

SCIENCE & TECHNOLOGY AUSTRALIA

POLICY SUBMISSION

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INDUSTRY GROWTH PROGRAM

Science & Technology Australia thanks the Department of Industry, Science and Resources for the opportunity to offer responses to the questions posed in the Industry Growth Program [consultation paper](#). The program is a once-in-a-generation opportunity to drive a culture shift in our approach to innovation, partnerships, and economic diversification.

Science & Technology Australia is the peak body for the nation's science and technology sectors, representing 144 member organisations and more than 115,000 scientists and technologists. We connect science and technology with governments, business and the community to advance science's role in solving some of humanity's greatest challenges.

What objective criteria should determine eligible innovative SMEs? For example, annual turnover of \$20 million or less, employee cap and/or net asset cap?

'Eligible SME' should be defined by a combination of revenue, size, and sector. Any SME with a worthy project or idea of merit should be eligible to be considered for Industry Growth Program support, but an upper revenue or turnover threshold would be reasonable to provide targeted support.

If the intent is to directly align with the focus areas for the National Reconstruction Fund, then the sector is a critical part of the eligibility criteria – only SMEs within those industry areas should be eligible, noting that revenue and turnover thresholds might need to vary across sectors.

What level of grant matching is appropriate? Should there be a variation for earlier stage Technology Readiness Levels (TRLs) programs and the size of the grant?

As the Industry Growth Program aims to prepare businesses and the sector more broadly to access the National Reconstruction Fund effectively, it could take a measured and guiding approach throughout the TRLs.

Ideally, co-investment for Industry Growth Program support must be realistic and should be set on a sliding scale. Our recommendation for industry contribution thresholds are:

- 25% for early-stage projects (TRL5 and below) with smaller and tighter project scope and budget (up to \$500,000 from IGP over 12 months) – to de-risk and support innovation
- 50% for validation and prototyping projects (TRL4–TRL7) that require greater levels of funding (between \$500,000 and \$3 million from IGP over 2–5 years) to succeed
- 75% for large scale-up programs (TRL6 and above) where a greater contribution from industry should be expected (with \$3 million to \$5 million from the IGP over 2–5 years)

STA strongly recommends using existing grant matching (investment leveraging) principles and calculations such as those used in the Cooperative Research Centres Projects (CRC-P) scheme, to have a streamlined approach across the innovation ecosystem.

Are there barriers beyond pre-profit stage that the program should consider supporting?

Start-ups or SMEs leading and investing in projects at the pre-revenue or pre-profit stage are often severely constrained when it comes to internal facilities (CapEx) investment. To aid their evolution into successful Australian manufacturers, they need to be supported to traverse the prototyping and manufacturing scale-up ‘valley of death’.

As recommended in our [response to the inquiry on Developing Advanced Manufacturing in Australia](#), targeted investment into prototyping capabilities that can be accessed by SMEs will be an effective mechanism for their growth. We have described examples for battery prototyping and medical device scale-up, and can provide further specific details and case studies from our expert membership.

The Industry Growth Program should ensure that access to such facilities is supported as eligible expenditure, while targeted investment is undertaken through the NRF advanced manufacturing development strategy to establish such capabilities across the country.

Should Technology Readiness Levels (TRLs) be used to determine eligibility of a project? If so, what are appropriate TRLs for commercialisation and/or early-stage growth phases?

Technology Readiness Levels (TRLs) are a subjective evaluation mechanism. A technology at a high TRL for one application area, could be a lower TRL in another innovative use case. Re-engineering the technology for the new focus area carries lesser technical risks, and there is a strong business case that negates commercial risk.

The Industry Growth Program has a critical role in shifting the culture, capability, and competency across Australian industry. Proposals should indicate the project TRLs, but this should not be used as a rigid eligibility constraint. Proposals should also map technical and commercial risks as part of business cases, and complement this with assessments of Manufacturing Readiness Levels (MRLs) (as developed by the [Innovative Manufacturing CRC \(IMCRC\)](#) and are described in Appendix B of the [IMCRC Project Application and Selection Guidelines](#)) and [Design Readiness Levels \(DRLs\)](#).

A brilliant technology (high TRL) that is not advanced in manufacturing process alignment (MRL) or user-engaged and user-ready design (DRL), would not have high chances of market success or social impact – so it’s critical that proposal assessment takes into account more than just the proposed project’s TRL.

How should we determine which projects have the most potential for future growth and market impact?

The Industry Growth Program support should focus on supporting businesses to conduct prototyping, validation, and trials – these are the essential precursor stages to support companies up to then be ready to scale up via the NRF.

The assessment process for the Industry Growth Program should not have an over-emphasis on evaluating project business cases. This process of evaluating growth and market impacts is challenging, especially in innovative and disruptive fields. It is best left to investors who have access to significant amounts of information, data rooms, due diligence documents, and market sizing information to inform their investment decisions. Providing this level of data in grant applications would not be feasible, for reasons of administrative load and commercial sensitivity.

