



T H E M C K E L L I N S T I T U T E

Build it Here

The economic cost of offshoring major transport projects in New South Wales

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Introduction

Public procurement is a major driver of economic activity, constituting 15 per cent of GDP – higher than the OECD average of 11 per cent. Through competitive tender processes, governments in Australia have awarded 13 per cent of all public procurement expenditure to international bidders.

In awarding tenders for major projects, governments must balance public expectations with the need to ensure that major expenditure commitments represent value for money.

Often, the purported cost-savings associated with ‘offshoring’ major procurement is cited by policymakers as a rationale for awarding international bidders with major contracts instead of domestic bidders.

This report considers the merit of this argument, examining six major public procurement decisions by the NSW Government to determine whether the decision to offshore these projects was, ultimately, value for money after considering the broader economic benefits associated with domestic procurement.

It examines six major transport procurement decisions made by the NSW Government. It then examines the forgone domestic economic activity and jobs creation that has resulted from offshoring these projects.

It finds that in four of the six case study projects, the moderately higher costs alleged to be associated with domestic procurement would have been offset by the broader economic benefits of awarding the major tenders to domestic firms. In the two remaining case study projects, the overall cost savings to the NSW Government is marginal and may be eroded when factoring in other costs such as delays and design flaws.

In Australia’s liberalised, trading economy, governments will always engage international firms to meet niche procurement demands. Claims that engaging international firms for major procurements lowers overall costs to the Australian public, however, ignores the broader economic benefits associated with awarding domestic firms major government tenders, particularly those associated with advanced manufacturing. This is observed in the findings of this report.

Ultimately, this report recommends that the NSW Government should engage in more thorough cost-benefit analyses of international procurement, and do so in a transparent manner, prior to awarding major contracts to international bidders at the expense of domestic firms.

Key Findings and Recommendations

1. The six major international procurements examined in this report experienced increases to their budgets of between 40 and 50 per cent, negating the cost savings originally used to justify awarding the tenders to international bidders instead of domestic bidders.

Recommendation 1: The cost increases observed in overseas procurements should be investigated to determine whether inefficiencies resulting from offshore contract sourcing are consistent, and how they may be mitigated via local production.

2. Wider economic benefits and job creation figures associated with domestic production are not made public alongside other tender documents when offshoring decisions are made in NSW.

Recommendation 2: The NSW Government should establish an international sourcing comparator based on the public sector comparator to promote transparency in significant procurement decisions. The international sourcing comparator should be published alongside contract award notices.

3. Of the six Transport for NSW procurements examined, four would have produced greater economic benefits from local production than the savings generated from overseas sourcing. The net economic benefit was greatest for contracts worth more than \$1 billion.

Recommendation 3: Government agencies should publish wider economic benefits as part of a holistic cost-benefit analysis when making decisions about major procurement contracts that exceed \$1 billion.

4. If the four projects with positive net economic value of local production were produced locally, we estimate that 2,445 direct and indirect jobs would have been created.

Part 1: Public procurement as a driver of economic activity

In the 2019-2020 financial year, Federal and State Governments have awarded more than 82,000 public procurement contracts worth over a combined \$54 billion.¹ Public procurement is worth more than 15 per cent of Australian GDP, compared to an OECD average of 11 per cent.² Importantly, 13 per cent of all Australian public procurement contracts are awarded to international bidders.

