SUBMISSION TO THE PRODUCTIVITY COMMISSION

Reducing Barriers to Business Dynamism in Australia

The Missing Instrument

Correcting the Capital-Market Failure That Suppresses
the Entry and Growth of High-Productivity Young Firms

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Inquiry: Reducing barriers to business dynamism in Australia (Productivity Commission, terms of reference received 12 May 2026, the Hon Jim Chalmers MP, Treasurer).

Submission focus: Priority area 2 (Australia's innovation ecosystem) and priority area 4 (Capital markets) — specifically, the structural barrier to entry and expansion faced by pre-revenue, research-intensive young firms whose primary assets are intangible and therefore cannot be financed through conventional channels.

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This submission may be made public by the Commission.

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Executive Summary

Australia holds the inputs of a leading innovation economy and assembles almost none of them. It has world-class research universities, a globally competitive talent base, the rule of law, and political stability. What it lacks is not ingredients — it is the single financing instrument that converts research into anchored companies, the instrument every comparable economy built decades ago and Australia, uniquely, has not.

That gap is not a matter of ambition; it is a documented market failure, and it sits squarely within the Commission's frame. Business dynamism depends on the entry and growth of young, high-productivity firms — the reallocation of capital toward firms at, or pushing, the technological frontier that the Commission's own work has established as the central mechanism. **This submission identifies one fundamental, well-documented barrier that obstructs that reallocation for the highest-productivity cohort of all — and asks the Commission to recognise it and to recommend that a targeted reform option be piloted and independently evaluated. A first-cheque guarantee is specified in full as one worked illustration of how that option could be built — included to show the option is feasible, not to ask the Commission to endorse a particular vehicle.**

The mechanism is a documented capital-market failure. Australia's business-finance system is structurally engineered toward tangible collateral. Almost all SME lending is secured, and residential property has an outsized role in that security. Firms whose primary assets are intangible — patents, research-validated know-how, software — cannot satisfy that collateral requirement, and private venture capital structurally cannot price genuinely world-first innovation because it has no comparator to benchmark against. The Reserve Bank has formally identified this as a structural feature of Australian SME finance, not a cyclical one. The result is a specific, identifiable class of young firm that is **research-validated, IP-rich, export-capable — and unable to enter or expand** because no existing financing channel is designed to reach it.

This is not a marginal cohort. It is the cohort that produced CSIRO Wi-Fi, Cochlear, ResMed, Atlassian and Canva — each of which was rejected, under-served, or forced offshore by the Australian capital system at the point of entry. The economic value Australia retained from these firms is a function of whether public risk-bearing bridged the gap before private capital would engage. Where it did (CSIRO, Cochlear, ResMed), the value anchored onshore. Where it did not (the black-box flight recorder), the value was captured entirely offshore. The same structural barrier operates today.

> **The reform option, illustrated in one sentence.**
>
> A merit-assessed, identity-blind federal **guarantee** — not a grant — that lets pre-revenue, research-validated young firms access first-cheque debt finance their intangible assets cannot otherwise secure, with portfolio governance designed to satisfy the Commonwealth Grants Rules and Principles 2024 and to avoid the documented failure modes of comparable international schemes.

What this submission proposes

1. **A merit-based assessment framework (the OIAF).** Six published, weighted criteria — research validation, IP strength, problem and structural demand, team, milestone credibility, and expected Australian economic return — that assess a young firm on the evidence of its innovation rather than on the existence of an overseas comparator or a pledgeable house. 'No sector precedent' is treated as a neutral-to-positive signal, not a disqualifier.
2. **A first-cheque guarantee instrument (the RBIG).** A $500M–$1B Commonwealth contingent-liability guarantee facility (an 80% standard coverage rate, on the British Business Bank CBILS/CLBILS partial-guarantee precedent) that crowds in private lending rather than substituting for it. A guarantee is not budget expenditure: the Commonwealth pays only on default. Estimated net annual fiscal cost is

$15–20M in the base case and approximately $32M in a 50% default stress case — against approximately $625M in mobilised private capital.

3. **Assessment governance that pre-empts the known failure modes.** AI-assisted, identity-blind scoring with full published rationale; a single named expert (not a panel) for borderline cases; milestone-linked tranching so public exposure never exceeds verified progress; and zero ministerial discretion at any tier. This design is a direct response to the empirical record on grant-system failure in Australia and on guarantee-scheme failure internationally. It also dispenses with the paid intermediary adviser layer of current programs — redirecting roughly $20M a year of pre-award overhead from gatekeeping to capital (§5.3, Appendix E).
4. **A staged, evidence-first implementation path.** A state-level pilot (proposed in a parallel Queensland submission) generates prospective performance data before any federal scaling, and an independent actuarial assessment is recommended as a precondition to program design — not as an afterthought.

What this submission does not claim

Consistent with the Commission's own caution about reading too much into aggregate dynamism indicators, this submission **does not** argue that headline firm-entry rates prove a crisis. Recent entry growth has been concentrated in non-employing sole traders, which tells us little about the high-growth, employing, innovation-intensive firms that matter for productivity. The argument here is narrower and more defensible: a specific, well-documented financing barrier prevents a specific, high-value class of firm from entering and scaling, and a targeted instrument can correct it at trivial fiscal cost. The retrospective validation presented in Appendix A is explicitly framed as **directional consistency across a curated test set, not predictive validation** — which is precisely why a prospective pilot is proposed before any federal commitment. The economic projections in Appendix B are likewise illustrative and order-of-magnitude — inputs to the case for evaluation, not forecasts — and the recommended pilot and independent actuarial assessment must precede any reliance on them.

Why this fits the Commission's frame

The terms of reference state the objective in their own words: settings that 'prevent their premature failure', 'preserve their innovations', and 'support more efficient use of capital across the economy'. Each element of this submission maps to that objective and to the Commission's published priority areas:

INQUIRY PRIORITY AREA	HOW THIS SUBMISSION RESPONDS
Area 2 — Australia's innovation ecosystem	Identifies a structural barrier (intangible-asset unbankability + comparator-dependence in private capital) and proposes exactly the category the call for submissions names under this priority — 'risk protection systems to support entrepreneurs' — without reliance on discretionary grants.
Area 4 — Capital markets	Addresses firms' inability to access finance outside conventional bank and VC channels — the precise gap the RBA has documented — through a guarantee that mobilises private debt rather than displacing it.
Area 1 — Administrative/regulatory costs of starting up	Tiered 30/60/90-day published-rationale decisions reduce the time-to-decision burden that disproportionately penalises pre-revenue firms with no runway to wait — and the design removes the paid intermediary adviser layer entirely, cutting pre-award overhead from roughly 27% of program budget to 3–5% (§5.3, Appendix E).
Integrity of public funding	The zero-discretion, merit-based, published-rationale design aligns directly with the two new key principles of the Commonwealth Grants Rules and Principles 2024 (merit-based processes; consistency with published guidelines).
Insolvency & orderly exit (TOR 1(b))	The instrument speaks to the inquiry's exit limb on both sides: the guarantee helps prevent the premature failure of viable-but-unbankable firms, while Track C provides a founder-protective, IP-preserving orderly-exit model aligned with the Commission's safe-harbour and insolvency objectives — distinguishing failed innovation from failed integrity (see §4.3).

1. The Barrier: A Capital-Market Failure That Suppresses Entry and Growth

The Commission has asked participants to identify processes and barriers that significantly limit efforts to start and grow a business, and to be specific about the regulation or market condition that causes the problem. This Part does exactly that. It identifies a single, well-evidenced barrier; explains why private markets cannot self-correct it; and specifies the class of firm it excludes.

1.1 The barrier, stated precisely

Almost all SME lending in Australia is secured, and residential property plays an outsized role in collateralising it. Firms whose value is intangible — a granted patent, research-validated method, or software platform — hold nothing the secured-lending system is designed to accept. The Reserve Bank's Assistant Governor (Financial System) put the mechanism on the record in April 2024:

> *"Given that almost all SME lending is secured, and residential property has an outsized role in collateralising the loans of small businesses, access to innovation-based debt financing is not straightforward … particularly … for younger entrepreneurs struggling to get onto the housing ladder."*
>
> — Bradley Jones, Assistant Governor (Financial System), Reserve Bank of Australia, COSBOA National Small Business Summit, 4 April 2024.

The same speech draws the link this inquiry is concerned with: it cites the international finding (Davis & Haltiwanger 2021, *Dynamism Diminished*) that housing-market and credit conditions shape firm entry and the employment share of young firms. The RBA has, in other words, already connected collateral-driven finance constraints to business dynamism. This submission operationalises that connection.

1.2 Why private capital cannot self-correct

There are two distinct private channels, and each fails the target cohort for a structural reason that competition will not fix:

- **Bank debt fails on collateral.** The asset is intangible; the security the system requires does not exist. This is a design feature of secured lending, not a pricing error a more aggressive lender would correct.
- **Venture capital fails on comparability.** Australian risk capital de-risks by pointing to a proven overseas comparator ('the Australian version of [X]'). A genuine world-first has no comparator by definition. The stronger the novelty and the IP, the harder the rejection — the exact inverse of what an innovation-funding system should reward. The consequence is that the firms private capital can fund are, structurally, second movers into categories someone else already proved.

Neither failure is a moral or cultural deficiency in Australian investors. Each is a structural property of the instrument. That is what makes this a market failure amenable to government action rather than a problem solvable by exhortation, tax tweaks, or 'more risk appetite'.

The barrier also has an identifiable regulatory root — the 'specific regulation' the Commission's call for submissions asks participants to name. Under the prudential capital framework, intellectual property is not a recognised form of collateral for capital-relief purposes (APS 112), so a loan secured only by intangible assets is, for regulatory-capital purposes, effectively unsecured. The framework's stance on intangible value is consistent and explicit: APS 111 requires intangible assets to be deducted in full from Common Equity Tier 1 capital — a treatment the customer-owned banking sector has quantified as equivalent to a risk weight of 800–1,250 per cent, against 100 per cent for a comparable tangible asset. The exclusion documented above is therefore not a failure of bank risk appetite; it is the prudential framework operating as designed. This submission does not argue that those settings should be weakened — they reflect genuine valuation uncertainty and protect depositors. The implication runs the other way: where prudence

necessarily prices an entire high-value cohort out of debt finance, the least-distortionary correction is targeted risk transfer — a guarantee — not regulatory dilution. That is how every comparable economy in section 2.3 resolved the same tension.

