficulty integrating external innovations into their operations). Universities are helping SMEs overcome these challenges. At UNSW, the Entrepreneurial Campus and Founders Program play a vital role in bridging the gap between research and commercialisation. These initiatives help SMEs navigate the challenges of scaling innovation by providing access to university expertise, infrastructure, and facilities - resources that are often out of reach in capital-constrained environments.

Despite these challenges, SMEs in Australia today spend 25 per cent more on R&D overall than large firms, and the introduction of innovations by SMEs increases annual productivity by 2.7 per cent. To further support the innovation potential of SMEs, we encourage the Government to consider how it can provide incentives to achieve a step-change in SME-university collaboration to advance **Pillars One and Two** of the productivity agenda by:

- Creating an R&D Tax Incentive (R&DTI) collaboration premium to incentivise industry to work with universities (in line with recommendation 2 of the 2016 Ferris, Finkel and Fraser Review)
- Introduce an R&D levy on large businesses, which can be claimed back through the R&DTI (the difference between the levy and the R&DTI paid out could be reinvested by government in SME-specific innovation, and research schemes on an industry sector basis, in consultation with those industries)
- Offering SMEs an instant tax write-off for the difference between a PhD salary and an undergraduate salary to encourage SMEs to hire PhD graduates
- Establishing a national broker network to connect SMEs with universities through funding to create technologies or via technology diffusion to support SME innovation
- Developing a public national researcher directory to connect industry with research expertise
- Developing a program that provides pre-seed funding for SMEs to collaborate with universities in the first stages of the commercialisation process

Recommendation 9: Supporting large businesses to spur greater R&D investment and collaboration with ecosystem partners

Large businesses play a pivotal role in R&D ecosystems and are a key source of capital and knowledge transfer. Not only do these businesses provide stability to the R&D ecosystem as large employers of R&D staff and deploy significant amounts of capital for investment, they also generate additional benefits to the R&D ecosystem through knowledge and talent transfer. However, over the last decade, Australia has seen a $2.9bn decline in large business R&D and Australia's R&D costs are among the highest among peer nations. Subsidies, grants and incentives are also failing to improve Australia's R&D cost competitiveness.

To become more competitive and stimulate additional investment, Australia must strengthen the R&DTI and other incentives to boost commercialisation. It is also important to enable a simple and stable tax system to attract and boost R&D investment from larger companies, as this would amplify the economic returns on tax incentives. Specifically, the Government should focus on two key areas which align with efforts to boost business investment through corporate tax reform, directly advancing **Pillar One** of the productivity agenda.

Firstly, Australia should strengthen the R&DTI by introducing a collaboration premium to reward partnerships between industry and research institutions. UNSW calls for the introduction of a premium

tax credit for firms partnering with Australian universities or publicly funded research agencies on R&D aligned to national priorities. This is in line with the 2016 Ferris, Finkel and Fraser Review, which encouraged the restructure of the R&DTI to reflect the evolving needs of Australia's research and industry landscape.

Secondly, Australia should boost R&D commercialisation by applying a concessional taxation rate of 10% for income derived from R&D activities completed in Australia. This will provide a new financial incentive for research commercialisation and help improve Australia's competitiveness in the global R&D market. This type of initiative exists in the UK, offering insights and lessons for Australia's ecosystem. The UK Patent Box regime is a tax incentive that allows companies to claim an effective 10% corporate tax rate on certain qualifying intellectual property profits. It encourages businesses to drive technology within the UK through R&D activities and ensures that revenue generated from intellectual property remains in the UK.

Recommendation 10: The Government should develop a national strategy to better leverage philanthropy, including the growing influence of Family Offices and High Net Worth investors, as a key source of funding for bold, high-risk research. This strategy should include policy frameworks that encourage collaboration between public research institutions and private donors, alongside targeted tax incentives for philanthropic contributions to R&D.

Australia has a proud philanthropic culture, one that should be better leveraged and encouraged to support bold, high-risk research that may fall outside the scope of traditional government or industry funding. To realise the full impact of philanthropy, a cohesive national strategy is needed to advance **Pillar One** of the productivity agenda. By creating policy frameworks that actively encourage collaboration between public institutions and private donors - and by offering meaningful tax incentives or funds matching for contributions to R&D – the Government can help attract greater philanthropic investment in innovative research.

