

Rationale for Australian Sovereign Manufacturing Capability

Introduction

The manufacturing sector is viewed as a key component of intervention mechanisms to stimulate economic growth. To do this successfully there needs to be high-level direction given to greater collaboration between the various disparate players across the Australian manufacturing and industrial research landscape.

Over past decades the Australian taxpayer has spent in the vicinity of \$12 billion supporting the publicly funded research sector, the majority without any requirement for collaboration.

- \$1.3 billion on CSIRO and DSTO – no requirement.
- \$2.6 billion on industry R&D tax rebate – no requirement.
- \$3.7 billion on the higher education sector – some small requirement for collaboration.
- \$1.5 billion on medical research – no requirement.
- \$230 million on CRCs – only area requiring collaboration.

We believe that now is the time to seek a return on this substantive investment for the benefit of Australian taxpayers. The main thrust of this paper is a proposition to motivate the substantial SME sector to drive the collaboration imperative forward.

The Authors

Manufacturing on the Move™ (MotM™) was formed several years ago as a whole-of-sector, professional networking group with the express intention of making significant contributions to the competitive fitness of a viable Australian manufacturing economy.

MotM™'s parallel focus is on enabling and driving outcomes that are integral to government policy, corporate strategy or constructively operated interest groups.

Manufacturing on the Move™ draws on the extensive international experience in manufacturing and market environments of its founders' core group and an associated pool of practitioner professionals.

Link: <https://www.linkedin.com/groups/6987032>

Key contact:

Patron / Founder: Bruce Grey <https://www.linkedin.com/in/bruce-grey-03570913/>

Contributors:

- Jon Bradshaw <https://www.linkedin.com/in/jon-bradshaw-a45b6823/>
- Richard Jefferies <https://www.linkedin.com/in/rgj2015>
- Angus M Robinson <https://www.linkedin.com/in/angusmrobinson/>
- Eduardo Sifontes <https://www.linkedin.com/in/eduardosifontes/>

Observations

- * There is an immediate need for an overarching incentive of national priority to drive creation of an Australian sovereign, manufacturing capability.
- * The concepts of 'sovereign' and 'capability' articulate national strength, purpose, and resolve.
- * 'Collaboration' is the third implicit dimension of this multi-functional conceptualisation that enables Australians to manage network relationships based on mutual trust, communication, and commitment.
- * Australians generally do not excel at collaboration except in times of dire national emergency and consequently, Australians are fearlessly competitive as a nation - on the global sporting field, amongst the States, amongst universities and research institutes, and amongst manufacturers competing for market share.

Australia therefore requires primarily a vision for 'high value' manufacturing that reflects both high levels of independence and an organisational framework to remediate the current collaborative shortfalls.

Analysis

Based on analyses carried out by MotM™ and drawing on extensive E-media platform-sourced policy inputs from industry and interaction with professional networks that capitalise on SME attributes, we have identified several structural improvement imperatives towards building sovereign, manufacturing capability.

- *Optimise commitment of capital and resources to maximise gains in market-relevant innovation, sustainable materials, IP with channels to volume commercialisation, qualified jobs, and collaboration appeal – also internationally.
- * Enhance supply chain resilience, sustainability, security, national self-sufficiency, and terms of trade.
- * Focus on four (4) selected 'engine room industries' as launch initiatives and technology carriers to build a 21st century industrialisation platform. For example, the following, potentially 'wealth creating' industries have been suggested.

- ❖ **Two existing industries** already with an established Australian presence, experience, and track record:
 - medical / biomedical technologies, and
 - defence / aerospace.

- ❖ **Two new industries** identified as growth markets where Australia has capabilities, know-how, IP, rare earth resources and/or abundant new and advanced materials:
 - surface transportation/ new mobility (with an 'E-mobility' core), and
 - energy (especially storage and mobile energy).

Process Deliverables for the Australian Government

1. Create a fund open to all Australian manufacturers – current and future, that:

- a) encourages and rewards collaboration across the currently disconnected Growth Centre and CRC entities, universities, medical research Institutes, CSIRO, Defence, SMEs and MNCs with Australia-centric operations;
- b) creates unique Australian 'high value-add', manufacturing capabilities and process technologies; and
- c) facilitates access to key industry research resources not currently found in Australia.

2. Provide pro-active support for:

- a) the creation and development of a uniquely 'high value-add', Australian, and specialist, manufacturing dynamic;
- b) leveraging the design and production of 21st century productivity-enhancing, machine tools and incorporating such technologies as advanced robotics, automation, 'big data', cyber security, and artificial intelligence to build world-class competitiveness; and
- c) a strong focus on new and qualified jobs as a workforce gateway for career entrants.

3. Assistance for small firms for technology research and workforce development by:

- a) technology development, and diffusion within the SME manufacturing sector; and
- b) creation of higher-paying, upskilled jobs and secure workforces with more developed skills.

4. Finance:

- a) state-of-the-art digital infrastructure to support business development / new industry creation; and
- b) physical infrastructure (roads, airports, railroads, bridges, intermodal depots, dams etc.).

5. A governance strategy that is predicated on:

- a) political consistency and economic predictability; and
- b) fair and open trade policies that provide Australia-centric manufacturing players access to global markets and facilitate technology diffusion.

6. A governance framework that:

- a) anchors 'Australian majority-owned' firms in eligibility criteria for participation in the Sovereign Industry Fund;
- b) establishes metrics for reporting and auditing impact, project goals and stage gates; and
- c) requires returns of x% [tbd] to flow back to the Fund to achieve break-even.

Appendices

*<https://www.industry.gov.au/data-and-publications/science-research-and-innovation-sri-budget-tables>