1.3 The five structural failure types

The barrier resolves into five recurring failure types. Each is observable in the Australian innovation record and each is present today.

FAILURE TYPE	WHY PRIVATE CAPITAL CANNOT FIX IT	POLICY RESPONSE
1. Non-existent market (blue ocean)	VCs require existing market size to justify investment. A world-first creates its market; there is none to size.	Assess structural demand signals (LOIs, pilots, validated need), not market size in a market that does not yet exist.
2. Intangible-asset unbankability	Secured lending requires physical collateral; the asset is intangible. Formally identified by the RBA (Jones, April 2024).	A guarantee substitutes public risk tolerance for private collateral — the core function of the RBIG.
3. Category illegibility (the comparator trap)	Capital pattern-matches against overseas comparators. A world-first has none; novelty raises rejection risk.	Assess on research quality and IP strength; 'no overseas equivalent' is a neutral-to-positive signal.
4. Geographic and prestige penalty	Affinity, prestige and geographic bias are extensively documented and not corrected by market competition.	Identity-blind, criteria-based assessment (Part 4) removes the channel through which bias operates.
5. Time-horizon mismatch	VC fund lifecycles (7–10 yrs) bias against long-horizon deep tech; the most transformative cycles are longest.	Guarantees carry no fund-lifecycle pressure; rolling, milestone-tranched support proceeds at technical pace.

1.4 The cohort this barrier excludes — and only this cohort

This submission is deliberately narrow about which firms it concerns, because the Commission rightly distinguishes barriers that bind from barriers that are merely cited. The instrument proposed here applies to **innovative young firms that cannot access conventional finance because there is no comparator and the IP is unbankable** — research-validated, IP-rich, pre-revenue or early-revenue firms with credible export potential.

It does **not** apply to the ordinary bankable economy — bakeries, cafes, restaurants, trades, professional-services firms, retailers — because those businesses can be financed through standard channels against cash flow, equipment, or property, and have observable comparators. They face their own dynamism barriers (regulatory cost, licensing, insolvency friction), but not **this** one. Targeting matters: a guarantee aimed at the bankable economy would crowd out private credit and create exactly the 'subsidy business' distortion the evidence warns against. Targeting it at the unbankable-by-structure cohort crowds private capital *in*.

> **Anticipated Commission question — answered up front.**
>
> "Isn't this just government picking winners?" No. The instrument does not select a sector, a technology, or a company on discretion. It applies published criteria to firms that have already been validated by independent research and IP processes, and lets **private lenders** make the capital-allocation decision behind an 80% guarantee — retaining 20% of the risk to preserve credit discipline. Government is correcting a collateral failure, not exercising commercial judgement.

A contemporary illustration — the status quo already picks winners, by category (June 2026). The 'picking winners' concern is best answered by describing how public innovation capital is allocated now: by designated priority category, not by merit. Quantum computing is a National Reconstruction Fund priority field, and in a single recent period more than $1 billion of public capital was directed to it — including a $940 million Commonwealth and Queensland package to a United States company to build a facility near Brisbane (C22), alongside sustained public backing for domestic quantum firms (C21). A research-validated, IP-rich firm of equal merit in a category without a comparable funding lane receives nothing of the kind. The Government's own State of Australian Quantum report concedes the result: 'Australian businesses and researchers face strong incentives to move overseas' (C23). This is not an argument to withdraw support from strategic priorities such as quantum; it is the argument that merit — research validation and IP strength — should open a financing channel in any category, because the collateral-market failure described above is category-neutral. OIAF selects no category: it scores merit and lets private lenders allocate behind a guarantee — the inverse of picking winners.

FACTOR	SILICON QUANTUM COMPUTING	DENTROID
Innovation profile	UNSW research; atomic-precision manufacturing IP; commercial scale targeted 2033 (C21).	University clinical research (UQ, Griffith, Sydney, Maryland); patented Nuralyte; pre-commercial (C24).
Category status	National Reconstruction Fund priority field.	No comparably funded priority lane.
Public risk-bearing	Approximately $100M in combined Commonwealth and NRF backing (C21).	None comparable.
Private capital raised	Raised within a strategic-corporate and government consortium.	$32M at a $265M valuation (C24).
Where the core IP sits	**Retained onshore.**	**Core IP licensed offshore to a French manufacturer (C24) as part of the funding partnership.**

Two firms of comparable merit profile. The variable that tracks the outcome is category-tied public risk-bearing, not private appetite — Dentroid in fact raised a substantial private round. Where public risk-bearing was available, the IP stayed in Australia; where it was not, the IP was licensed abroad to secure capital. The point is not that quantum is over-funded — it is independently meritorious — but that merit alone, untethered from a favoured category, does not currently open a financing path.

2. The Evidence: The Pattern Is Documented, Not Anecdotal

The Commission asks for evidence — data, case studies, research. This Part provides three independent evidentiary supports for the barrier described in Part 1: the historical record of Australian innovation; the empirical record of how public funds have and have not worked; and the international record of how comparable economies have closed the same gap.

2.1 The historical record: six firms the Australian capital system would not, or could not, fund

Each of the following was conceived in Australia, on Australian research, and either rejected, under-served, or forced offshore by the Australian capital system at the entry stage. The economic value Australia retained correlates precisely with whether public risk-bearing bridged the gap before private capital engaged.

FIRM / FIELD	HOW THE CAPITAL SYSTEM FAILED IT	OUTCOME
CSIRO Wi-Fi (1990s, wireless)	No private investor would fund the underlying radio-astronomy physics; no VC could value a networking market that did not yet exist. Public research (CSIRO) was the only possible source.	$430M+ in global licensing royalties from 20+ companies including Microsoft, Intel, Dell and HP — the most commercially significant patent in Australian history, from public research.
Cochlear (1970s–80s, implantable medtech)	Banks could not lend against pre-market research; private capital could not finance a multi-year clinical pathway with no comparator. University of Melbourne research carried the early risk.	ASX-listed; peak market capitalisation above $17B; 700,000+ implants across 180+ countries; advanced-manufacturing IP anchored onshore for 40+ years — because pre-market risk was carried publicly.
ResMed (late 1980s–90s, medtech)	Sleep apnoea was under-recognised; the market did not exist at scale and there was no overseas comparator. Foundational research from the University of Sydney.	NYSE-listed; market capitalisation above $30B; millions of patients served globally. The company exists because public research carried it through the pre-market years.
Black-box flight recorder (1954–58, aviation safety)	Invented at the Aeronautical Research Laboratories, Melbourne. Rejected domestically; never patent-protected; no public bridge to commercialisation.	Commercialised in the UK and US after a 1958 demonstration abroad. Now mandatory on every commercial aircraft on earth. Australia invented it and captured virtually none of the value — the inverse case.
Atlassian (2002–10, enterprise software)	No early-stage Australian capital existed to fund two graduates building developer software with no overseas template. They bootstrapped on personal credit-card debt for eight years.	First institutional cheque from Accel (US), 2010; redomiciled to the US in 2022. NASDAQ-listed. A success that bootstrapped through, not because of, the local capital system.
Canva (2010–13, design software)	Rejected repeatedly over roughly three years — for being Australian, for ‘design is too niche’. The Commercialisation Australia grant arrived after the offshore seed round closed and required matched private funding even to apply.	One of Australia’s most valuable private companies; 240M+ users across 190 countries — built on a capital pathway that ran through San Francisco, not Sydney. Redomiciled to a US (Delaware) parent in 2025 in preparation for a likely US listing.

Sources: CSIRO annual reports; Cochlear and ResMed company filings; Defence Science and Technology / National Museum of Australia / Museums Victoria (Warren, black box); Atlassian filings; Canva newsroom. In each case the failure is one of the capital system, not of the innovation or the founder.

The pattern is structural.

Across six fields and seven decades, the same configuration recurs: the innovation was world-first; its market did not yet exist; its assets were intangible; the capital required was patient; and the founder was penalised for geography, youth, or unconventional background. Where public risk-bearing bridged the gap, the value anchored in Australia. Where it did not, the value left. The configuration is operating now, on founders in exactly the position these firms once occupied.

When the first cheque is unavailable onshore, the company, its intellectual property, and the productivity spillovers relocate to where capital will engage — as Atlassian and Canva did. The barrier is therefore not only a dynamism cost; it is a direct drag on the international competitiveness the terms of reference ask the Commission to promote.

DOMICILES OFFSHORE what Australia retains	VALUE CHAIN Δ what the fork is worth to Australia	ANCHORED IN AUSTRALIA what Australia retains
SAME STARTING POINT — one Australian deep-tech firm that scales to $1bn ARR. What Australia keeps when it succeeds depends entirely on where it raised its first cheque.		
No domestic lead investor. Raises offshore — only if it relocates.	**CAPITAL** The decisive fork	**First-cheque guarantee leads.** Raises the first round in Australia.
Incorporates a Delaware C-corp; Singapore HQ. IP assigned offshore, pre-revenue.	**CORPORATE STRUCTURE** IP: Australian-owned vs offshore	**Australian resident company.** IP-registration covenant keeps IP onshore.
$1bn ARR booked to the offshore entity. ~$0 recognised in Australia.	**REVENUE** $1bn	**$1bn ARR booked in Australia.**
A small local Mktg/Sales office only. Manufacturing/Operations offshore in SE Asia.	**JOBS** ~5,700 FTE	**~5,700 high-value FTE in Australia.** ~$150M/yr in personal income tax.
Profits booked offshore. ~$0 Australian company tax.	**COMPANY TAX** ~$90M/yr	**~$60M/yr company tax (30% on profit).** + ~$30M/yr state payroll tax.
Productivity gains accrue offshore. Locks-in $2.50 GDP per $1 Govt. Spend ($12 GDP Intnl. Education)	**PRODUCTIVITY** ~$225 GDP per $1 net public cost	**Productivity gains accrue to the Australian economy.**
~$800M export income booked offshore. Australia keeps ~$0.	**EXPORT & GROWTH** ~$800M/yr export income	**~$800M/yr counted as Australian export income.** Compounds locally, every year.
$1bn ARR firm, offshore: **Australia keeps ≈ $0**	TOTAL Δ / YEAR **~$240M tax + ~5,700 jobs**	$1bn ARR firm, anchored: **~$240M tax · ~5,700 jobs · ~$800M export**

Exhibit 2.1 — No Capital, No Anchor: what the same configuration does to one firm today (illustrative; $1bn-ARR deep-tech composite)

For scale.

