

Submission  
No 2

**INQUIRY INTO PROCUREMENT PRACTICES OF  
GOVERNMENT AGENCIES IN NEW SOUTH WALES AND  
ITS IMPACT ON THE SOCIAL DEVELOPMENT OF THE  
PEOPLE OF NEW SOUTH WALES**

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# **Inquiry into the procurement practices of government agencies in New South Wales and its impact on the social development of the people of New South Wales**

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Public procurement has been long recognised as a powerful tool through which governments can use their spending power to achieve a broader range of policy objectives. As such, the scope of public procurement is a source of long running tension between (i) those who advocate for governments to purchase ‘least cost’ through a competitive tendering process and (ii) those who argue that government should use procurement to capture broader benefits (social, environmental, industrial etc.).

Following decades of offshoring and de-industrialisation in Australia, recent supply chain disruptions triggered by COVID-19, alongside growing concerns about loss of strategic capability, have triggered renewed interest in rebuilding domestic manufacturing capability. This makes it critically important for policymakers to ensure that any decision to preference domestically produced offerings is grounded in a sound methodology and supported by contracting practices which level the playing field and enable domestic firms to flourish.

Across a three-year study at the Institute of Transport and Logistics Studies, The University of Sydney, I investigated whether recent procurements of passenger trains manufactured overseas delivered better value for money to taxpayers relative to domestically produced offerings. To conduct this exercise, I examined train purchases across New South Wales (NSW), other Australian states and the United Kingdom (UK). My research found that:

1. Public procurement would benefit from a framework which measures the value of benefits being generated for the domestic economy and compares this against the additional cost incurred.
2. Existing approaches to public procurement are unsophisticated. Application of local content has generally failed to distinguish between activities which add additional value to the economy over those which would have taken place irrespectively (depot construction and maintenance cannot be readily outsourced). Local content targets also emphasise dollar values or percentages rather than composition. This has resulted in low-value assembly work (assembly is politically popular as it creates a large number of jobs and manufacturers favour it because it requires minimal capital investment and can be readily wound up at the contract’s conclusion) taking preference over high-value component manufacturing.
3. When the impact of company spending in the domestic economy is accounted for, domestically manufactured trains can be better financial value in cases where the local economy has underutilised capacity. Strikingly, the net financial value of making trains domestically increases with the sophistication of onshore manufacturing. This reflects the importance of capturing high value aspects of the supply chain.
4. Government contracting approaches commonly undermine the health and competitiveness of domestic industry. In purchases of advanced products, where government is a major buyer, it is important that contracts: (i) provide domestic producers with a consistent

workflow, (ii) have sufficient volumes to make capital investments economical, (iii) involve suppliers to develop innovative solutions and take advantage of spare capacity, (iv) ensure that financing arrangements do not skew the playing field in favour of overseas suppliers and (v) take a national whole of government approach to value, including the setting of local content requirements.

**My findings are at odds with typical Government led procurement approaches in Australia. These have tended to create large, short-term build requirements that effectively forced the offshoring of much train manufacture. Subsequent attempts to onshore generally amount to no more than simple fabrication processes with a requirement to build in the home state rather than the most competent location within Australia. There appears to be a complete lack of awareness as to the need to foster advanced manufacturing capability, for example in specialised componentry such as air-conditioning or braking systems, where Australia has, and can foster, world leading capability with considerable export potential and genuine long-term employment prospects.**

Whilst I focus my submission on train procurement, the key principles discussed in this submission are generalisable to other areas of public procurement, particularly those where the government is purchasing an advanced manufactured product of a specialised nature. The remainder of this submission walks through my findings in greater detail.

### **Supporting the domestic economy without sacrificing competition**

Whilst NSW and the UK have largely emphasised the best price school of thought in train purchases, other Australian states, such as Victoria and Queensland, have sought to retain local train manufacturing through local content requirements. It is undeniable that manufacturing trains onshore generates a wide range of benefits for the local economy. The issue is whether the size of benefits created outstrips the additional cost incurred. Minimum local content requirements also risk a reduction in competition, diminish the incentive for domestic industry to innovate and leave governments vulnerable to price gouging.

