

Biomanufacturing our way to a more secure Australia

A wake-up call from the United States' pivot to biomanufacturing sovereignty

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Behind: Cauldron Ferm's biomanufacturing facility

When the U.S. Congress releases a 200-page report sounding the alarm on national security and the imminent threat of losing its global leadership in biomanufacturing, the Australian Government should sense a unique, once-in-a-generation opportunity.

In April 2025, the US National Security Commission on Emerging Biotechnology (NSCEB) quietly released a comprehensive report on the strategic centrality of biomanufacturing to the United States' national security and economic prosperity. In no uncertain terms, it outlines the real and potentially catastrophic risk of ceding technological superiority in biotechnology and biomanufacturing to China.

The report reflects an increasingly vocal shift in U.S. national security thinking, where emerging biotechnologies (inclusive of biomanufacturing) are no longer viewed solely as scientific milestones, but as foundations of national security, global influence, economic power and resilience. It challenges narrow, defence-focused definitions of national security, instead recognising its relevance across every strategic sector, including food.

This shift presents both a serious question and an opportunity for Australian policymakers: by failing to prioritise the development of a diverse and sovereign biomanufacturing sector, *are we passively creating a deep vulnerability in a time of rising geopolitical tensions?*

Conversely, as a net exporter of raw materials and much of the talent required for biomanufacturing success, *are we helping other countries gain biomanufacturing superiority at our own expense?*

A strong industrial biomanufacturing sector would diversify and build resilience in supply chains whilst building genuine sovereign capability onshore – both essential in a world of rising geopolitical uncertainty.

To seize this opportunity, government thinking must evolve. Australian national security policy should move beyond a narrow defence lens and recognise biomanufacturing as crucial for safeguarding our supply chains and ensuring resilience against global shocks.

McKinsey estimates that by 2040, biology could supply up to 60% of the world's physical inputs, representing a staggering opportunity for nations ready to lead.

With natural and built-in advantages including world-leading cross-disciplinary research, abundant high-quality biomanufacturing inputs (i.e. feedstock), product approvals, and manufacturing capability, Australia is well-positioned to leverage this opportunity. The U.S. is stepping up, and Australia should do the same.

There are promising signs, with the Minister for Industry & Innovation Tim Ayers recently committing to reassessing the mandate of the National Reconstruction Fund – a welcome opportunity to align investment with national security needs.

CAA believes that a dedicated inquiry, akin to the one undertaken in the US, would be a valuable next step in evaluating the opportunities and risks associated with biomanufacturing and national security.