Across the whole economy, every $1 of total government spending is associated with roughly $2.50 of GDP; international education — Australia's best-leveraged export sector — returns about $12 of GDP per $1 of government input. RBIG models ~$225 per $1 of net fiscal cost. Because a guarantee is a

> contingent liability, the cost to taxpayers is the net default loss (~$15–20M/yr), not the headline exposure. These comparators are not strictly like-for-like: the $2.50 and $12 figures are GDP per dollar of gross outlay, whereas the RBIG figure is GDP per dollar of net contingent cost — the comparison is indicative of order-of-magnitude leverage, not a normalised ratio. Even under the 50%-default stress case (~$32M/yr net cost), it returns ~$140 per $1 — still an order of magnitude above any existing sector.

2.2 The empirical record: how public money has, and has not, worked

The case for a new instrument must confront the evidence on whether public innovation funding works at all. That evidence is unambiguous about **how** it fails — and the failure mode is precisely the one the proposed design eliminates.

2.2.1 The Australian record: non-competitive grants destroy value

The IPA–Deakin SME Research Centre tracked 141,800 firms that received $4.2 billion in Commonwealth business grants between 2018 and 2022. The findings are directly material to instrument design:

- More than 30% of grants generated no significant business or economic benefit.
- Firms funded through non-competitive, eligibility-driven processes performed worst — average declines in return on assets of 4.9% and in turnover of 6.6%.
- 83.77% of business grants were awarded through non-competitive, demand-driven processes.
- Approximately $500 million was distributed through ministerial discretion without formal processes.
- Non-competitive grants tended to create ‘subsidy businesses’ — firms sustained by grants rather than commercial viability.

> *“The awarding of Commonwealth government grants has been a shrouded process for many years, despite the significant quantum of public money involved.”*
>
> — Professor George Tanewski, Director, IPA–Deakin SME Research Centre (2024).

A second, independent audit points the same way. The Auditor-General’s performance audit of the Entrepreneurs’ Programme — the predecessor commercialisation scheme — found that the procurement of its delivery partners did not comply with the Commonwealth Procurement Rules and was ‘deficient in significant respects’: the delivery-partner contracts at issue ($144 million in value at signing) were evaluated against only two of the six published evaluation criteria, and the large majority of contracts (around 83 per cent by the ANAO’s count) were awarded to incumbent providers (ANAO Report No. 42 of 2021–22). The programme was subsequently closed and replaced. The failure was not the act of funding innovation; it was a discretionary, partially-assessed allocation process — which is precisely what an assessment that scores every applicant against all six published criteria, with full published rationale, is designed to eliminate. The cost of that intermediary structure persists in the current architecture: the Industry Growth Program allocates approximately $105 million of its $392.4 million budget to the adviser network and program administration — overhead incurred before any capital reaches a firm. Section 5.3 and Appendix E quantify the efficiency dividend of removing it.

The lesson is not ‘do not fund innovation’. It is ‘do not fund it through non-competitive, discretionary, eligibility-driven channels’. Every design choice in Part 3 and Part 4 — competitive merit criteria, published rationale, milestone tranching, and zero ministerial discretion — is a direct response to this record. Notably, these choices now align with the **two new key principles** introduced into the Commonwealth Grants Rules and Principles 2024 (in force 1 October 2024): merit-based processes, and consistency with published guidelines.

2.2.2 The integrity framework has already moved in this direction

The Commonwealth's own grants framework was strengthened in October 2024 specifically to improve integrity, accountability and transparency. Competitive, merit-based selection is now the default expectation for grant opportunities unless a delegate specifically agrees otherwise, with documented reasons. A guarantee instrument built on published criteria and zero discretion is not asking the Commonwealth to adopt a novel governance posture — it is asking it to apply, to a financing instrument, the discipline it has just legislated for grants.

2.2.3 The scaffolding is being withdrawn — and instability is itself a barrier

The barrier is widening as this inquiry proceeds. Around the 12 May 2026 Budget — the same period in which these terms of reference were referred to the Commission — the two principal federal instruments serving this cohort were closed to new entrants. Australia's Economic Accelerator, the $1.6 billion research-commercialisation program, was discontinued, with approximately $800 million in uncommitted funding redirected for 'essential Budget repair'; and the Industry Growth Program was paused to new applications. Both decisions illustrate a structural feature of cash-grant support: because its return is slow and diffuse, it is among the first expenditure cut when budgets tighten, irrespective of its long-run value.

The cost of this pattern is not only the funding withdrawn; it is the unreliability it signals. Capital allocation is forward-looking. A founder deciding where to incorporate, hold intellectual property, and hire is pricing the reliability of the support environment across a seven-to-ten-year build, not the support available in any single year. The Reserve Bank has documented that elevated uncertainty — including domestic policy uncertainty — leads firms to delay or withhold investment that is costly to reverse, with the largest effects on business investment. Stop-start innovation support raises that uncertainty directly: it signals that Australian support is discretionary and first to be cut, which raises the risk premium on staying and lowers it on the offshore alternative. Instability is therefore itself a barrier to firm entry and retention — a dynamism cost that appears in no headline spending figure, and a contributor to the very offshore migration this submission documents.

This carries a design implication the Commission is well placed to note. A standing guarantee facility, governed by published criteria and a durable mandate, is structurally harder to switch off than an annual grant appropriation: it presents no discretionary cash line to redirect in a Budget-repair round. The form of the instrument, not only its cost, determines whether founders can rely on it (see §5.2).

2.3 The international record: the gap has been closed before

The instrument proposed here is not experimental. Every operating principle in it has been proven separately in at least one major innovation economy. The table below summarises the comparators most relevant to design.

JURISDICTION / INSTRUMENT	WHAT IT DOES	SCALE	WHAT RBIG ADOPTS OR IMPROVES
United States — SBIR (1982–)	Non-matched, criteria-based innovation grants across federal agencies; three-phase (feasibility / R&D / commercialisation).	~US$4B/yr; US$54.6B / 178,731 awards to FY2019.	Adopts the non-matched first-cheque principle, applied to a guarantee rather than a grant.
France — Bpifrance Deep Tech Plan (2019–)	Combined repayable loan + grant + guarantee architecture for deep tech, via the public investment bank.	~€3.7B in innovation aid to 2,100+ deep-tech startups since 2019.	Closest architectural analogue. RBIG adds AI-assisted criteria-based assessment and explicit retention covenants.
South Korea — KIBO / KOTEC (1989–)	Statutory technology credit guarantees for SMEs 'with	Multi-billion-USD portfolio; ~US$130M	Closest analogue by purpose — and a cautionary tale. RBIG's

JURISDICTION / INSTRUMENT	WHAT IT DOES	SCALE	WHAT RBIG ADOPTS OR IMPROVES
	little or no collateral', based on technology appraisals.	in AI guarantees committed for 2025.	governance fixes target KIBO's documented failures (see 2.3.1).
European Union — EIC Accelerator (2021–)	Non-matched grants (up to €2.5M) blended with equity (€0.5–15M) for deep tech; Pathfinder/Transition are pure grants.	~€10.1B budget (2021–2027); 3.5× private-capital leverage on the equity component.	Assessment principle aligns with EIC's excellence/impact/implementation rubric; guarantee + Tier 3 equity mirrors the blend.
Israel — Innovation Authority	R&D grants (30–50% of budget, company matches remainder); royalty repayment if IP is transferred offshore.	Budget ~ILS 1.5B/yr (~US$400M); ~1,500 active deep-tech companies.	Adopts IIA's IP-retention principle; rejects its matched-funding precondition, which Australian private capital does not satisfy.

2.3.1 The single most important design lesson: KIBO

South Korea's KIBO is the closest international analogue to the proposed instrument by purpose — a statutory technology-credit guarantee for collateral-light firms. It is also a documented governance failure. Net guarantee-call losses reached approximately KRW 1.43 trillion (over US$1B-equivalent) in 2025; documented misuse includes personal use of funds, related-party transactions, and embezzlement; oversight ran at roughly one monitoring officer per 250 firms; and only about 35% of misused funds were recovered. **These failures are not a reason to avoid the instrument; they are the specification for governing it.** AI-assisted assessment with published rationale, milestone tranching, a structured review gate, and zero ministerial discretion are the direct fixes — built in from day one rather than retrofitted after loss.

3. The Instrument: Assessment Framework and Guarantee

This Part specifies the instrument in the detail the Commission requests: what is assessed, how, by whom, against what coverage, and at what fiscal cost. The design separates two questions that are usually conflated — **which firms qualify** (the OIAF assessment framework) and **how the public risk is structured** (the RBIG guarantee).

3.1 The assessment framework (OIAF): six published, weighted criteria

The Outlier Innovation Assessment Framework scores a firm against six criteria, published in full before any application round opens. The weights are calibrated so that genuine research validation and IP strength — the two attributes private capital cannot price — dominate the score.