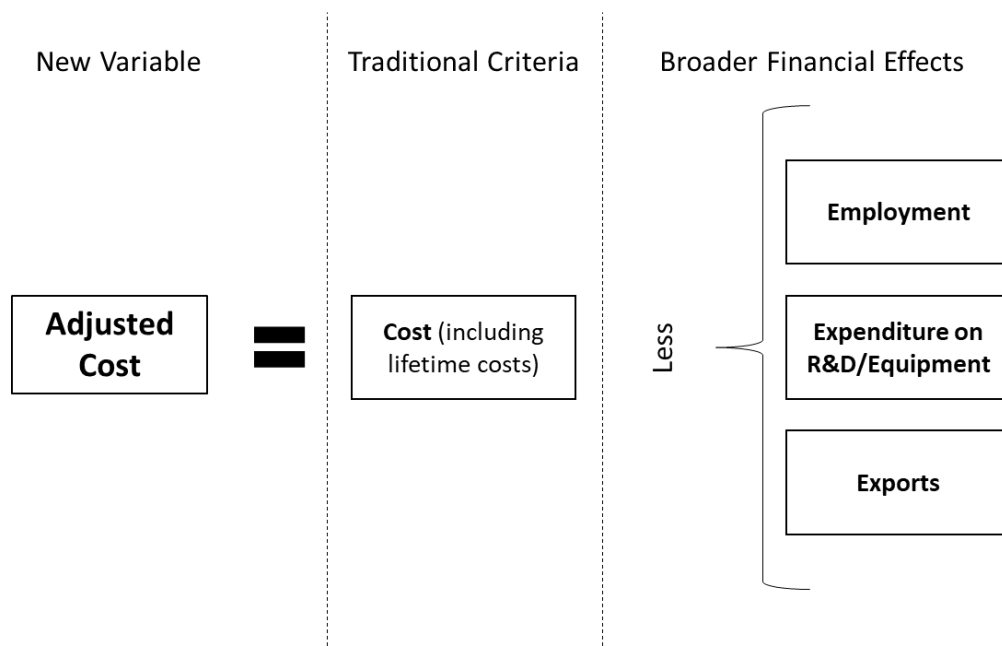
The challenge with broader benefits lies in determining their value and composition. Economic benefits generally rely on dollar estimates of non-price factors that can be readily challenged or discounted by budget constrained purchasing authorities.

I develop a new approach which overcomes this limitation by defining and estimating the broader financial benefits generated by onshore train production. Unlike social, economic, and environmental benefits, broader financial benefits are *“effects which appear in accounts such as payroll, employee training expenses (including apprenticeships), expenditure on property, plant and equipment needed to fulfil a contract, investment in research and development to win and accomplish an order and exports generated from capability developed to fulfil a previous government purchase. The factors listed are in financial accounts (company books) and exist on paper at a level equivalent to cost and should therefore be treated accordingly in appraisal*

frameworks”<sup>1</sup>. In essence, direct corporate expenditure of this type generates additional wealth for the economy and it is appropriate to deduct a portion of it from a bid’s price.

Quantifying broader financial benefits into an adjusted price brings broader financial factors to the forefront of decision making and allows procurement decisions to make a like-for-like comparison between domestic and overseas manufactured options. This is illustrated in Figure 1. Unlike approaches which mandate local content, the framework presented here maintains competitive tension as domestic bidders need to ensure that the size of the financial benefits they are creating exceeds the price differential between themselves and a cheaper overseas competitor.

**Figure 1: Estimating adjusted cost**



**Existing consideration of broader benefits and local content**

Broader financial benefits are poorly understood and largely overlooked by policymakers in the UK and Australia. This appears to be irrespective of the jurisdiction’s treatment of local content and broader benefits (i.e. Victoria has high local content requirements on train purchases whilst NSW does not). A lack of sophistication in understanding benefits is characterised by public procurement following established lines with an emphasis on either (i) best whole of life price or (ii) a strong desire to include local content without fully appreciating its cost and value to the economy.