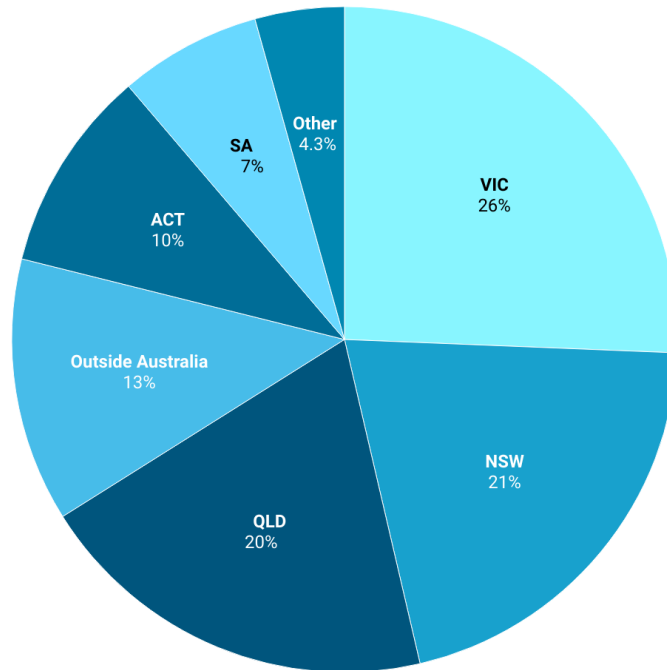


Figure 1: Location of public procurement allocation Source: AusTender

Despite their size difference, public procurement generates approximately the same economic activity in NSW and Queensland. Victoria is the location for the largest share of public procurement as a result of a procurement framework which promote local capacity and participation.³ The Victorian and South Australian policies have been described as best practice Australian procurement guidelines.⁴

The NSW Government has a recent history of offshoring major projects

A series of major public investments in NSW over the past five to ten years have seen the NSW Government award tenders to international firms, often citing cost savings as justification.

In 2016, while announcing new railway rolling stock for the New Intercity Fleet (NIF) the NSW Transport Minister Andrew Constance said that the South Korean built trains would be a 25 per cent saving compared to local production.⁵

"In this case the procurement stacks up, it's a 25 per cent saving by going with this consortium."

In 2020, the Transport Minister again indicated that 25 per cent represents a standard cost premium for local production.

*"As a rule of thumb, they say around **25 per cent [more]**, and that comes down to our energy cost, our labour cost, our raw material cost; we need to be honest about this."*⁶

The COVID-19 induced international border closure has required policymakers to rethink their reliance on international supply chains. Recent news of design problems⁷ and cost increases has added to the debate over whether local procurement would be more effective.

In light of the indicative cost differential provided by the NSW Government, this report seeks to answer the question; does the financial benefit of overseas procurement outweigh the wider economic benefits of local production?

To do this we examine the largest procurement project for each category of transport rolling stock. These are summarised in Table 1.

Table 1: Largest headline public purchases

	Project	Primary location	Stated budget*	Description
Intercity Rail	New Intercity Fleet (NIF)	South Korea	\$2.8 b	500 train carriages
Suburban Rail	New Suburban Fleet	China	\$2.6 b	17 new trains
Metro Rail	Sydney Metro	India	\$1.2 b	22 train sets
Light Rail	Light Rail	France, Spain	\$1.6 b	60 carriages
	Trams			
Ferries	Sydney Ferries	China, Indonesia	\$1.3 b	13 ships
Buses	B-Line Buses	Germany, Malaysia	\$222 m	38 buses, chassis built in Germany and assembled in Malaysia

*Note that published budgets may include operating or other activities that are performed locally, as well as the rolling stock production.^{8,9,10}

Part 2: Quantifying the economic value of onshoring rolling stock procurement in NSW

Significant infrastructure projects such as WestConnex and Metro West have included wider economic benefits in their business case. This is consistent with the Australian Transport Assessment and Planning Guidelines (ATAP) which provide guidance for the appraisal of transport projects.¹¹

However, these wider benefits are not publicly compared to the cost differential used to justify overseas procurement contracts.

In examining the economic value of the transport procurement projects examined in this report, we seek to assess whether considering additional economic benefits would make local production more attractive.

Methodology

We assume local production carries a 25 per cent cost premium on headline budgets in accordance with Government statements. We then examine the wider economic benefits including the job creation associated with local procurement. We consider whether local procurement, accounting for wider economic gains, is more beneficial than overseas procurement.

Asset procurement decisions impact local communities

The decision to source assets from overseas is a trade-off between a cost saving and domestic economic activity. Foregone injections into Australian industries by state governments must be validated to accurately evaluate this trade-off.

Unlike a single supplier in a competitive market, governments obtain value through taxation and improved community welfare. Therefore, wider benefits to the community should be considered in procurement decisions.

Headline cost-benefit analysis is not reflective of true redistributions within the economy. Basing supplier choice on posted manufacturing costs is superficial and underestimates true gains from economic activity.