CRITERION	WHAT IT MEASURES	WEIGHT	FAILURE ADDRESSED
Research validation quality	Peer-reviewed research, university partnership, independent methodology. Absence of sector precedent is neutral-to-positive, not disqualifying.	**25%**	Category illegibility + non-existent market
IP strength	Granted patent, PCT application or equivalent; jurisdictional breadth; Australian-entity registration.	**20%**	Intangible-asset unbankability
Problem definition & structural demand	Verifiable problem; demand signals (LOIs, pilots, waitlists) even where no formal market yet exists.	**20%**	Non-existent market
Team track record	Technical and commercial execution capability, assessed blind to identity. No prior success in this exact category expected.	**15%**	Geographic / prestige penalty
Milestone credibility	Independently verifiable, time-bound milestones. Long timelines assessed for credibility, not penalised.	**10%**	Time-horizon mismatch
Australian economic return	Expected revenue, employment, exports, tax. Assumptions scrutinised for credibility.	**10%**	Cross-cutting

Funding threshold: 65/100. Borderline review band: 55–65 (single independent expert). Rejection: below 55. All criteria, weights and rubrics are published before the round opens — transparency is the discipline that prevents the IPA–Deakin failure modes.

3.2 Where the NRF and the National Innovation Pillars fit

Direct response to the Commission's briefing question (27 May 2026): 'Where does the National Reconstruction Fund fit? Does this propose removing it as a filter?'

No. The AUS-OIAF score remains the primary decision factor. **NRF priority-sector alignment is retained as a secondary, non-scored consideration only**. The submission does not propose abolishing the NRF or its seven priority areas. It proposes that a firm should not be excluded at the gate solely because its category-creating innovation does not map cleanly onto a pre-defined sub-sector. By definition, the most economically consequential innovations frequently create the sub-sectors that did not previously exist. The framework operates within the six National Innovation Pillars recommended by the Strategic Examination of R&D (Ambitious Australia, 2025; C25). **It removes only the narrower, hard eligibility gate that systematically screens out world-first innovations at the assessment stage.** Where a proposal also aligns with an NRF priority area, that alignment can be noted for potential co-funding or parallel pathways without affecting the core AUS-OIAF merit score.

3.3 The guarantee (RBIG): structure and coverage

The Research-Backed Innovation Guarantee is a Commonwealth contingent-liability facility of $500M–$1B in guarantee exposure for OIAF-approved firms. It is a guarantee, not a grant: the Commonwealth pays only on default. Standard coverage is 80%, on the British Business Bank CBILS/CLBILS partial-guarantee precedent (under which the lender carried 20% of the loss while the borrower remained fully liable), leaving the lender with 20% of the risk — enough skin in the game to preserve genuine credit discipline. A bounded uplift to 100% coverage is available only for the highest-scoring, strategically aligned firms, and only via a technical-body supermajority with published rationale — never by ministerial discretion.

COVERAGE	RATE	ELIGIBILITY	GOVERNANCE
Standard	**80%**	All OIAF-approved firms (score 65+/100).	Standard conditions per tier. Lender retains 20% — credit discipline preserved.
Uplift (ceiling)	**100%**	OIAF score 80+/100 AND alignment with a declared National Innovation Priority.	Technical-body special resolution (75% supermajority) + published rationale within 30 days + annual reporting to the Minister. No ministerial discretionary override at any tier.

3.4 Fiscal position: a contingent liability, not expenditure

Because a guarantee is contingent, the budget cost is the expected loss, not the headline exposure. The base case assumes a $500M portfolio at 80% coverage:

Government exposure (80% of $500M)	**$400M**
Default rate (deliberately above BBB Future Fund's ~18%, for earlier-stage risk)	**30% (base) / 50% (stress)**
Loss given default (limited IP recovery on pre-revenue failure)	**80%**
Expected portfolio-lifetime loss — base ($400M × 30% × 80%)	**$96M (~$19M/yr gross)**
Net annual fiscal cost — BASE CASE (after royalty/equity returns)	**$15–20M / yr**
Net annual fiscal cost — STRESS CASE (50% default)	**~$32M / yr**
Private lending mobilised at 80% coverage	**~$625M (1.25× leverage)**

> For context: even at the 50% stress case, net annual fiscal cost is approximately 0.2% of the roughly $15 billion the Commonwealth already invests in R&D each year — comparable to a small grant program, but structured to **mobilise** private capital rather than displace it. These figures are illustrative. The submission recommends the Commonwealth commission an independent actuarial assessment (estimated $400–600K, 4–6 months) as a **precondition** to program design, rather than treating these estimates as design inputs.

4. Governance: Eliminating the Documented Failure Modes

The Commission asks not only whether a reform would work, but whether it can be implemented without creating new risks. This Part sets out the governance that converts a guarantee — historically a vehicle for discretion, capture and loss — into a merit-based, auditable instrument.

4.1 AI-assisted, identity-blind assessment

Human funding panels carry documented, replicated bias. A natural experiment at the Canadian Institutes of Health Research (Witteman et al., *The Lancet*, 2019) found that grant-funding gaps stemmed from how principal investigators were evaluated, not from differences in proposal quality. Australia's own innovation history — Canva rejected repeatedly, partly for being Australian — is the local case. Identity-blind, criteria-based assessment removes the channel through which that bias operates.

STAGE	TASK	WHO
1	Eligibility screen: university partnership, granted IP, Australian HQ, milestone plan. Binary pass/fail against published checklist.	AI — automated, immediate, auditable. No human involvement.
2	Criteria scoring against the published OIAF rubric, with full rationale published to the applicant.	AI primary; human triggered only if score is in the 55–65 band.
3	Borderline review of the AI rationale; adjustment within ±10 points with written justification.	A single named expert — not a panel. Identity disclosed post-decision.
4	Conditions: confirm which tier conditions apply by guarantee size; obtain signed acceptance.	AI-managed workflow. Conditions set by tier — no discretion.
5	Decision publication: full rationale, any expert adjustment and justification, conditions attached.	Automated. Full transparency. No confidential deliberations.

Decision timelines are tiered: a 30-day target for AI-primary decisions, 60 days for borderline expert review, and 90 days maximum including conditioning. Even at the ceiling this is materially faster than the current Industry Growth Program (typically 120–150 days). For a pre-revenue firm with no runway, speed is itself a barrier-reduction measure.

4.2 Retention conditions, tiered by guarantee size

Public risk-bearing should retain a proportionate share of the economic value it enables, without deterring the most successful founders — the ones with the most international options. Conditions are disclosed at application, scale with guarantee size, and are formula-based, not discretionary.

TIER	CONDITIONS	RATIONALE
Tier 1: $100K–$500K	IP registration covenant + Employment Floor (activation-conditional) + milestone tranching (3 tranches).	Minimal friction; protects IP and jobs baseline; designed for earliest-stage firms.
Tier 2: $500K–$2M	Tier 1 + Australian HQ covenant (5 yrs) + revenue royalty (0.5%, activating above $2M revenue and third tranche, capped at 2× guarantee or 8 yrs).	Medium friction; royalty is proportional repayment with a defined ceiling, not equity dilution.
Tier 3: $2M+	Converts to equity at Series A / first institutional round: 1% per $1M, capped at 3.5%, formula-based, managed by an independent fund manager; non-tradeable to third parties; company buyback right.	Justified by larger public exposure; formula-based equity eliminates discretion; buyback gives a clean exit for both parties.

4.3 The Month-36 review gate — and an orderly-exit model for the inquiry's insolvency strand

Deep tech is long-horizon by nature: Cochlear took 15 years to reach scale, CSIRO Wi-Fi a decade before licensing. A covenant that auto-penalises a firm for not having commercial revenue at an arbitrary date would punish the exact profile the instrument exists to support. Equally, open-ended deferral invites moral hazard. The instrument resolves this with a structured review at Month 36 (where commercial revenue has not been reached), conducted by an independent administrator against three published criteria — milestone progress, capital integrity, and commercial-pathway viability — with three published outcome tracks and no ministerial discretion at any stage.

TRACK	TRIGGER	TREATMENT
A — Extension	All three criteria met	Activation deferred up to 24 months (single use). Quarterly reporting continues; next tranche may release on milestone verification. Founder-friendly default for good-faith long-horizon development.
B — Watch list	Two of three met, or partial concerns	Activation deferred 12 months; monthly reporting; next tranche held until first revenue or reassessment; independent technical review at Month 42.
C — Activation or structured wind-down	Fewer than two criteria met	Clawback on undeployed tranches; firm offered structured wind-down — managed asset transfer, IP returned to an Australian entity, founder released from personal liability per guarantee terms. No further tranches.

A note for the insolvency strand of this inquiry.

Track C is, in effect, a purpose-built orderly-exit mechanism for failed deep-tech ventures: it distinguishes **failed innovation from failed integrity**. The firm is wound down in a managed way, the IP is preserved onshore, and the founder is released from personal liability rather than pushed into bankruptcy or public-record punishment. This is the same principle the Commission is examining under its insolvency and safe-harbour terms of reference — that an orderly, inexpensive, non-stigmatising recovery for good-faith failure is what keeps capable people willing to start the next venture. RBIG's Track C offers a working model of that principle applied to the highest-risk, highest-value cohort, drawing on the precedent of the British Business Bank Future Fund's structured wind-down approach. It gives practical content to the principle the Government's own framing of insolvency reform calls 'room to fall, room to rise' (Leigh 2025).

4.4 Score durability: re-confirmation at each tranche gate

An OIAF score is a point-in-time judgment, and the two criteria that dominate it — research validation and IP strength, 45% of the weight combined — are precisely the attributes a fast-moving technology frontier can erode. A research moat that is genuine at first cheque can be commoditised by a single general-purpose advance well before the guarantee has run its term. The instrument already holds the control for this: guarantees are released in milestone-linked tranches (§4.2), so public exposure only ever grows as a firm continues to earn it. This covenant makes that control explicit against technological change.

At each tranche-release gate, the AI re-confirms — against the current state of the art, not the state at first assessment — that Criteria 1 and 2 still hold: that the research basis remains distinctive and the IP remains

defensible. The check is automated and lightweight where nothing material has changed; only a flagged erosion triggers a full re-score, routed to the single named expert under the same ±10-point, published-rationale rule that governs borderline cases at first assessment (§4.1).

The consequence is forward-gating, not punishment. Where a re-score now falls below the 65-point funding threshold because the frontier has moved — an exogenous event, not a failure of the founder — the next tranche is held pending expert review, on the same watch-list logic as Track B (§4.3). Tranches already drawn stand; the firm remains free to continue on its own or its lender's capital; and nothing is clawed back for exogenous technological change, which remains distinct from the failure-to-progress and integrity triggers reserved to Track C. The Commonwealth simply stops extending new exposure behind a moat that no longer exists — exactly what a lender carrying 20% of the loss would do.

