Advancing Manufacturing Aotearoa
The Future House c/o – Outset Ventures
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11 April 2025

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By: Advancing Manufacturing Aotearoa & The Minister for Manufacturing's Productivity Advisory Group

Tēnā kōrua Ministers

Bold generational reset to ensure science drives economic growth

Advancing Manufacturing Aotearoa (AMA) welcomes the opportunity to provide considered feedback on the need to reform New Zealand's approach to science and innovation. As it currently stands, the system falls short of effectively translating science into industry productivity and gross domestic product (GDP) gains.

The manufacturing sector is a cornerstone of New Zealand's economy: 60% of exports are manufactured; it employs 250,000 Kiwis; and contributes c.10% to GDP.

The sector continues to face challenges due to outdated perceptions of manufacturing, policy misalignment, and innovation frameworks that inadequately drive product and process commercialisation.

AMA endorses a bold generational reset to ensure science drives economic growth. We believe that Manufacturing Process Innovation (MPI) is essential for optimising the return on investment in the Science Sector. By ensuring that the commercialisation of our scientific advancements goes beyond intellectual property (IP) and translates into productivity gains, we can maximise the return on capital invested. This is achieved by producing higher value goods through advanced manufacturing processes. Therefore, supporting the advancement of MPI should be a critical element of the science and innovation sector.

AMA's feedback does not comment on all areas of considered reform but rather focuses on the following areas of insight:

- Need for proactive sector collaboration and leadership;
- Enabling education and skills;
- Embracing elements of Mātauranga Māori to guide industry best-practice;
- Competitive business environment;
- Innovation system design.

Need for proactive sector collaboration and leadership

The purpose of the science system should *also* be explicitly aligned with economic transformation, national productivity gains and resilience. It must extend beyond academia, and into prioritising tangible and real-world outcomes.

The current science and research framework does not adequately incentivise genuine collaboration between industry and research institutions. AMA advocates for policy settings that explicitly mandate and reward collaborative, outcome-focused projects, backed by dedicated funding streams and clear performance metrics tied to industry adoption. Manufacturing Process Innovation (MPI), for example, is crucial for optimising the commercialisation of intellectual property (IP) through productivity improvements.

The AMA identifies significant fragmentation and poor incentivisation in translating scientific research into practical industry applications. Current institutional settings reinforce silos, which invariably hinders meaningful collaboration.

<u>Recommendations</u>

- Clearly redefine the purpose of science funding to explicitly prioritise clear pathways to commercialisation, enhancing domestic capability and national resilience

- Include explicit reference to MPI as key to realising the full commercial potential of IP effectively, using examples such as those demonstrated by research-driven organisations like Fonterra.
- Ensuring representation from the manufacturing sector on strategic panels, such as the Prime Minister's *Science & Research Advisory Panel*, in aligning policy with practical industry requirements. This representation would provide valuable insights into how innovation policies can effectively deliver real-world manufacturing outcomes.
- Mandate stronger industry-research collaboration through explicit funding conditions.
- Establish "knowledge brokers" to facilitate effective translation of scientific innovations into industry adoption.
- Provide explicit funding for the early uptake of technologies in public-private pilot partnerships to rapidly scale innovative processes.

Education and skills

The manufacturing sector urgently requires more engineering technology and science-capable talent. Current educational settings significantly inhibit the development of skilled individuals entering manufacturing, limiting workforce readiness.

By way of example, the University of Canterbury is currently struggling to place hundreds of mechanical engineering students on industry internships due to cashflow constraints faced by industry; which only serves to highlight a disconnect between education and practical industry engagement.

In contrast, under the current Summer Internship funding programme companies can receive funding to pay said students if they are involved in an R&D project. MPI projects such as automation, digitisation or new systems development do not currently qualify.

<u>Recommendations</u>

- Introduce student grants specifically tailored to manufacturing process engineering and advanced technologies work experiences, mitigating cashflow constraints for companies through upfront payments amortised over the financial year.
- Enable the seamless integration of PhD-level skills into manufacturing and practical technician roles.

Embracing elements of Mātauranga Māori to guide industry best-practice

There is a strong alignment between manufacturing, Māori innovation principles, sustainability, and circular economy goals. Embedding kaupapa Māori values and promoting co-designed research initiatives within funding structures would strengthen cultural inclusivity and enhance long-term economic resilience.

AMA supports meaningful integration of Māori innovation, sustainability principles, and circular economy goals within manufacturing. Co-development opportunities and genuine partnership are needed in realising this opportunity.

Recommendations

- Establish targeted funding and structured co-developed research projects with iwi-aligned manufacturers and innovators.
- Embed kaupapa Māori principles directly into research funding criteria, particularly within technological and design fields.

Driving a competitive business environment

Investments in robotics, automation, software integration, and skills training carry significant upfront costs that many businesses find prohibitive. To help bridge the gap between research and market readiness, the sector requires explicit support through the Research & Development (R&D) Tax Incentive (RDTI) for process innovations.

Recommendations:

- Rebalanced funding model by implementation of ring-fenced research funding specifically targeted towards manufacturing innovation and advanced technological integration.
- Expand the R&D Tax Incentive (RDTI) explicitly to include Manufacturing Process Innovation, covering costs such as consultancy, software integration, AI, robotics, and training internal capability.
- Undertake a gap analysis of current industry capability required to effectively commercialise science.

Innovation System Design

The current funding model typically delivers academic outputs rather than real-world implementation and outcomes. The absence of targeted support for Manufacturing Process Innovation stifles the potential productivity benefits of advanced technologies.

New Zealand requires a redesigned system that that rewards adoption and positive national impact. Current innovation incentives prioritise inputs (academic papers, patents) rather than tangible outcomes like adoption, scalability, and economic resilience.

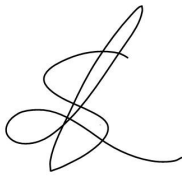
Recommendations:

- Realign innovation funding and evaluation models to explicitly reward adoption, productivity gains, scalability, and national impact.
- Collect return on investment metrics explicitly measuring productivity benefits against business-as-usual investment, incentivising industry to rapidly adopt innovative practices.

AMA believes that implementation of this paper's abovementioned recommendations will assist in unlocking the untapped potential that exists within our research, technology, and manufacturing sectors.

AMA would welcome the opportunity to discuss the contents of this paper and is appreciative of your considered leadership in the science reform area.

Nga mihi nui



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About Advancing Manufacturing Aotearoa & The Minister's Manufacturing Productivity Advisory Group

Advancing Manufacturing Aotearoa (AMA) is a cross-sector industry body established in 2023 to champion New Zealand's manufacturing and accelerate productivity innovation. AMA does this through information sharing, promoting collaboration, and taking practical steps to connect stakeholders across the industry. By delivering initiatives that strengthen the sector and support sustainable growth, AMA aims to drive meaningful progress and innovation that benefits all New Zealanders.

Hon. Chris Penk's Manufacturing Productivity Advisory Group (MPAG) is a 'think tank' comprised of over 30 manufacturing business owners and executives from across New Zealand. We meet with Minister Penk at least three times per year with the mandate of defining New Zealand's vision for the manufacturing sector and developing strategies to facilitate greater investment, process innovation, talent and global perceptions of the sector.

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