A wide array of economic benefits of local procurement should be considered

December 2020 changes to the Commonwealth Procurement Rules (CPR) required that, “for procurements above \$4 [million] officials are required to consider the economic benefit of the procurement to the Australian economy.”¹²

The Commonwealth Government does not specify how to calculate the economic benefits but lists some examples of these benefits, including, but not limited to:

- building, leasing or procuring infrastructure that supports Australian communities
- providing skills and training that benefit Australian communities
- employing workers in Australia
- paying taxes in Australia
- contributing to positive social outcomes in Australian communities

The Australian Transport Assessment and Planning Guidelines include three categories of ‘wider economic benefits’ associated with transport projects.¹³

- Agglomeration economies
- Output change in imperfectly competitive markets
- Tax revenues from labour markets

While these guidelines are most relevant to transport infrastructure projects, they are broadly applicable to rolling stock procurement and other major procurements, and could be reflected at a state level.

Cost increases on internationally contracted projects have been common

Before exploring the wider economic benefits of the procurements analyses in this paper, we must determine an actual, as opposed to headline, costs for significant procurement. The actual costs take into account cost increases throughout the life of the project.

The literature on public procurement cost increases is extensive. Project errors include intercity trains poorly designed for Blue Mountains tracks, ferries too tall to fit under bridges (requiring passengers to clear the top deck on every trip)¹⁴ and more. Each design error results in increased final expenditure on these assets as well as delays to their utilisation.

Of the six overseas procurement projects examined, all experienced some cost increase which erodes some of the savings as compared to local production. In many cases this cost increase alone is enough to outweigh the benefit of overseas procurement. Final costings for each project are represented in Figure 2.

While data is not widely available, we note that some of the cost increases may be associated with domestic aspects of the procurement contract. In these cases, we assume that the cost increase is proportional to the component of the contract undertaken in each location.

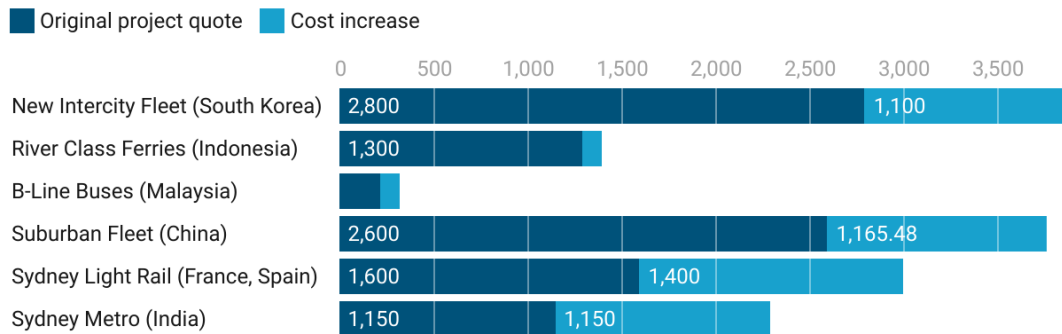


Figure 2: Cost blowout of offshore procurements (millions)^{15,16,17}

The average observed cost increase is greater than 40 per cent. This figure would increase were the costs of delays (and subsequent loss in activity) and stock quality (ferries not being able to carry full passenger load) be considered.

Quantifying the economic value of domestic production

The net economic value of domestic production is determined by the cost minus any positive economic return. In this analysis, that economic return is tax revenue from domestic job creation (income tax and payroll tax).

Overseas procurement produces no additional domestic economic activity therefore the net cost is the same as the actual procurement cost. The difference between the two indicates whether domestic or overseas production is more costly. Figure 3 presents this analysis with respect to six major procurement initiatives of the NSW Government.