In one line. Milestone tranching already ties exposure to verified progress; the durability covenant adds that progress includes keeping the research-and-IP moat ahead of a moving frontier — re-confirmed at every gate, any pause published, and never applied retroactively.

5. Implementation, Feasibility and Risks

The terms of reference ask the Commission to advise on implementation, including feasibility, risks, and areas where more evidence is needed. This Part responds directly, in that structure.

5.1 An evidence-first sequence: pilot, then scale

The most defensible way to deploy this instrument is not to launch it federally on the strength of retrospective modelling. It is to pilot it at state scale, generate prospective performance data, and scale federally only once that data exists. A parallel submission to the Queensland Government proposes exactly such a pilot, using identical criteria at a $50–100M state-guarantee scale. The sequence:

Year 1 (pilot). State pilot at $50–100M; AI-assisted assessment validated against live applications; first 20–40 firms scored; initial default and traction data collected. This directly supplies the prospective validation that retrospective testing (Appendix A) cannot.

Year 2 (expansion). Other jurisdictions invited to adopt the common framework; shared assessment infrastructure; independent actuarial assessment commissioned.

Year 3 (federal scale). Federal facility launched at $500M–$1B, applying validated criteria and informed by ~24 months of prospective pilot data.

This sequence reduces federal risk, builds an evidence base before commitment, and means the Commonwealth is never asked to scale an unvalidated instrument.

5.2 Feasibility: the instrument is buildable within existing architecture

- **No new statutory body strictly required to pilot.** The Industry Growth Program — paused to new applications from May 2026 pending redesign for 'better targeted grant rounds and a more predictable grant application process' — is the natural federal host, and a merit-based, published-criteria framework of the OIAF type answers that stated redesign objective directly. The coordinating architecture now exists alongside it: the 2026–27 Budget established the National Resilience and Science Council to align public innovation investment. Marginal additional administrative cost.
- **Durability is part of the design, not only the economics.** A guarantee governed by published criteria and a standing mandate is far harder to withdraw than an annual grant appropriation — precisely the property the 12 May program closures show cash grants lack. That reliability is itself part of the instrument's effectiveness: it is a commitment a founder can plan a long build around, which a stop-start grant cycle is not.
- **The contingent-liability mechanism is well understood.** The British Business Bank Future Fund demonstrates the convertible-instrument design at scale; Bpifrance demonstrates the federal-guarantee-for-deep-tech architecture; KIBO demonstrates the governance pitfalls to design out.
- **It complements rather than displaces existing reform.** It sits alongside, not in place of, broader capital-market measures (venture-capital regime settings, superannuation reform, translation infrastructure). It is the instrument for the specific cohort those broader measures do not reach.

5.3 Process efficiency: removing the paid intermediary layer (Priority Area 1)

The current architecture carries a second cost, separate from the grant-versus-guarantee question: the paid intermediary layer through which every applicant must pass. The Industry Growth Program allocates approximately $105 million of its $392.4 million four-year budget to internal costs — the adviser network and program administration — against a project-funding pool of approximately $287 million. That is roughly 27 per cent of the program budget, or 37 cents of overhead for every dollar of grant funding, incurred before any capital reaches a firm. The predecessor Entrepreneurs' Programme embedded the same structure: delivery-partner contracts the Auditor-General assessed as deficient in significant respects ($144 million in value at signing), procured through a process that did not comply with the Commonwealth Procurement Rules (§2.2.1).

The adviser pre-filter is, in principle, defensible: independent expert assessment can reduce downstream risk. The structural failure is where it sits and how it operates. It functions as a discretionary gate ahead of any criteria-based merit assessment: a subjective judgement about whether an innovation fits a recognisable category, whether its market 'exists', or whether the founder matches a familiar profile determines access — and that judgement is neither published, nor reviewable, nor appealable. This is the category-illegibility failure of §1.3 operating inside the public program that exists to correct it. The applicant cannot see the reasoning, cannot contest it, and waits 120–150 days for the outcome.

OIAF removes the gate by removing the discretion, not the rigour. Published criteria, AI-assisted scoring with full rationale, and a single named expert for the borderline band perform the same screening function transparently, in 30–90 days, with every decision auditable (§4.1). The structural consequence is that the multi-contract adviser network collapses to a single expert-review function plus standard program administration. On the current cost line, that is a saving in the order of $20 million per year — an approximately 80 per cent reduction in intermediary overhead — redirected from gatekeeping to capital: it either lowers the net contingent-liability cost of the guarantee, or expands the portfolio from roughly $500M toward $650M at constant fiscal cost, mobilising proportionally more private lending.

The scale of the inefficiency is clearest against private-market practice. A function-matched comparison (Appendix E) shows the current model spends roughly four to six times more, per dollar deployed, on its one-time pre-award gate than a venture fund spends on the equivalent screening function — while performing none of the decade-long post-investment monitoring and value creation that justifies private-fund fees. This addresses Priority Area 1 of the terms of reference directly — administrative and process friction in starting and growing a firm — and applies to the assessment pathway itself the merit-based, published-criteria discipline the Commonwealth Grants Rules and Principles 2024 now require of grant allocation.

> **The efficiency dividend, in one line.** Replacing the paid intermediary layer with published-criteria assessment is not an administrative footnote to the reform option — it is part of its fiscal case. Roughly $20M a year moves from gatekeeping to capital, decision times fall from 120–150 days to 30–90, and the discretionary channel through which the documented bias of §1.3 operates is closed. All figures are illustrative, drawn from published program-budget allocations, and subject to the same independent validation recommended throughout (Appendix E).

5.4 Risks and mitigations

RISK	WHY IT MATTERS	MITIGATION
Capture / discretion creep	The documented cause of Australian grant-system value destruction (IPA–Deakin) and KIBO losses.	Zero ministerial discretion at any tier; published criteria and rationale; merit-based default consistent with CGRP 2024.
Default losses exceed projections	Pre-revenue cohort is inherently higher-risk than the BBB precedent.	Independent actuarial assessment as a precondition; 50% stress case still ~0.2% of Commonwealth R&D spend; milestone tranching caps exposure to verified progress.
Crowding out private credit	A guarantee aimed too broadly would subsidise bankable firms.	Strict targeting to the unbankable-by-structure cohort (Part 1.4); 80% standard coverage leaves lenders with real risk; bankable businesses explicitly excluded.

RISK	WHY IT MATTERS	MITIGATION
Moral hazard / 'subsidy businesses'	Firms could subsist on public support without commercial intent.	Month-36 review gate with three published tracks; royalty/equity returns align incentives; structured wind-down for genuine failure.
Assessment error / over-reliance on AI	Automated scoring could embed or obscure error.	Published rationale for every decision; human expert for borderline cases; annual independent audit of scoring distributions for bias.

5.5 Where more evidence is needed

- Prospective predictive validity of the OIAF criteria — supplied by the proposed state pilot, not yet demonstrated.
- Australian-specific default and recovery rates for a pre-revenue deep-tech guarantee cohort — the subject of the recommended independent actuarial assessment.
- Employment and export multipliers specific to the relevant pillar/geography combinations — national averages are used in Appendix B and flagged as such.

6. Recommendations

The submission's ask is matched to the Commission's task — to identify barriers and recommend actionable reform options. It does not ask the Commission to endorse or fund a specific vehicle; it asks for recognition of the barrier and a recommendation that a targeted reform option be developed, piloted, and independently evaluated. The detail in Parts 3–4 specifies one buildable model. None of the following requires new ministerial discretion, funding for any specific company, or any reduction in transparency or competitive merit. Much of what the Commission will hear under priority area 4 will rightly concern later-stage settings — venture capital, listed markets, scale-up finance. This submission addresses the stage those settings cannot reach: the first cheque.

1. **Recognise the barrier in the interim report.** Identify intangible-asset unbankability combined with comparator-dependent private capital as a structural barrier to the entry and expansion of high-productivity young firms — consistent with the RBA's April 2024 analysis and the firm-level dynamism literature it cites.
2. **Recommend that any such instrument adopt a merit-based, identity-blind assessment framework** (of the OIAF type) for pre-revenue, research-validated firms, with published criteria and rationale — aligned with the merit-based and transparency principles of the Commonwealth Grants Rules and Principles 2024.
3. **Recommend that government develop and evaluate a first-cheque guarantee** (of the RBIG type) as the financing mechanism for this cohort — a contingent liability that mobilises private debt, with 80% standard coverage and zero ministerial discretion.
4. **Recommend a state pilot before federal scale,** generating prospective performance data, and an independent actuarial assessment as a precondition to any federal program design (estimated $400–600K, 4–6 months).
5. **Recommend that any successor to the paused Industry Growth Program replace the paid intermediary adviser layer** with published-criteria, AI-assisted assessment and a single named expert for borderline cases — redirecting the roughly $20M a year currently absorbed in pre-award overhead to capital, and cutting decision times from 120–150 days to 30–90 (§5.3, Appendix E).
6. **Treat structured, founder-protective wind-down (Track C) as a model** relevant to the inquiry's insolvency strand: orderly, inexpensive, non-stigmatising recovery for good-faith deep-tech failure, distinguishing failed innovation from failed integrity.

The author would welcome the opportunity to provide working-level detail in participant meetings, to appear at the public hearings scheduled for February 2027, and to make the full assessment-framework documentation, scoring workbook and modelling assumptions available to the inquiry team on request.

> **The proposition, in the Commission's own terms.**
>
> Business dynamism depends on the entry and growth of high-productivity young firms and on the reallocation of capital toward the frontier. A documented capital-market failure currently blocks that reallocation for the highest-value cohort of all. A targeted, merit-based, zero-discretion guarantee corrects the failure at a net fiscal cost comparable to a small grant program, while mobilising several times its value in private capital. The question is not whether Australia can afford the instrument. It is whether it can continue to watch the next Cochlear, the next ResMed, or the next Canva fail to enter — or board a plane — for want of it.