The Industry Growth Program assessments should be satisfied that if start-ups, SMEs, and listed companies have been able to raise the capital required for funding co-contributions they are underpinned by a strong strategy.



Our view is that if an organisation and their stakeholders backs a concept sufficiently to invest funds, that should be the core evaluation of potential. Business and growth decisions should be left to businesses, with IGP focussing on overall growth of sector capabilities in the NRF focus areas.

Should it be necessary that the applicant has the legal ownership, or effective ownership, of the know-how, intellectual property or other similar results arising from the project?

Proposals should include a clear and coherent intellectual property (IP) strategy and provide evidence as part of execution of grant agreements.

Given commercialisation can have different routes, the ownership requirements could be either direct patent or knowledge ownership, executed licence agreements for the IP and in the application spaces and markets chosen, and jurisdiction-focussed strategies for commercialisation.

Demonstrating alignment to the announced [Patent Box initiative](#) – which should be expanded to all NRF areas – would serve as a convincing case for investment and commercialisation of the IP in Australia.

Is ‘need for funding’ (i.e. why applicants are unable to access sufficient funding for the project from other sources) a useful merit criterion for assessing grant applications? If so, how should this be measured?

Any strategic business would access every mechanism, scheme, or incentive that supports their growth, visibility, and opportunities. So, a ‘need for funding’ assessment is not a good tool, as any organisation looking to maximise its resources (which we should encourage as a nation) should be exploring every opportunity – a ‘need for funding’ will likely be equally applicable to all proposals.

Alternatively, the effective leverage of Industry Growth Program support should be evaluated. The investment of cash and in-kind resources by the organisations involved should be assessed. Rather than a new approach, this should align with current mechanisms used in the CRC-P scheme. This evaluation has been refined over 14 funding rounds, and takes key elements of the success of the larger CRC program over three decades.

What are the potential barriers to accessing the Industry Growth Program?

Women, and particularly women of colour, are traditionally significantly underrepresented in start-ups and venture capital projects. There are several systemic reasons behind this – a predominance of men in the start-up and venture capital ecosystem; a perception that women lack the confidence, competitiveness and drive to succeed in entrepreneurship; and deep-rooted systemic bias that exists across Australian society that poses significant challenges to women and people of colour.

How can we help overcome these barriers to expand the reach of the program? Should the program consider more specific merit criteria for traditionally underrepresented groups?

There are a number of ways to support underrepresented groups to overcome barriers to receiving funding. The Industry Growth Program should:

- develop mechanisms that minimise or avoid bias
- provide targeted participation uplift where barriers exist
- promote and support role models or exemplars
- drive greater participation of under-represented groups.

There are several ways this could be done:

- Eligibility requirements, rules and guidelines should be explicitly and transparently stated to provide equal and fair access to all, regardless of existing connections, language barriers, or lack of assumed or implicit knowledge about how the system works.
- Deploy targeted funding rounds that are clearly advertised for women only, or for underrepresented groups only. Alternatively, a proportion of funding could be quarantined (and statistical data used to ensure equal success rates).



- Quarantined funding streams, with minimum 20% of the Industry Growth Program funding set aside in a dedicated funding stream to support women applicants, and another 20% allocated to support people of colour. Approaches should ensure that eligibility is robust, by ensuring 50% or greater of founders or board members meet these criteria, not just one.
- Merit criteria for funding should be set that encompass a broad range of attributes and considerations – broadening the assessment metrics to be more inclusive of people with diverse backgrounds and experiences.
- The Industry Growth Program should collect and report on statistics on funding recipients.

What core capabilities and resources would be most useful from industry partner organisations to improve commercialisation and early-stage growth performance for participants of this program?

When considering the trajectory from early-stage discovery (TRL 0–3) to proven feasibility (TRL 4–5), the challenge often lies in developing innovative approaches and solutions to make a technology work. Moving from early stage discovery to the next stage (TRL 6–7) – which the Industry Growth Program should support – is an enormous leap, with investments typically being at least an order of magnitude higher. Knowing a technology works and making it suitable for the market are different challenges. Designing for manufacture and designing for the user can sometimes cause a reset (where some TRL 4–5 work has to be undertaken on new designs).

To support such activities, industry partners could provide resources in the areas of product design, design for manufacture, prototyping, testing, quality management standards, quality assurance requirements, and user engagement.

What services and support should industry partner organisations provide to participants?

Participants would benefit from advice and expertise in:

- market assessment and analysis
- marketing and promotion
- sustainable business growth
- ethical business practices
- user engagement and testing
- circular economy
- manufacturing and regulatory standards
- product diversification options and dual- and/or multi-use strategy development.

Are there other skills and expertise that should be represented on the committee?