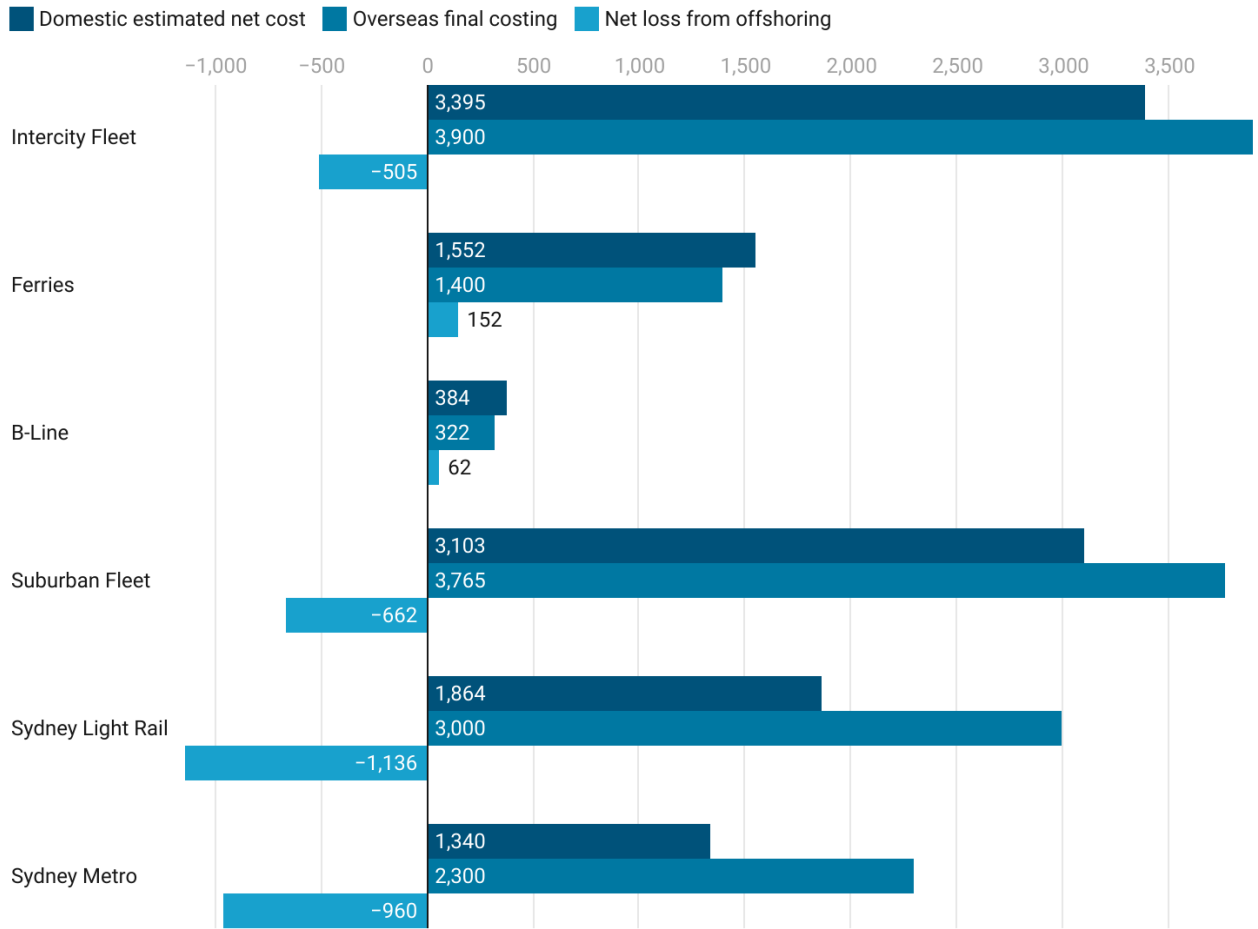


Figure 3: Comparison of domestic and international net economic costs of projects (figures in \$ million)

We find that four of the six projects would have produced greater economic value were they to be built in Australia, after cost increases and wider economic benefits are taken into account.

The analysis reveals that the production of some large asset projects produces greater economic benefit, even if they initially bear greater headline prices. This becomes increasingly significant when the cost increases from overseas manufacturing are included in the net benefit equation.

Some projects such as the B-line buses or the River Class Ferries have benefited from offshoring based on the analysis. It should be noted however, that although cost increases were not reported for these projects, both have suffered from significant design flaws that may have otherwise been avoided in domestic production. Further analysis would be required to assign a cost to these design errors before making a judgement as to whether domestic or overseas procurement was more beneficial.

Estimating foregone domestic job creation on the projects examined

Domestic job creation has greater benefits than the associated tax revenue, including social outcomes, individual welfare and reduced government payment costs. Foregone Australian job creation is another indicator of the lost economic activity from outsourcing public procurement.

For the rolling stock industry, macroeconomic analysis has shown a 1:1.4 ratio of primary to secondary job creation. Further, the ratio of jobs created in downstream consumer spending to project-employment is cited to be 1.1.¹⁸ Primary job creation from domestic production was estimated from publicly available domestic tender applications which were unsuccessful.