6.7 The opportunity this corrects toward

This submission has deliberately argued from market failure, not aspiration — because that is the argument the evidence supports and the discipline the Commission rightly demands. It is nonetheless worth stating plainly what the correction makes possible.

The contrast this submission opened with — every ingredient of a leading innovation economy present, and almost none of them assembled — comes down to the absence of one instrument.

The international record (section 2.3) is not a menu of competing models to choose between. It is a set of **separately proven mechanisms that have never been combined in one jurisdiction** with the governance discipline to sustain them:

- the **non-matched first-cheque principle** that built the United States' innovation base (SBIR);
- the **legislated research-to-commercial IP pathway** that doubled American academic-startup formation (Bayh-Dole);
- the **public-bank deep-tech guarantee** that shifted France's startup-formation rate (Bpifrance);
- the **blended guarantee-and-equity instrument** delivering roughly 3.5× private-capital leverage (EIC);
- and the **IP-retention discipline** that anchors value onshore (Israel Innovation Authority).

No country has assembled all five. The instrument proposed here is that synthesis — adapted to Australian conditions, governed against the documented failure modes of its closest analogue (KIBO), and sequenced so that the evidence precedes the commitment.

Silicon Valley is the cautionary lesson here, not the slogan. It was not willed into existence by ambition, and it cannot be copied by geography. It was *manufactured* by four decades of sustained public risk-bearing that private markets would not provide — and then, once a cohort of fundable companies existed, private capital took over at the margin. That is the only mechanism that has ever produced an innovation hub. Australia already holds every other condition. It has simply never built the spark.

> The choice the Commission frames — reducing barriers to the entry and growth of high-productivity firms — is, at its largest scale, the choice of whether the next Cochlear, the next ResMed, or the next Canva is Australian-owned and Australian-anchored, or whether it boards a plane. The instrument is modest. The compounding opportunity it unlocks is not.

Appendix A — Retrospective Scoring of 16 Documented Cases

> **Methodological note, stated plainly.** Retrospective testing against known outcomes is confirmation-prone, and a curated split of successes and failures does not represent the natural distribution of applications. The result below shows that the framework **discriminates correctly across a curated test set** — it is **not** prospective predictive validation. That validation is the explicit purpose of the proposed state pilot.

Each case is scored on the six published criteria and weights from Part 3. Composite above 6.5 indicates approval; 5.5–6.5 borderline; below 5.5 rejection. Scores reflect publicly available evidence at the corresponding investment-decision stage.

Category A — genuine innovations (approved)

FIRM	ERA	SCORE (Res/IP/Dem/Team/Mile/Ret)	COMP.	DECISION
Canva	2010–13	8 / 7 / 9 / 9 / 8 / 9	**8.15**	APPROVED
CSIRO Wi-Fi	1990s	10 / 10 / 8 / 10 / 8 / 10	**9.40**	APPROVED
Cochlear	1980s	10 / 10 / 9 / 10 / 8 / 10	**9.50**	APPROVED
ResMed	Early 1990s	9 / 9 / 8 / 9 / 8 / 9	**8.65**	APPROVED
Atlassian	2002–04	6 / 5 / 8 / 9 / 9 / 9	**7.20**	APPROVED
WiseTech Global	1994–2010	7 / 8 / 8 / 8 / 8 / 9	**7.85**	APPROVED

Order: Research validation (25%) / IP (20%) / Problem & demand (20%) / Team (15%) / Milestone (10%) / Economic return (10%). All sub-scores out of 10; composite is the weighted total.

Category B — borderline cases (review band)

FIRM	ERA	SCORE	COMP.
Afterpay (BNPL)	2014–17	3 / 3 / 7 / 8 / 8 / 8	**5.55**
H2X Global	2018–22	6 / 7 / 5 / 6 / 5 / 7	**6.05**
Euclideon	2010s	7 / 7 / 5 / 6 / 4 / 6	**6.05**
Harvest B	2020–25	6 / 5 / 6 / 7 / 6 / 6	**5.95**

Borderline cases land in the 5.5–6.5 band by design and receive a single named-expert review with published justification — not a panel.

Category C — hype-cycle failures (rejected)

FIRM / SECTOR	ERA	SCORE	COMP.
Openpay (ASX: OPY)	2019–23	2 / 1 / 5 / 5 / 3 / 5	**3.30**
Cultivated meat (global avg)	2019–23	5 / 4 / 3 / 5 / 2 / 3	**3.80**
Deliveroo (AU)	2015–22	1 / 1 / 4 / 6 / 4 / 3	**2.85**
Metaverse (Meta Reality Labs)	2021–25	4 / 5 / 2 / 8 / 2 / 1	**3.75**
Crypto / Web3 (FTX, Celsius)	2021–23	2 / 1 / 4 / 5 / 3 / 3	**2.95**
Menulog (AU)	2006–25	1 / 1 / 3 / 6 / 4 / 2	**2.50**

Result across the curated set: 16 of 16 directionally consistent. Six of six genuine innovations approved (7.20–9.50); four of four borderline cases identified in the review band; six of six hype-cycle failures rejected (2.50–3.80). The discriminating mechanism is Criteria 1 and 2 combined — firms without genuine research validation *and* genuine IP fall below threshold regardless of commercial narrative (Meta Reality Labs had world-class talent and was still correctly rejected). This demonstrates discrimination across the set; it does not constitute predictive validation.

Appendix B — Illustrative Economic Impact (Summary)

> **These projections are illustrative, not Treasury-modelled.** They are derived from ABS industry data, published Treasury/ABS multipliers, and comparable international schemes (British Business Bank Future Fund, Israel Innovation Authority). They must not be cited as government estimates or used as design inputs without the independent actuarial validation recommended in Part 5. Full assumptions are available on request.

Instrument basis: a $500M guarantee portfolio at 80% coverage mobilises ~$625M in private capital; ~400 firms funded over five years; ~70% survival to maturity (~280 firms). Two distinct employment figures are reported and must not be conflated: the **Employment Floor** is the contractual minimum at covenant activation (~1,000 direct / ~3,500 economy-wide FTE on a $500M portfolio under a 1-FTE-per-$500K covenant); the **maturity projection** is the modelled actual employment of surviving firms at Year 10 (~18,550 direct / ~64,925 economy-wide FTE). The Floor is a guarantee; the maturity figure is a projection.

Headline figures at Year 10 maturity (base case)

INDICATOR (annual, at Year 10)	VALUE
Direct deep-tech employment (projected)	**~18,550 FTE**
Economy-wide employment (3.5× multiplier)	**~65,000 FTE**
Average deep-tech salary	**~$110,000**
Economy-wide GDP contribution (2.5×)	**~$4.5B**
Annual export income	**~$1.26B**
Net government fiscal cost — base	**$15–20M / yr**
Net government fiscal cost — stress (50% default)	**~$32M / yr**
Economy-wide GDP per $1 net government cost — base	**~$225**

> The figure that matters most is the constancy of the net fiscal cost: ~$15–20M per year regardless of whether the portfolio produces zero or several breakout firms, because the cost is a function of default losses, not of success. The upside is uncapped; the downside is bounded and small. A single onshore breakout firm, retained under the IP and HQ covenants, returns more in annual tax than the entire instrument costs.

Appendix C — Anticipated Questions

This appendix anticipates the questions the proposal is most likely to attract — including the two raised directly in the inquiry briefing of 27 May 2026 — and answers each concisely. The detail behind each answer is in the body of the submission; this is the fast-reference layer.

A. Scope and fit

Q1. Where does the National Reconstruction Fund fit? Does this propose removing the NRF as a filter?

No. The OIAF score is the **primary** decision factor; the NRF priority-sector match is retained as a **secondary** consideration. The submission does not propose abolishing the NRF or its sector priorities. It proposes only that a firm not be excluded *at the gate* solely because its category-creating innovation does not map cleanly to a pre-defined sub-sector — because the most consequential innovations create sub-sectors that did not previously exist.

Raised by Lou Will (Assistant Commissioner), inquiry briefing, 27 May 2026.

Q2. What type of business does this submission refer to?

Innovative young firms that cannot access conventional finance because there is no comparator and the IP is unbankable — research-validated, IP-rich, pre-revenue or early-revenue firms with credible export potential. It does **not** apply to the ordinary bankable economy (bakeries, cafes, restaurants, trades, professional-services firms, retailers), which can be financed through standard channels against cash flow, equipment, or property, and which have observable comparators.

Raised by Alison Roberts (Commissioner), inquiry briefing, 27 May 2026.

Q3. Isn't this outside the inquiry's scope — industry policy, not dynamism?

It sits squarely in priority area 2 (innovation ecosystem) — which the call for submissions defines to include 'risk protection systems to support entrepreneurs' — and priority area 4 (capital markets). It also speaks to priority area 1, through the tiered 30/60/90-day published-rationale decision timelines that reduce the time-to-decision burden on firms with no runway to wait; to the integrity of public funding, through the zero-discretion, published-rationale design; and to the insolvency strand of the terms of reference, through the Track C orderly-exit model (§4.3). The argument is a dynamism argument: a documented financing barrier suppresses the entry and expansion of the high-productivity young firms that reallocation and productivity growth depend on. The instrument removes a barrier; it does not subsidise an incumbent.

B. The 'picking winners' family

Q4. Isn't this just government picking winners?

No. The instrument selects no sector, technology, or company on discretion. It applies published criteria to firms already validated by independent research and IP processes, then lets **private lenders** make the capital-allocation decision behind an 80% guarantee — with 20% of the risk retained to preserve credit discipline. Government corrects a collateral failure; it does not exercise commercial judgement.

Q5. Why a guarantee rather than a grant, equity, or a tax incentive?

A grant is non-recoverable, and the Australian record shows non-competitive grants destroy value (IPA–Deakin). Equity requires government to price firms it cannot price. A tax incentive cannot reach a pre-revenue firm with no tax liability. A guarantee is the only instrument that mobilises *private* debt against the specific asset the market will not accept (intangible IP), pays out only on default, and leaves allocation to the market.

Q6. Why should government bear risk that private markets have rationally declined?