The growing prominence of Family Offices and High Net Worth investors presents a significant opportunity to harness venture philanthropy - combining philanthropic capital with a focus on measurable, scalable outcomes - to drive greater investment in R&D. Australia is home to an estimated 2,000 family or private offices, nearly 60 per cent of which were established in the past decade. The largest 350 are estimated to manage between $515bn and $695bn in wealth, presenting a substantial and largely untapped pool of capital that could be mobilised to accelerate innovation aligned with national priorities.

Recommendation 11: Reforms should be implemented to support Australia's superannuation sector and other latent sources of capital to invest in high-risk, high-reward domestic R&D. This would require appropriate regulatory adjustments, accompanied by public co-investment and innovation-led procurement to reduce risk and incentivise participation. Australia can leverage learnings from the UK's Mansion House Compact, which aims to better utilise institutional capital for national innovation and commercialisation outcomes.

Australia's superannuation system represents a largely untapped source of capital. With appropriate legislative and regulatory support, even a small portion of superannuation funds allocated to high-risk, high-reward domestic R&D could significantly boost national investment levels. Encouraging private sector investment, especially in conjunction with public co-investment and procurement-led innovation, is essential if Australia is to meet its ambition of lifting R&D intensity to 3 per cent of GDP.

To support this, the Government should develop targeted policies that incentivise superannuation funds to allocate a portion of their assets to domestic R&D and early-stage commercialisation. Mobilising institutional capital is critical to both bridge persistent R&D funding gaps and accelerate the development and diffusion of new technologies that drive productivity.

Australia should consider adopting policy frameworks similar to the UK's Mansion House Compact, which aligns long-term institutional investment with national strategic priorities. Under this agreement, nine of the UK's largest defined contribution pension funds have committed to allocating at least 5 per cent of their default assets to domestic startups and high-growth companies by 2030. This initiative is helping to unlock up to £75bn in investment to support the country's innovation economy. This approach reflects a broader understanding that achieving national R&D ambitions requires not only strong public investment, but also greater participation from private capital markets. The Compact's goal is not just to improve retirement outcomes, but to deepen the pool of scale-up capital available to UK innovators, enabling them to grow, commercialise, and compete globally without going offshore.

By mobilising greater institutional capital into R&D, Australia can accelerate the transformation of its industrial base and build sovereign capability. Importantly, this budget neutral measure could be targeted towards supporting investment in cheaper, cleaner energy and the net zero transformation, under **Pillar Five** of the productivity agenda.

1.D. Building stronger links to international innovation ecosystems and networks

Recommendation 12: Deepen international collaboration through targeted bilateral and multilateral agreements that expand research networks and market access

Strengthening Australia's engagement in global research networks is critical to ensure our national capability continues to evolve in line with international best practice. Negotiating bilateral and multilateral research agreements in shared strategic areas such as quantum computing, clean energy, and critical technologies would allow Australia to leverage global expertise and fast-track solutions to our complex societal challenges. These partnerships should be underpinned by sustained investment and a clear commitment to co-development and knowledge transfer, supporting **Pillars One, Two, Three and Five** of the productivity agenda.

Recommendation 13: Join Horizon Europe to connect Australia to the world's largest collaborative research and innovation program

Facilitating researcher mobility and improving access to world-class research infrastructure would ensure Australian institutions and innovators can contribute to and benefit from leading-edge discoveries. Enhanced exchange programs, joint appointments, and collaborative facilities would help embed Australian researchers in international innovation ecosystems and support the development of globally connected talent pipelines.

Joining Horizon Europe, a €95.5bn research and innovation program, represents a significant opportunity to deepen Australia's international partnerships, strengthen sovereign capability, and ensure Australian research remains globally competitive across critical domains. Membership would directly support **Pillar Five** of the productivity agenda, and includes a range of benefits for Australia:

- Access to the world's largest R&D fund, enabling deep involvement in mission-driven research across critical domains such as health, clean energy, and advanced technologies;
- Unlocking global research networks and collaborative leadership, boosting R&D impact and elevating institutional visibility and influence;
- Strategic risk diversification and geopolitical uncertainty which helps to de-risk Australia's research ecosystem
- Accelerated innovation and economic creation, supporting translation of academic research intro industrial and social impact
- Strengthened international standing and human capital flows, enhancing researcher mobility, talent development, and institutional recognition

1.E. Better regulation and public processes to support a competitive R&D ecosystem

Recommendation 14: Undertake a comprehensive regulatory stocktake to remove barriers to research and innovation and reduce compliance challenges for research grants and institutions to enable researchers to focus on innovation and discovery. Pursuing efficiencies in regulation and compliance will support faster innovation cycles and help to build an adaptable future workforce.