These figures were incorporated to the available employment figures for the construction and management of each of these assets to identify the lost economic value from overseas procurement.

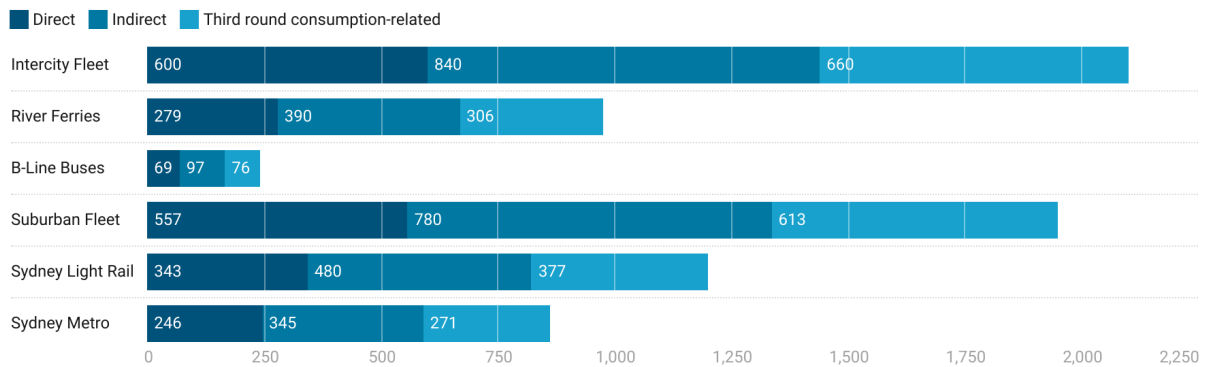


Figure 4: Job creation from domestic sourcing

Employment increases due to increased job demand in manufacturing and in indirect activity. Direct job creation refers to workers hired for asset production. Indirect job creation relates to employment arising from suppliers experiencing increasing demand and increasing the number of workers they hire as a result. Third round job creation refers to the increase in employment experienced throughout the economy from increased spending by newly employed workers and ranges across diverse industries and occupations.

Direct and indirect job creation is likely to be confined to similar industries (manufacturing, production) but also extends to transport services. Third-round job creation spans wider industries including hospitality and retail. The downstream effects of local asset production improve outcomes for workers throughout the supply chain and wider industries.

The four projects that would have created greater economic benefit through local production would have generated approximately 1,746 direct and 2,445 indirect jobs through 100 per cent local production.

Sensitivity Analysis: Estimating value-add in domestically manufactured projects

This paper examines just the job creation and taxation wider benefits that can be readily measured. We therefore explore whether, on a value-add measure, local procurement continues to generate a net economic benefit.

Due to restrictive access to data, the actual breakdown between domestic and international components of these major procurement projects are not specified. This sensitivity analysis explores whether, even without the later cost increases, domestic value of local investment would overcome the 25 per cent cost premium.

Value-add is a measure of how a firm or industry adds value to the inputs used in the production of a final good. Value add measures are publicly available for different industries. Here we show that even when cost blow outs are excluded, domestic procurement remains attractive.

Industry	Rolling stock manufacturing	Ship manufacturing	Motor vehicle manufacturing
Domestic production (\$ million)	4,885	5,717	11,294
Value added (\$ million)	1,083	2,289	3,732
Ratio of value added to production (%)	22.2%	40.0%	33.0%

Table 2: Industry production and value add. Source: ABS.

Value-add to production ratios were used to compute the value-add that would have resulted were projects to have been manufactured domestically. For those projects within the rolling stock industry, and for which manufacturing costs were unable to be reliably found, overseas manufacturing was assumed to be a constant fraction of total project cost taken from available data. Note the following assumptions and exclusions:

Project	Overseas manufacturing cost (without blow out) (\$m)	Australian manufacturing cost (\$m)	first round value added (\$m)	second round value add	third round value add	total value add
Intercity	\$1,300.00	\$1,625.00	\$360.26	\$504.37	\$396.29	\$1,260.91
Ferries*	-	-	-	-	-	-
Buses	\$25.00	\$31.25	\$10.33	\$14.46	\$11.36	\$36.14
Suburban fleet	\$1,207.14	\$1,508.93	\$334.53	\$468.34	\$367.98	\$1,170.85
Light rail	\$742.86	\$928.57	\$205.86	\$288.21	\$226.45	\$720.52
Sydney Metro	\$533.93	\$667.41	\$147.96	\$207.15	\$162.76	\$517.88

Table 3: Value add by project

*The River Class Ferries are not included in the analysis due to limited data availability.