Because the decline is structural, not a rational pricing of bad bets. Private capital declines on *collateral form* (intangible) and *comparator absence* (world-first), not on expected return. That is a market failure — the textbook condition for intervention — and the Reserve Bank formally identified it in April 2024.

C. Fiscal and risk

Q7. What does it actually cost?

Net $15–20M per year in the base case; approximately $32M in a 50%-default stress case — against roughly $625M in mobilised private capital. A guarantee is a contingent liability, not expenditure: the Commonwealth pays only on default. Even the stress case is approximately 0.2% of existing annual Commonwealth R&D investment. All figures are illustrative pending independent actuarial validation.

Q8. Are your default assumptions credible?

The 30% base and 50% stress rates are set deliberately *above* the British Business Bank Future Fund's actual rate of approximately 18%, reflecting earlier-stage risk. The submission recommends independent actuarial assessment as a **precondition** to program design (estimated $400–600K, 4–6 months) rather than treating these estimates as design inputs.

Q9. Won't a guarantee crowd out private credit?

Only if aimed at bankable firms. Targeting is strict: the unbankable-by-structure cohort only. At 80% coverage the lender retains real risk, and bankable businesses are explicitly excluded. Correctly targeted, the guarantee crowds private capital *in*.

D. Governance and the failure record

Q10. Guarantee schemes have failed badly elsewhere. Why won't this one?

South Korea's KIBO — the closest analogue by purpose — lost over US$1B-equivalent in 2025 to poor oversight and misuse. Those failures are the *specification*, not a deterrent: AI-assisted assessment with published rationale, milestone tranching, a structured review gate, and zero ministerial discretion are the direct fixes, built in from day one rather than retrofitted after loss.

Q11. Why AI-assisted assessment — isn't that a risk in itself?

Human funding panels carry documented, replicated bias (Witteman et al., The Lancet, 2019; and Canva's own rejection history). AI-assisted scoring is identity-blind, publishes a full rationale for every decision, routes borderline cases to a single named expert, and is independently audited each year for bias. Transparency is the control.

Q12. Does this align with, or cut across, the new Commonwealth grants framework?

It aligns. The Commonwealth Grants Rules and Principles 2024 (in force 1 October 2024) made merit-based processes and consistency with published guidelines two new key principles. The instrument applies that same discipline to a financing tool: published criteria, merit-based, zero discretion.

Q13. Current programs use paid independent advisers to pre-assess applicants. Isn't removing them a loss of expertise?

No expertise is removed; the discretion is. The screening function the advisers perform is retained — published criteria, AI-assisted scoring, and a single named expert for the 55–65 borderline band — but it becomes transparent, reviewable, and fast. What is removed is an unpublished, unappealable gate that absorbs roughly $105M over four years in the current program (about 37 cents of overhead per grant dollar) and through which the category-illegibility failure of §1.3 operates. A function-matched comparison with private-fund practice is at Appendix E.

E. The honest-limitations questions

Q14. Your validation is retrospective. Doesn't that prove nothing?

Correct, and stated plainly: Appendix A demonstrates *directional consistency across a curated set, not predictive validation*. That is precisely why a state pilot is proposed to generate prospective data *before* any federal scaling.

Q15. AI and technology move fast — doesn't an OIAF score have a short shelf-life?

It would, if approval were the end of the assessment — but it is not. The score is re-confirmed at every milestone tranche gate against the current state of the art, not the state at first assessment (§4.4). Where a research-and-IP moat has been overtaken by the frontier, the next tranche is held and the case moves to watch-list treatment, while already-drawn funds stand and nothing is clawed back for a change the founder did not cause. Because exposure is released in tranches and grows only as the moat holds, a stale score cannot expose the Commonwealth beyond the progress already verified — the discipline a lender carrying 20% of the loss would apply.

Q16. Aggregate dynamism indicators are ambiguous — the Commission has said so. Doesn't that undercut you?

It supports the submission. Recent entry growth has concentrated in non-employing sole traders, which tells us little about the high-growth, employing, innovation-intensive firms that matter for productivity. The claim here is narrow: a specific financing barrier blocks a specific high-value cohort. It does not rest on headline entry rates.

Q17. If the case is this strong, why hasn't it been done?

It has — abroad. Every operating principle is proven separately in a major economy (SBIR, Bayh-Dole, Bpifrance, EIC, the British Business Bank Future Fund). Australia is the outlier in *not* having an operational instrument for this cohort. The gap is policy architecture, not evidence.

Appendix D — Reference Library

Primary and authoritative sources for the claims made in this submission. Verified for traceability. Quotations are verbatim from the cited source.

C1. Productivity Commission, terms of reference — 'Reducing barriers to business dynamism in Australia' (the Hon Jim Chalmers MP, Treasurer; received 12 May 2026). Call for submissions, May 2026. pc.gov.au/inquiries-and-research/business-dynamism.

Establishes the inquiry scope, the five priority areas (administrative/regulatory start-up costs; innovation ecosystem; human capital and management capability; capital markets; transfer of successful businesses), and the insolvency/phoenixing terms of reference. Submissions due 3 July 2026; interim report November 2026; final report May 2027.

C2. Jones, B. (Assistant Governor, Financial System, Reserve Bank of Australia). 'Financing SME Innovation in Australia — Challenges and Opportunities', COSBOA National Small Business Summit, 4 April 2024. rba.gov.au/speeches/2024/sp-ag-2024-04-04.html.

The RBA's formal statement of intangible-asset unbankability as a structural feature of Australian SME finance: almost all SME lending is secured, residential property has an outsized collateral role, and access to innovation-based debt financing is 'not straightforward', especially for younger entrepreneurs. Explicitly links collateral/credit conditions to firm entry and young-firm employment share, citing Davis & Haltiwanger (2021), 'Dynamism Diminished', NBER WP 25466. The foundational evidence for Part 1.

C3. Kavourakis, J., Tanewski, G., & Zaman, M. (2024). Commonwealth Government Grants: 2018 to 2022 (IPA–Deakin SME Research Centre, first edition, January 2024) and Efficacy of Commonwealth Government Business Grants (second edition, April 2024). Deakin Business School, Deakin University, Melbourne. deakin.edu.au; publicaccountants.org.au.

Tracked 141,800 firms across $4.2B in Commonwealth business grants 2018–2022. More than 30% generated no significant benefit; non-competitive, eligibility-driven grants performed worst (ROA −4.9%, turnover −6.6%); 83.77% were non-competitive; ~$500M distributed via ministerial discretion without formal process. The empirical basis for the zero-discretion, merit-based design.

C4. Department of Finance (Australian Government). Commonwealth Grants Rules and Principles 2024 (CGRPs); Federal Register of Legislation F2024L00854; 'Changes to the Commonwealth Grants Framework 2024'. In force 1 October 2024. finance.gov.au.

On 1 October 2024 the CGRPs replaced the Commonwealth Grants Rules and Guidelines 2017, adding two new key principles — merit-based processes, and consistency with grant guidelines and established processes — to strengthen integrity, accountability and transparency. Competitive, merit-based selection is the default for grant opportunities unless a delegate specifically agrees otherwise with documented reasons. Directly supports the submission's governance design.

C5. Australian National Audit Office. 'Grants Administration' (ANAO Insights) and 'Delivery and Evaluation of Grant Programmes' (performance audit). anao.gov.au/work/insights/grants-administration.

Confirms the CGRP framework, the five-stage grants lifecycle, and the better-practice principle that, for project-based grants, value for money and sound risk management are promoted by funds becoming payable only on demonstrated completion of a milestone defined in the signed agreement — the direct authority for the submission's milestone-tranching design.

C6. Productivity Commission (2024/2025). 'Promoting economic dynamism, competition and business formation' (PC submission); 'Creating a more dynamic and resilient economy' (interim report, 2025); 'Competition, dynamism and productivity' (speech). pc.gov.au.

The Commission's own framing of dynamism via firm entry/exit, concentration, mark-ups, labour mobility and investment — and its caution that aggregate indicators are difficult to translate directly into policy, with the recommended focus on 'fundamental mechanisms amenable to government action'. This submission is deliberately framed to that standard.

C7. British Business Bank — Future Fund and the Coronavirus Business Interruption Loan Schemes (CBILS/CLBILS). Future Fund Annual Report 2020–21; CBILS/CLBILS scheme reporting (British Business Bank, 2021–2022). british-business-bank.co.uk.

Two distinct British Business Bank precedents are drawn on. The Future Fund is the precedent for the contingent-liability convertible-instrument design — 1,190 companies, £1.14B in convertible loans, 1:1 minimum private matching, government convertible equity, and a structured wind-down for failed positions; its default rate of approximately 18% is the conservative benchmark against which the RBIG base (30%) and stress (50%) cases are calibrated. CBILS/CLBILS is the source of the 80% standard coverage rate — a government-backed partial guarantee of 80% of the outstanding balance under which the lender carried the residual 20% of the loss while the borrower remained fully liable for the debt.

C8. Israel Innovation Authority (September 2025). 2025 State of High-Tech Report; Israeli Deep-Tech 2025 (with Dealroom). innovationisrael.org.il.

Demonstrates that a sustained, public pre-commercial R&D instrument can build a self-sustaining hub: IIA budget ~ILS 1.5B/yr (~US$400M, ~1.5% of national R&D spend); ~1,500 active deep-tech firms; high-tech ~17% of GDP and ~57% of exports. Source of the IP-retention/royalty principle adopted in the Sovereign Manufacturing Stack; its matched-funding precondition is the design RBIG departs from.

C9. European Innovation Council (2024). EIC Accelerator Impact Report 2023; EIC Work Programme 2025. eic.ec.europa.eu.

The EU's operational analogue: grants up to €2.5M blended with EIC Fund equity (€0.5–15M); ~€10.1B budget (2021–2027); ~3.5× private-capital leverage on the equity component — closely matching the RBIG modelled leverage. Aligns with the OIAF excellence/impact/implementation assessment logic.

C10. Congressional Research Service, 'Small Business Research Programs: SBIR and STTR' (R43695); Bayh-Dole Act 1980 (PL 96-517); AUTM surveys; Mazzucato, M. (2013), The Entrepreneurial State, Anthem Press.