Even when procurement rules provide flexibility, procurement officials have remained risk averse and local content is primarily driven by political imperatives. This has resulted in local content requirements which favour electoral boundaries (e.g. jobs in Dubbo for the NSW Regional Rail

<sup>1</sup> Day, C. J. & Merkert, R. (2023). Unlocking public procurement as a tool for place-based industrial strategy. *Regional Studies*, 57(6), 1029-1042.

fleet) over whole of government value. A failure to understand the financial value of benefits is problematic and has resulted in decisions which have not distinguished between activities by the real value they create.

Existing local content and broader benefit requirements generally specify percentage values/spending targets (e.g. fifty per cent local content), rather than measure the broader financial value generated by different alternatives. The creation of maintenance and construction jobs are frequently touted, even though these roles are not additive or readily outsourceable. In some contracts, local content requirements have been met by activities that would have been undertaken domestically irrespective of contractual requirements. Even in cases when ‘manufacturing jobs’ are created, there remains a focus on assembly employment rather than capability. This is reflected by the opening of assembly facilities such as Newton Aycliffe in England, Bellevue in Western Australia and Newport in Victoria. Manufacturers I spoke with stressed the importance of measuring local content in terms of sustainable job creation and investment that develops both capability and export competitiveness. A failure to measure the value of broader financial benefits and incorporate these effects into decisions leaves the government susceptible to sub-optimal choices. Assembly creates a large number of jobs, yet these roles are often short-term and low skilled with limited prospects at the project’s conclusion. Maintenance jobs can be long term but are likely to be created anyway and are often replacing jobs that already exist.

### **Are domestically manufactured trains better value?**

It depends on a wide variety of factors. Significantly, governments must consider whether making trains in the domestic economy will employ underutilised resources, the type of manufacturing being undertaken locally and the level of existing capability (creating a sustainable industry from scratch is very difficult and likely requires broader policy support).

To determine whether domestically built trains are cheaper when broader financial effects are considered, I examined four forms of manufacturing onshoring:

- (i) Trains completion works (e.g., NSW Regional Rail Fleet). Train completion works are the simplest form of onshoring and include basic train fit out.
- (ii) Train assembly (e.g., Melbourne HCMT, Perth Series C). Train assembly usually involves fabrication of an overseas designed train domestically from a mixture of local and imported parts. Unlike domestic manufacturing, a large portion of work is undertaken overseas and the parts are put together like a kit onshore.
- (iii) Domestic train design but foreign production (e.g., Queensland NGR trains designed in Australia but manufactured in India).
- (iv) Domestic train design and manufacture (e.g., Sydney’s Millennium train built in Cardiff, Perth Series B built in Queensland). It is acknowledged that the global nature of the rolling stock manufacturing industry means that a substantial share of parts are still imported.

Importantly, I only considered additional financial benefits generated from designing and manufacturing the train in Australia. Financial benefits from activities such as train maintenance

or depot construction are not included in my estimates as these would have taken place in Australia irrespective of whether the trains are manufactured locally or overseas.

In Table 1, I present the estimated size of each adjustment relative to a carriage’s price to produce an adjusted price per carriage for a hypothetical order of 600 carriages (arranged as single decker electric multiple units). All figures have been normalised to allow a like for like comparison between manufacturing options.

**Table 1. Adjusted price from different onshore manufacturing approaches**

	<b>Offshore Design &amp; Manufacture</b>	<b>Train Completion Works</b>	<b>Train Assembly</b>	<b>Domestic Design</b>	<b>Domestic Design &amp; Manufacture</b>
Price	\$2,400,000*	\$2,600,000*	\$2,970,000**	\$2,480,000***	\$3,400,000*****
Adjustment	\$0	\$119,162	\$856,997	\$83,333****	\$1,701,532
Adjusted Price	\$2,400,000	\$2,480,838	\$2,113,003	\$2,396,667	\$1,698,468

\*These values are conservative estimates.