Leveraging the findings from the forthcoming Strategic Examination of R&D and the Australian Universities Accord, the Government should undertake a cross-sector regulatory stocktake, including in higher education, to identify areas of duplication, overreach, and misalignment that slows innovation. A systematic review that prioritises a commitment to reducing regulatory burden by 2030 will provide the evidence base to modernise regulatory frameworks and ensure they remain fit for purpose in supporting a more dynamic economy, directly supporting **Pillar One** of the productivity agenda. For example, this could include - at a high level - the need for government oversight to enable the joining up of systems and accessing of secure data (particularly across health, education, environment sectors). The work done by UNSW in this regard through its Trusted Research Environments could assist in understanding the current state.

More streamlined operations can translate into faster innovation cycles within universities, while helping Australia's ability to turn ideas into market-ready products and services. It also supports universities to build a skilled and adaptable workforce for the future, directly supporting **Pillar Two** of the productivity agenda. The Government should support efforts to:

- Provide greater policy coherence by introducing targeted system reform to overcome disconnects within a sector (e.g. the disconnect between primary/community care and other forms of care through hospitals, aged care, disability);
- Direct the ATEC to prioritise the implementation of recommendations from the Universities Accord that focus on decreasing regulatory burden;
- Deliver operational efficiencies through increased data and information sharing, shared services arrangements and mergers (particularly TEQSA and ASQA to increase harmonisation);
- Develop faster approval processes for major projects at universities to unlock new capacity (including student accommodation, R&D facilities, and critical infrastructure); and
- Review the *Higher Education Support Act* and supporting guidelines for unnecessary complexity, and prioritise addressing fragmented programs with bespoke reporting requirements.

The stocktake should also consider how to reduce the compliance burden for research grants and institutions to enable researchers to focus on innovation and discovery. Policy settings must address the growing administrative and compliance challenges that divert time and resources from core research and commercialisation activities. Streamlined processes and proportionate reporting requirements will enable research centres and innovation-driven institutions to operate more efficiently and maintain their focus on delivering high-impact outcomes. Reducing unnecessary regulatory overhead, especially for research activity led by and funded by public institutions in partnership with industry, is a practical way for government to enhance innovation, economic dynamism and institutional agility, directly supporting **Pillar One** of the productivity agenda.

Recommendation 15: Restrict R&DTI eligibility to domestic R&D activities to strengthen local capability and skills

Eligibility for the R&DTI should be limited to activities undertaken within Australia to ensure taxpayer-funded incentives directly contribute to building local capability, generating high-value jobs, and enhancing sovereign resilience. This action would support **Pillar One** of the productivity agenda.

Recommendation 16: Simplify R&DTI administration to make the scheme more accessible and effective

Simplified compliance requirements are essential to broaden access for SMEs and reduce the administrative burden associated with claiming the R&DTI. This should include the provision of clearer guidance on R&DTI eligible expenditure, to align with international standards. A more accessible and proportionate system will drive broader participation and underpin greater investment in R&D. This action would directly support **Pillar One** of the productivity agenda.

2. Building a Skilled and Adaptable Workforce

Ninety percent of new jobs in coming years will require post-secondary qualifications, both vocational and university, while transforming the economy towards net zero will require important new skills. Workers without such qualifications may struggle to move up the job ladder, and jobseekers run the risk that their skills are mismatched to the labour market. We need to make it easier for prospective students to enter vocational education or university, by recognising their existing skills.

Innovation and upskilling must be aligned, with policies that encourage industry responsiveness and a growing skills base to drive economic dynamism. Maximising Australia's existing workforce is a key lever for boosting productivity. By improving skills utilisation through Masters conversion programs, streamlined recognition for skilled migrants, and targeted lifelong learning, Australia can quickly address workforce shortages and equip workers to adapt to technological advancements.