SBIR: ~US$4B/yr; US$54.6B / 178,731 awards to FY2019; statutorily non-matched for Phases I and II — the basis for RBIG's non-matched first-cheque principle. Bayh-Dole: university retention of federally-funded IP, generating (per AUTM) two new academic-invention startups per day. Mazzucato documents that the core technologies of the modern smartphone were publicly funded — the academic foundation for the public-spark argument.

C11. Bpifrance. Deep Tech Plan (2019, 2021, 2023); Bpifrance Annual Reports 2022–2024. bpifrance.com.

The closest architectural analogue: a public-bank combined loan + grant + guarantee instrument for deep tech; ~€3.7B in innovation aid to 2,100+ deep-tech startups since 2019; credited with materially shifting French deep-tech formation rates. RBIG improves on it with criteria-based AI-assisted assessment and explicit retention covenants.

C12. Korea Technology Finance Corporation Act (1989); KIBO / KOTEC; National Assembly of Korea audit reporting; KoreaTechDesk (2025–26). kotec.or.kr.

The closest analogue by purpose — a statutory technology-credit guarantee for collateral-light SMEs — and the key cautionary tale: net guarantee-call losses ~KRW 1.43 trillion (>US$1B-equivalent) in 2025; documented misuse; oversight ~1 officer per 250 firms; ~35% recovery of misused funds. The specification for the governance RBIG builds in from day one.

C13. Witteman, H.O. et al. (2019). 'Are gender gaps due to evaluations of the applicant or the science?' The Lancet, 393(10171), 531–540.

Natural experiment at the Canadian Institutes of Health Research showing funding gaps stem from how principal investigators are evaluated, not from proposal-quality differences — the evidentiary basis for identity-blind, criteria-based assessment in Part 4.

C14. Australian Government (2024). National Robotics Strategy. Department of Industry, Science and Resources; supporting data International Federation of Robotics and ASPI (2023).

Documents the commercialisation gap: Australia ranks ~32nd globally in industrial-robot adoption despite internationally recognised robotics research — a concrete illustration of world-class research output that the capital system structurally fails to commercialise.

C15. IMD World Competitiveness Center (2025). World Competitiveness Yearbook 2025; World Digital Competitiveness Ranking 2025. IMD, Lausanne.

Australia 68th of 69 for entrepreneurship; fell 8 places in Digital Competitiveness (to 23rd, worst in nine years) and 5 places in overall competitiveness (to 18th). Context for the urgency of correcting structural barriers to high-growth firm formation. (Composite-index figures; cited as directional context, not as the core market-failure proof.)

C16. Australian Prudential Regulation Authority. Prudential Standard APS 111 — Capital Adequacy: Measurement of Capital; Customer Owned Banking Association (2020), submission to APRA on revisions to the ADI capital framework. handbook.apra.gov.au; apra.gov.au.

Documents the regulatory root of the collateral barrier (§1.2): intangible assets are deducted in full from Common Equity Tier 1 capital — quantified by industry as equivalent to an 800–1,250 per cent risk weight, against 100 per cent for a comparable tangible asset — and intellectual property is not recognised collateral for capital-relief purposes.

C17. Australian National Audit Office (2022). Procurement of Delivery Partners for the Entrepreneurs' Programme. Auditor-General Report No. 42 of 2021–22. anao.gov.au.

Performance audit cited at §2.2.1: tender assessment did not comply with the Commonwealth Procurement Rules and was 'deficient in significant respects'; tenders assessed against only two of six published criteria; the large majority of contracts (around 83 per cent) awarded to incumbents. The programme was subsequently closed and replaced by the Industry Growth Program.

C18. Leigh, A. (2025). 'Room to fall, room to rise — insolvency and economic dynamism', The Australian, 21 November 2025.

Cited in the Commission's call for submissions; quoted at §4.3 in relation to the Track C orderly-exit model.

C19. Department of Industry, Science and Resources. Industry Growth Program — program documentation and budget allocations ($392.4 million over four years; paused to new applications May 2026). business.gov.au; industry.gov.au.

Source of the program cost structure cited at §2.2.1, §5.3 and Appendix E: approximately $287 million allocated to project grants, with the remaining ~$105 million funding the Industry Growth Program Advisory Service and program administration. Figures as reported in departmental program documentation and budget reporting; presented as approximate and subject to the independent verification recommended in Part 5.

C20. Metrick, A. & Yasuda, A. (2010). 'The Economics of Private Equity Funds', Review of Financial Studies, 23(6), 2303–2341.

The benchmark academic study of private-fund economics: management fees of approximately 2% per annum of committed capital, producing a cumulative fee load in the order of 15–20% of committed capital over a ten-year fund life — covering deal sourcing, due diligence, post-investment monitoring and exit management. The basis for the function-matched comparison in Appendix E.

C21. National Reconstruction Fund Corporation. Investments in Silicon Quantum Computing and NRFC mandate. nrf.gov.au.

The $15 billion NRFC invests via direct loans, equity and loan guarantees across seven priority areas (including enabling capabilities, under which quantum falls). It committed $20 million to Silicon Quantum Computing in March 2026 and a $40 million follow-on in June 2026 ($60 million total); the Commonwealth separately holds approximately a one-third stake, having invested around $40 million (including $25 million in 2017). Source of the public-backing figures at §1.4 and the contrast table. Figures as reported in NRFC and company announcements.

C22. PsiQuantum — Commonwealth and Queensland Government investment package (April 2024). psiquantum.com; science.org.

A $940 million AUD (approximately $620 million USD) joint Commonwealth and Queensland Government package — comprising equity, grants and loans — for the United States company PsiQuantum to build a utility-scale, fault-tolerant quantum computer near Brisbane. Source of the concentration figure cited at §1.4.

C23. Department of Industry, Science and Resources. State of Australian Quantum report (2024). industry.gov.au.

Source of the quantum-priority status and the offshore-incentive statement quoted at §1.4: quantum technologies as a National Quantum Strategy priority field, and the Government's own observation that 'Australian businesses and researchers face strong incentives to move overseas'.

C24. Dentroid / Septodont — SmartCompany and Australian Financial Review (June 2026). smartcompany.com.au; afr.com.

Source of the Dentroid figures in the §1.4 contrast table: a $32 million raise at a $265 million valuation; a global development and commercialisation partnership with Septodont (France) including a global licence to the patented Nuralyte technology; the founder's statement to the AFR on limited Australian venture-capital appetite for medical technology; and clinical trials with the University of Queensland, Griffith University, the University of Sydney and the University of Maryland.

C25. Strategic Examination of Research and Development (2025). Ambitious Australia: Strategic Examination of R&D — Final Report (December 2025). Commonwealth of Australia. industry.gov.au.

Source of the six National Innovation Pillars (Recommendation 1b: Health and medical; Agriculture and food; Defence; Environment and energy; Resources; Technology) within which the OIAF is designed to operate (§3.2), and of the National Resilience and Science Council established by the 2026–27 Budget to coordinate public R&D investment (§5.2).

Appendix E — Functional Cost Comparison: Current Program Overhead vs Private-Fund Practice

Methodological note, stated plainly. Headline overhead ratios mislead unless the functions they pay for are matched. A venture or private-equity fund's fee load buys a decade of work — sourcing, due diligence, board-level portfolio management, and exit execution. The Industry Growth Program's internal-cost line buys a one-time pre-award gate. The table below compares the two on a function-by-function basis. All figures are illustrative and order-of-magnitude: VC/PE figures from published fee research (C20); IGP figures from program-budget allocations (C19); functional splits are indicative industry estimates, not audited cost accounting.

FUNCTION	VC / PE FUND (share of committed capital, 10-yr life)	INDUSTRY GROWTH PROGRAM (share of program budget, 4 yrs)	OIAF–RBIG (design target)
Deal sourcing & origination	~3% — continuous pipeline building, Years 1–10.	— (applicants self-select).	— (applicants self-select).
Pre-award assessment & due diligence	~4–6% — intensive, 20–100+ hours per deal before any cheque is written.	**~27% — adviser pre-filter plus administration ($105M of $392.4M); the entire internal-cost line, concentrated at a single unpublished gate.**	~3–5% — published criteria, AI-assisted scoring, single named expert for the 55–65 band (§4.1).
Post-investment monitoring & value creation	~8–10% — board seats, follow-on rounds, operational support across the fund life.	**≈ nil — compliance and payment administration only; advisers exit after the gate decision.**	Borne by the lender (20% risk retention) plus milestone-tranche verification — exposure never exceeds verified progress.
Exit / outcome management	~2–3% — exit preparation and distributions.	**≈ nil.**	Month-36 review gate; Tracks A–C, including founder-protective orderly exit (§4.3).
TOTAL OVERHEAD	**~15–20% of committed capital over 10 years — buying a decade of active management (C20).**	**~27% of program budget over 4 years (~37¢ per grant dollar) — buying a one-time gate (C19).**	**~5–8% over portfolio life — assessment plus guarantee administration.**

Shaded column cells mark the function-matched contrast. The IGP figure is the program's entire internal-cost line; the 'design target' column reflects the OIAF–RBIG architecture specified in Parts 3–4.

How to read this — the like-for-like cell is the second row. A venture fund spends roughly 4–6% of committed capital on the screening function the IGP adviser layer performs. The IGP spends roughly 27% of its budget — about 37 cents per grant dollar — on that same function: roughly four to six times more per dollar deployed. And unlike the fund, the program performs none of the post-award monitoring, value creation, or exit management in the rows beneath, which is the work that justifies private-fund fee loads in the first place. For further context, nonprofit-sector research treats total overhead of roughly 15–25% as the healthy operating band for organisations that actually deliver programs. The current model sits above that band while delivering a single gate decision — and the gate is the unpublished, discretionary channel through which the bias documented at §1.3 and §2.2.1 operates. The OIAF design target (~3–5% pre-award) is not aspirational: it reflects the published-criteria, AI-assisted architecture specified at §4.1, with the saving — in the order of $20M a year — redirected to capital (§5.3).