\*\* Price of Perth Series C carriages.

\*\*\*Price of Queensland NGR.

\*\*\*\*Assume that 500,000 engineering hours are required at \$100 per hour.

\*\*\*\*\* Production cost at a state-of-the-art facility in Australia. Achieving this likely requires coordination between states to deliver long-term procurement contracts and sufficient order volumes.

My research illustrates that best value is obtained when trains are both designed and manufactured in Australia. This is due to the pace of financial benefits created outpacing increases to cost. Better value is still obtained when train assembly is undertaken in Australia. However, the same cannot be said for train completion works and the result is marginal for trains which are designed locally but produced overseas. Note that my calculations do not estimate an economic multiplier which is likely to enlarge the relative benefits of onshore designed and manufactured trains. Further, case by case adjustments which account for a region’s prevailing economic conditions are required to estimate the proportion of broader financial benefits which contribute to net economic activity (as opposed to poaching from another productive activity in the economy). This is important given the significant variance between regions. Creating jobs in Maryborough, Queensland, which had an unemployment rate of 15 per cent in the 2016 census, is likely to be more efficacious than adding jobs and investment in a prosperous metropolitan centre.

Inclusion of broader financial benefits in public procurement will only alter decisions in favour of onshore manufacturing in the presence of a competitive domestic industry when resources are not being more gainfully employed elsewhere.

### **Optimising contracting approaches**

Current approaches adopted in public procurement practice frequently undermine the health of domestic industry. Without addressing these factors, policies aimed at supporting local industry will have their efficacy undermined.

Accordingly, I recommend that government purchasing agencies:

- (i) **Improve collaboration with suppliers to draw on their expertise and effectively use spare production capacity.** This is effectively done in several European countries. Suppliers are often best placed to present innovative solutions, preference for ‘tried and tested products’ amongst risk averse government buyers denies local producers of an important testbed. An excellent example took place in the UK where a Bombardier (now Alstom) Derby designed lightweight bogie was shunned by buyers until competitors released a similar product.
- (ii) **Maintain consistent and stable order volumes.** Peak to trough demand stifles investment as manufacturers cannot readily capitalise expenditure in new plant/equipment and workforce training. A move away from large infrequent orders with tight delivery timelines towards pipelines of work will give domestic producers confidence to invest and build global competitiveness. The NSW Government’s order for 624 Waratah Series A carriages over 3.5 years exceeded local production capacity, resulting in the supplier subcontracting work to a Chinese producer. Future orders, such as the proposed Tangara replacement program, would benefit from adopting a production schedule which enables a continuous workflow. Interestingly, this was done in NSW prior to the original Tangara contract.
- (iii) **Avoid the spreading of orders between manufactures so that local firms can achieve critical mass.** In specialised markets such as rolling stock, which require significant investment in R&D and advanced production processes, introducing an excessive number of suppliers into the market to create competition can dilute order volumes to the detriment of domestic manufacturers. In contrast, major multinational suppliers can readily balance orders across markets. For example, the desire to increase competition resulted in the NSW Regional Fleet contract being awarded to a consortium led by CAF which is manufacturing the train in Spain (aside from minimal completion works being done in NSW).
- (iv) **Ensure that financing structures do not skew the playing field in favour of overseas manufacturers.** Use of private over public capital in government purchases skews the playing field in favour of bidders with access to low-cost capital. This can arise from the superior credit rating of large multinational parent companies, export banks or subsidies from foreign governments. This played out in the UK where the Hitachi led consortium which secured the Intercity Express Programme contract had backing from Japanese export banks whilst the Siemens led consortium, which was awarded Thameslink, likely triumphed over Bombardier (which would have produced the trains domestically) due to the borrowing credentials of its parent company. Further, contractual structures which financially damage domestic producers can undermine local manufacturing capability. Following losses on the Waratah train contract, Downer subsequently withdrew its bid to build Queensland’s Next Generation Rolling Stock. This resulted in the work being undertaken in India.
- (v) **Move away from parochial decision-making that fails to take a whole of government and national approach to balancing costs and benefits.** Procuring agencies often seek to minimise their own expenditure when the costs of overlooking industrial decline and broader financial effects falls on other departments or another