The value-add figures from all rounds of value creation were used to establish the net collection figures for state and federal governments. Income and payroll tax rates were used to establish these figures.

Project	Federal revenue	State revenue	total public collection	Domestic manufacturing - government revenues	Overseas manufacturing
Intercity	\$298.84	\$113.48	\$412.32	\$1,212.68	\$1,300.00
Ferries	-	-	-	-	-
Buses	\$8.57	\$3.25	\$11.82	\$19.43	\$25.00
Suburban fleet	\$277.49	\$105.38	\$382.87	\$1,126.06	\$1,207.14
Sydney light rail	\$170.76	\$64.85	\$235.61	\$692.96	\$742.86
Sydney Metro	\$122.74	\$46.61	\$169.35	\$498.07	\$533.93

Table 4: Public collections in domestic production scenario

It is found that even when cost blow outs from foreign procurement are excluded, and when a 25 per cent premium on domestic production is included, net domestic costs are more competitive (Figure 5).

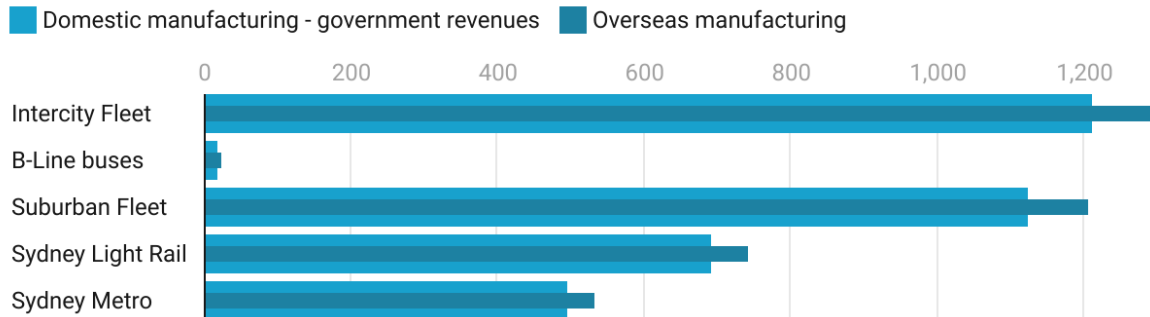


Figure 5: Net domestic production outcompetes foreign costs despite manufacturing premiums

More transparency surrounding internationally award contracts should be pursued

The result of this analysis should be considered in combination with job creation figures estimated previously. Value add is an indicator of economic activity and encompasses activity from increased employment.

Arguments for foreign procurement sourcing must bear more evidence and post contract figures for reliability in public procurement decision making. Effectively, this should already be done under state government’s own “Fair and Open Competition” procurement guidelines, which requires transparent procurement and proactive information sharing.

Project time delays constitute a lost economic benefit to NSW

The New Sydney ferries were expected to be delivered and in use in 2020, and instead underwent asbestos and maintenance for over a whole year. This time loss should be accounted for financially and is estimated to be worth more than \$28 million (before accounting for repairs cost and inflation) in foregone revenue based on Transdev and TFNSW's own modelling. Economic benefit should be benchmarked at this figure and, based on similar modelling as above, should encompass foregone employment, consumer loss from hindered travel, and more.

Such economic leakages should be identified in all major construction projects that state and federal government proceeds with, to conduct appropriate project reviews and appraisal. Greater procurement transparency enables feedback and improvement in government purchasing decisions and processes.

Existing frameworks should be expanded

Currently the NSW Government uses a Public Sector Comparator (PSC) as a tool used to compare relative costs of public production versus private sector engagement. The aim is to determine lowest-cost production to inform purchasing decisions.

Expanding such a framework to evaluate costs of offshoring public procurement *transparently, systematically, and holistically* is a solution to address the consistent cost increases on quoted prices, as well as the negative perceptions of offshoring. Once a system is established, it's appraisal, review and optimisation is also possible. Without it, it appears as though choice of supplier is made with headline figures as a top priority.

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