Committee members should have a strong understanding of the full knowledge ecosystem from ideation to product. Ensuring the Committee is structured according to a skills matrix that covers all core competencies effectively (and in duplicate) will strengthen program outcomes. Active participants in the sector would be important, to ensure they have a keen and current understanding of market and investment forces, technology evolution and disruption, and manufacturing practices and capabilities in Australia and overseas (where some international perspective might add value).

It would be beneficial to the program for the Committee overseeing grant assessment and guidance to include representation from women and other underrepresented groups, along with people at different career stages.

It would also be beneficial to ensure this Committee has some level of visibility of other Government initiatives working to support research commercialisation. These include:

- Australia's Economic Accelerator
- The CRC and CRC-P Programs
- CSIRO Mission projects



- Medical Research Future Fund projects
- University Research Commercialisation measures, including the Trailblazer Programs, ARC Industry Fellowships, Industry PhD programs.

What other design elements could be considered to ensure a quality, positive business experience and outcomes?

The core element the program design should have is **alignment to other complementary schemes**. The sector appreciates new schemes which address gaps in the ecosystem, but there is enormous lost productivity in grant writing with variations in application styles, templates, and interfaces. We strongly urge either aligning with the CRC-P program or the Australian Economic Accelerator schemes.

Are the proposed project periods (up to 24 months) reasonable?

Project periods should ideally be 12 to 60 months. If the organisations are willing to invest in and have a long-term strategy, providing stable and secure funding is the best route to success. Otherwise, they would be in the constant loop of applying for grants rather than focussing on delivering outcomes. No deep technology solution would grow sufficiently in 24 months, especially if pursuing validation or scale-up – the investment in such capability is what aligns to NRF areas and opportunities for economic diversification.

Experience and grant data shows that most organisations would opt for 24–36 month projects, as a balance of depth and commitment. In the response to Question 2, we have indicated technology state and project lifetime options.

How should we measure the success of the Industry Growth Program, for the economy and for participating businesses?

The program's success would be defined by the growth of the industries it supports. The true measure of success is market impact and company valuations.

STA suggests tracking companies from the application stage, through completion, and at three year intervals after that. Looking at company valuations, market size, headcount, and impact case studies would be hard evidence of the effectiveness of the Industry Growth Program.

It should be noted that typically across the investment landscape (even with deep technology venture capitalist firms) that achieving a rate of 1 in 10 businesses surviving, growing, and thriving is considered a major success. Expectations for Industry Growth Program outcomes must also be realistic in measuring success.

What information would be important to seek during the follow-up (post-grant or post-advice) period?

Please see the previous response.

Over what timeframe should the program follow up with grantees and advise recipients to collect data on their business?

Please see the previous response in relation to measuring success of the program and the next response related to reporting burden.

How can the reporting burden be kept to the minimum required to best support a future evaluation of the program?

Simple and essential reporting that provides useful insights should be the focus.

For listed companies, the reporting should be designed such that data can be extracted regularly from exchanges to track performance.

For privately-held companies, reporting regimes should minimise the administrative burden. Business valuation, market size and/or revenue, and headcount should be reported. Short impact case studies of



products resulting from Industry Growth Program support should be provided in the later stages of projects as updates to previous reports.

What other opportunities (including those beyond data) could be explored as part of the post-grant period?

Beyond market and valuation insights, impact case studies of the products' journey from the early stages, through the stage of Industry Growth Program support, to current business status and operations would be very useful in communicating program outcomes and results to the community and stakeholders.

How can the program complement other university, industry and government initiatives?

To deliver a streamlined national innovation ecosystem, the Industry Growth Program should interact and build on other Government initiatives that support research commercialisation. These include:

- Australia's Economic Accelerator
- The CRC and CRC-P Programs
- CSIRO Mission projects
- Medical Research Future Fund projects
- University Research Commercialisation measures, including the Trailblazer Programs, ARC Industry Fellowships, Industry PhD programs.

The Industry Growth Program will also be a valuable 'feedstock' for the NRF. The Government should also consider expanding Patent Box eligibility to encompass all NRF focus areas – this would support the Industry Growth Program and the NRF to deliver maximum value to Australia.

How could the program support better connections from industry to universities and entrepreneurial students?

The Industry Growth Program should be developed to support work arising from university research and projects supported by the CSIRO Industry PhD program and the National Industry PhD Program. The Industry Growth Program could also seek to provide the next level of support for students who develop an idea or project through the Startup Year scheme.

As noted in previous responses, the Industry Growth Program is well placed to work with university-focussed initiatives such as the Australian Economic Accelerator and the Trailblazer program – aligning with these programs would certainly support students and help bolster university–industry collaboration. That said, the Industry Growth Program should be developed to **complement, not duplicate**, other schemes. When interacting with these programs, it would be expected that the Industry Growth Program would support industry-focussed activities, with Australia's Economic Accelerator supporting university-led projects. This creates an environment where the AEA validates university IP, with spin-outs and start-ups applying to the IGP for the next stage of development and growth.

Please do not hesitate to be in contact if STA can provide any further information or advice.