The sustained decline in labour productivity is largely driven by the underutilisation of qualified workers, particularly mid-career professionals and migrants, who are often employed in roles that do not align with their skills. Barriers such as fragmented skills recognition systems, limited upskilling opportunities, and insufficient business incentives are preventing the economy from fully capitalising on available talent. For instance, over 100,000 qualified engineers are working in non-engineering jobs, despite a projected shortage of 200,000 engineers by 2040.

To build a future-ready workforce, Australia needs a coordinated, long-term strategy focused on removing barriers to skill utilisation and strengthening education-to-employment pathways. This includes addressing workforce mismatches and prioritising lifelong learning. By positioning Australia as a global destination for talent and leveraging the full potential of its existing workforce, the nation can rebuild its productivity base and drive sustainable, inclusive growth.

2.A. Building a coordinated, long-term strategy for Australia's skilled workforce

Recommendation 17: Build a unified, fully funded, and harmonised post-secondary education system to position Australia's future workforce for success

Better integration of Vocational Education and Training (VET) and universities is critical to improving national productivity. The current divide often leads to duplication, inefficiencies, and lost opportunities for both learners and employers. A more connected tertiary system - where VET and universities are not in competition but aligned in purpose - would enable learners to move more seamlessly between practical and academic pathways, ensuring the right skills are developed at the right time to meet economic and industry needs.

The ATEC has a central role in driving this integration. As a national body, the ATEC can provide system-wide coordination, support consistent policy and funding frameworks, and champion collaboration over competition. By fostering shared planning between VET and higher education

providers, and aligning qualifications and quality standards, the ATEC can help build a cohesive tertiary system that better serves students, employers, and the broader economy. This is important in driving **Pillars One and Two** of the productivity agenda.

Recommendation 18: Establish a more equitable funding model for lifelong learning programs and micro credentials across areas of strategic importance to empower workers to upskill and reskill in response to emerging industry demands

Lifelong learning opportunities need to be widely and equitably accessible, and broadly appreciated as an important step in career development - addressing both supply and demand challenges. With the skills required by today's workforce rapidly evolving, ongoing education to adapt to these changes is more important than ever. The Government, along with industry stakeholders, should play a supporting role in highlighting the importance of lifelong learning and ongoing education to the benefit both of the individual and, also, national productivity over the long term, while also leading the way by government agencies focusing on upskilling its workforce.

Supporting equitable access to lifelong learning programs and micro credentials across areas of strategic importance (including digital skills, cybersecurity, renewable energy, and advanced manufacturing) would enable workers to upskill and reskill in response to emerging industry demands. This also means workers are not dependent on being long-term employees of 'good employers' who invest in their workforce.

Targeted programs should be designed in close partnership with employers to ensure training is directly relevant to workforce needs and delivered flexibly to support participation by individuals at all career stages. This could be funded through a HECS style scheme, extending FEE HELP to short courses and micro credentials, providing vouchers, or issuing a lifetime learning levy for large businesses, which would incentivise them to invest in upskilling their workforce and support the expansion of existing programs and initiatives. At present upfront out-of-pocket costs create a strong disincentive to individuals investing in enhancing their skills and capabilities.

For workers and education providers, integrating post-secondary pathways would support the development of flexible, 'stackable', adaptive qualifications that reflect the realities of contemporary careers. Clear, coordinated pathways between universities and training providers will allow students to seamlessly combine practical training with advanced academic study, accelerating progression into high-demand industries.

For example, UNSW welcomes the Government's commitment to lifting national productivity through stronger industry-research collaboration, targeted investment in R&D, and a more innovative industrial base, with a focus on net zero transformation and cheaper, cleaner energy. Targeted degrees, micro credential and lifelong learning programs, designed in partnership with industry, are needed to have a workforce with the right skills for the green economy.

These actions would directly support the workforce through flexible post-secondary education and training, in line with **Pillars Two and Five** of the productivity agenda.

Recommendation 19: Encourage more affordable and accessible work-related training

More affordable and accessible work-related training is essential to improving Australia's productivity by equipping workers with the skills needed for a rapidly changing economy. It also enables higher workforce participation by making it easier for underrepresented groups - such as women, older workers, and people in regional areas - to enter or remain in the labour market. Beyond economic benefits, affordable training promotes social equity by reducing barriers to upskilling and reskilling, particularly for lower-income and disadvantaged Australians. This helps address inequality, supports inclusive growth, and ensures that the benefits of productivity are more widely shared.