level of government. This is a particular challenge in Australia where trains are procured by the states yet responsibility for social security, strategic capability, industry and trade primarily rests with the Commonwealth. Local content policies are particularly problematic. Whilst local content rules generally specify Australia and New Zealand content, individual states heavily preference options which manufacture within state boundaries. Examples include Perth's C Series trains, Melbourne's HCMT and Queensland's Train Manufacturing Program. Parochial local content policies of this nature are counterproductive when seeking to support local industry in advanced manufacturing given the importance of scale economies to justify the investments required to remain competitive. Narrow state-based local content requirements result in manufacturers duplicating low-value assembly activities with limited long-term prospects in multiple locations.

### **The way forward**

Although NSW has regressed from building state-of-the-art trains, my research illustrates a pathway towards restoring capability whilst retaining competition and incentives for innovation. When the broader financial benefits of train production are reflected within an adjusted price, designing and manufacturing trains onshore can deliver the best value for money when resources are not being gainfully employed elsewhere. As such, buying locally manufactured trains is not necessarily a subsidy or form of social procurement. It is the most fiscally responsible course of action for governments in jurisdictions which possess and nurture this capability through effective contracting structures.

The NSW Government has stated its intention to have the Tangara replacement trains manufactured in Australia. This is an opportunity to lead Australian procurement best practice by learning from past experience and procurements made by other states. **We must not repeat past mistakes.**

Critically, a national whole of government approach should be adopted to avoid duplication of functions across states. Narrow local content policies undermine the competitiveness and health of domestic manufacturers. A successful NSW train manufacturing sector does not necessarily need to engage in the final assembly of trains, this could be undertaken with spare capacity at a facility in another state. Instead, NSW may benefit most from building high value components which can be purchased for inclusion in trains purchased by other states and countries. For example, Australia does not make widebody commercial aircraft but it does make components for planes manufactured by Airbus and Boeing. Developing world-leading capability in components is likely to enable the creation of a sustainable domestic manufacturing sector which is able to successfully compete in export markets and not be wholly reliant on orders from the state government. Understanding the optimal path forward requires measuring the value of benefits relative to their cost and identifying areas where NSW has a competitive advantage (either existent or readily developable). This will reduce the likelihood that ambitions to make trains in NSW morph into lower value train assembly. **Without awareness and changes to existing procurement orthodoxy in NSW, a poor value outcome is the default position.** It is important to understand that multinational rolling stock manufacturers favour train assembly facilities as they



are labour rather than capital intensive, enabling rapid establishment and closure to meet local content requirements, where additional costs are passed onto the state government. **NSW needs to adopt a smarter approach.**

Regardless of whether bodyshells or components are being manufactured within NSW, procurement contracts must be structured to provide local manufacturers with sufficient and consistent order volumes which create an environment that supports long term skilled job creation, investment in R&D, expenditure on capital and equipment and export competitiveness. Greater application of robotics and automation will make onshore manufacturing more productive and leverage the skillsets of Australian workers for higher order activities.

**The Commonwealth has an important role to play here.** To reduce duplication of functions amongst states and incentivise specialisation and collaboration, the Commonwealth could provide fiscal transfers which compensate state buyers when additional costs are incurred yet benefits, which exceed the costs at a national whole of government level, are accruing to another state. NSW must put pressure on and support the Commonwealth in making national coordination a reality.

Overall, NSW can use public procurement to support economic activity both within the state and across Australia in a fiscally advantageous manner. Doing so requires a more sophisticated understanding of value add and competitive advantage, in conjunction with contracting structures which support rather than undermine the health of domestic industry. In many instances, local manufacturers will choose to produce products domestically if they are provided with certainty and opportunities which enable them to confidently deepen their capital base.