UNSW supports the OECD's recommendation for the tax deductibility of training to be extended beyond training that is directly related to an individual's current employment. This is important given current arrangements potentially creating disincentives for employers to invest in 'future skills' including reskilling or upskilling for new roles in the same organisation or, as part of restructuring, providing employees the opportunity to undertake training that improves their future job prospects.

UNSW also recommends the Government consider the use of tax deductions and tax credits particularly for SMEs. From our experience, working in SMEs in Australia and also from our discussions with market participants in Singapore, where they have this type of scheme, it is clear that SMEs have a greater preference for tax credits and that we would support pilots to introduce a similar system in Australia. Strong consideration should be given to making this type of training available to not-for-profits (NFPs) and charities. This is a critical sector that is responsible for significant service delivery, but with limited resources to invest in training and development. UNSW has offered short courses to NFPs, often with support from generous donors, and the response has been overwhelming - reflecting a clear need in the sector. NFPs looking for help with many of the same skills that SMEs are - business and operational effectiveness, digital and AI-related skills.

We also support using the power of government procurement to drive behavioural change. There is clear evidence that SMEs respond to incentives that may enhance their ability to secure additional revenue. This could be particularly useful in areas like cybersecurity where there is a gap in SME knowledge and capabilities. For example, government could help finance cyber training for SMEs and at the same time make this part of its procurement conditions.

UNSW strongly endorses the trial of financial incentives and we offer to participate in a pilot program as detailed in the interim report on building a skilled and adaptable workforce to support **Pillar Two** of the productivity agenda.

Recommendation 20: Introduce targeted incentives for employers to expand work-integrated learning opportunities, strengthening the connection between education and industry and improving graduate employability

Through UNSW's experience of running work-integrated learning programs, incentivising employers to host students in these placements is essential to bridging the gap between study and employment. This is particularly important given the barriers to industry participation such as:

- Resource constraints, financial pressures, and complex administrative requirements
- Equity and access issues, including barriers for regional and international students
- Uncertainty around legal, insurance, and compliance responsibilities can deter industry partners from offering placements

Targeted support should prioritise placements within critical industries and sectors, fostering practical experience, building industry connections, and accelerating the development of job-ready graduates equipped to contribute to national productivity and innovation.

This could be complemented by extending existing initiatives, such as UNSW's Skills Passport, which helps graduates who struggle to identify and articulate their skills. UNSW's passport tool provides a structured, scalable, and interoperable model to better align education and workforce needs, better balance the supply and demand of skills in Australia, and improve graduate access and success in the workforce, leading to societal and economic productivity. Implementing these actions would directly support **Pillars One and Two** of the productivity agenda.

Recommendation 21: Unlock labour force participation gains through targeted investment in mid-life skills

By 2050, nearly 40% of the adult population will be aged 55 or older. At the same time, Australia's labour force growth is expected to slow, and the traditional working-age share of the population (15-64 years) will decline. In this context, a clear opportunity exists to increase both productivity and labour force participation through targeted investment in mid-life skills training.

Underinvestment in mid-life skills development is hindering productivity and limiting older workers' participation. This is largely due to insufficient income support, with the main option of Austudy being inadequate for workers in their 30s and 40s who have family and mortgage responsibilities and need financial support to upskill outside of work. Workers who are not supported to adapt and upskill are more likely to withdraw early from the labour force or remain underutilised.

To unlock productivity and participation gains among older workers to advance **Pillars One, Two and Three** of the productivity agenda, the following steps are recommended:

- Introduce income-contingent loans for mid-career upskilling based on a modified HECS model to reduce financial barriers, while reforming Austudy to better support mature-aged learners.
- Ensure wide access to training opportunities across all industries, education levels, and employment statuses, with focus on sectors facing critical skills shortages.
- Incentivise providers to offer flexible, high-quality programs tailored to the needs and schedules of mid-life learners, including part-time and online delivery options.
- Advance tertiary harmonisation efforts to streamline funding, credit transfer, and quality assurance, improving responsiveness and efficiency in adult education pathways.

Recommendation 22: Build on the efficiencies that the National Skills Passport aims to deliver to systematically improve Recognised Prior Learning and create a common currency for recognition

Underpinning the success of all these proposed measures is a coordinated system for Recognised Prior Learning (RPL). The implementation of the National Skills Passport is an important opportunity to further this goal and promote lifelong learning, by recognising the breadth of competencies that can be acquired (through for example, formal qualifications, courses, training, and micro credentials) from a range of providers such as universities, private providers, VET providers, and industry-led training. Most importantly, it would help to establish a common currency by which institutions can place value on prior learning, while also supporting a systematic approach to 'stacking' micro credentials towards future certifications or qualifications across providers.

Effectively capturing micro credentials in this way can help to map a broader picture of an individual learner's experience that helps providers decide appropriate levels of RPL. It can also make it easier to combine an individual's qualifications and to more effectively demonstrate their competencies to prospective employers including recognised skills diversity and culturally reflective skills. This should help reduce barriers to employment for some groups, while, enabling individuals to move into jobs faster. These actions would directly support **Pillars One, Two, and Three** of the productivity agenda.

2.B. Position Australia at the forefront in the race for global research talent

Recommendation 23: Establish targeted Masters conversion programs and streamlined recognition pathways to equip temporary and permanent residents with accredited skills in priority sectors

Empowering universities to deliver high-quality Masters conversion degrees could play a pivotal role in lifting productivity. This would address critical skills shortages and unlock the full potential of Australia's existing talent pool, reducing our reliance on temporary migration and without adding to our population burden.

Targeted Masters programs would enable graduates holding a related bachelor's qualification (for example, transitioning from Science to an accredited Engineering credential) to quickly upskill within an accelerated timeframe. This approach would fast-track the development of advanced technical skills and expand the pipeline of qualified professionals in sectors experiencing acute workforce shortages that constrain productivity.

In parallel, establishing clear and efficient pathways to convert foreign or unaccredited qualifications into recognised Australian credentials is essential to harnessing the expertise of skilled migrants already living in Australia. Removing unnecessary barriers to recognition would unlock a significant pool of underutilised talent, boosting workforce participation and enabling faster responses to emerging labour market needs.

Streamlined and transparent conversion processes, supported by targeted bridging programs and accelerated assessment pathways, will enable skilled migrants to contribute more effectively to the economy. This will strengthen labour market dynamism, reduce reliance on short-term migration, and help build a more resilient, competitive national skills base, which are critical to advance **Pillars One and Two** of the productivity agenda.

Recommendation 24: Streamline and better integrate skilled visa pathways with migration and workforce planning to attract and retain global talent, strengthen Australia's workforce, and enhance international competitiveness

Streamlined visa pathways and improved recognition processes for skilled migrants are critical to strengthening Australia's human capital base. A fit-for-purpose migration system should reduce barriers for universities and employers to attract and retain top talent in critical sectors. This can be achieved by:

- Enhancing the visibility and accessibility of skilled migration programs to bolster Australia's competitiveness and ensure the workforce can grow in line with government priorities.
- Better integrating skilled visa and migration workforce outcomes to strengthen industry's capacity to adapt to changing demands, supported by closer alignment between skilled visa settings, government priorities, and industry accreditation bodies.

This also includes long-term support for our international education sector to meet our workforce needs by ensuring a consistent policy approach to visas while also making visas globally competitive.

These actions would directly support **Pillars One and Two** of the Government's productivity agenda.

Conclusion

Australia's future prosperity depends on our ability to adapt, innovate, and invest in the capabilities that will drive long-term economic growth and productivity. By strengthening the connection between research, education, industry, and community, we can build a dynamic and inclusive economy equipped to meet the challenges and seize the opportunities of the decades ahead.

UNSW is committed to working collaboratively with government and stakeholders to deliver reforms that are fiscally responsible, nationally focused, and designed to achieve measurable impact. Our proposals aim to unlock the full potential of Australia's people, institutions, and ideas; ensuring that knowledge created here generates enduring economic and societal benefits for all Australians.

We thank the Government for the opportunity to contribute to this important consultation and stand ready to support the design and delivery of policies that build a stronger, more resilient Australia. Should you wish to discuss any issue raised in this submission, please do not hesitate to contact [redacted]