

## Supply Market and Supply Chain Analysis Guideline

### Purpose

This Guideline provides practical advice when analysing supply markets and/or supply chains in planning a procurement. In reading this Guideline, procurement practitioners will gain an understanding of:

- Supply market analysis and supply chain analysis, and their application in the context of the South Australian Government Procurement Framework; and
- How to undertake supply market and supply chain analyses, including considerations and models that may be applied.

### Relationship to the South Australian Government Procurement Framework

The *Procurement Planning Policy* establishes the need to analyse the supply market to inform the development of an acquisition strategy, requiring that:

- A supply market analysis is undertaken to assess market capability, capacity and willingness to achieve desired outcomes; and
- For all complex and strategic procurements, a supply chain analysis is undertaken to identify potential supply chain risks. Public authorities will assess whether a supply chain analysis is required for a transactional or routine procurement.

The *Value for Money in Procurement Guideline* identifies that better value for money outcomes can be achieved when public authorities improve their knowledge of, and engagement with, the supply market – particularly the local supply market. Ongoing market awareness and constructive relationships with suppliers will assist public authorities to remain informed about goods or services with improved value outcomes and will better inform the needs identification stage.

When engaging with industry and suppliers, for the purposes of supply market and supply chain analyses, refer to the *Industry Engagement Guideline*.

### What is Supply Market Analysis?

A **supply market** comprises the businesses and organisations willing to sell the goods and services relevant to a public authority's procurement needs. The supply market can be classified into smaller groups<sup>1</sup> based on characteristics such as size, capability, specific expertise, financial stability, location, type, service, price points, or whether it operates for-profit or not-for-profit etc.

**Supply market analysis** is a technique used to identify market characteristics for

<sup>1</sup> Guide to Procurement Strategic Analysis, Health Purchasing Victoria, [Guide-to-Procurement-Strategic-Analysis.pdf \(hpv.org.au\)](https://www.hpv.org.au)

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specific goods and services<sup>2</sup>, providing an understanding of:

- how a market works, and the direction in which it is heading
- the size and competitiveness of a market
- key suppliers and their respective market shares and profitability
- the degree of influence certain suppliers have within the market/sector;
- existing ownership structures in the market
- the overall market share key suppliers have in respect to government purchasing (to identify dominant suppliers and/or potential dependencies)
- the value that suppliers place on the public authority as their customer
- capacity and capability of the market
- how suppliers or markets meet or can be developed to meet a public authority's and end-user needs.

### What is Supply Chain Analysis?

A **supply chain** comprises all activities and stakeholders (e.g. suppliers, partner organisations, internal business units, end-users) involved in creating a good or service and delivering the inputs, outputs or outcomes that will meet the public authority's specific requirement.<sup>3</sup> The number, location, risks and costs associated with each of the activities in the supply chain and the profit margin added by each party in the supply chain are what determine the cost that the public authority will ultimately pay for the product.

The types of suppliers that comprise a supply chain will depend on the nature and complexity of the good or service. Suppliers may include primary producers, manufacturers, traders, transporters, importers, wholesalers, distributors, contractors, information systems providers, not-for-profit organisations and retailers.

A **supply chain analysis** complements the market analysis. While market analysis looks at the whole marketplace and the ability of the supply market to meet a public authority's procurement need, supply chain analysis looks more deeply at the risks impacting suppliers to supply the public authority, and the individual elements that contribute to the successful delivery of the goods or provision of services.<sup>4</sup>

### Benefits

Understanding the supply market, market dynamics and supply chain helps to inform

<sup>2</sup> Supply market analysis, State of Queensland (Department of Housing and Public Works) 2018

<sup>3</sup> (Former) UK Office of Government Commerce, Supply Chain Management in Public Sector Procurement: a Guide, 1996.

<sup>4</sup> Victorian Government, Understanding the supply chain – goods and services procurement guide, 2019.

[Understanding the supply chain – goods and services procurement guide | Buying for Victoria](#)

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the strategy for approaching the market to deliver the best long-term, value for money outcome, underpinning the development of the acquisition strategy and establishing the context for developing specifications and contracting strategies. Knowing how goods and services are manufactured, sourced and delivered can help public authorities to:

- achieve value for money
- assess and manage risks that could affect delivery
- identify strategies to meet other government objectives<sup>5</sup> (such as supporting economic development in accordance with the South Australian Industry Participation Policy).

In addition to providing in-depth market understanding to inform a procurement strategy, supply market and supply chain analysis results in:

- improved identification and management of supply-related risks, through:
  - early identification of market factors that may lead to limited supplier interest or response to a public authority's procurement strategy
  - identification of any substitute goods or services available from more competitive and less risky supply markets
  - assisting in the development of specifications to maximise competition and value for money
  - identifying compliance requirements to legislation or standards
  - informing decisions about whether to aggregate or disaggregate requirements
  - informing negotiation strategies, including risk reduction strategies
  - identifying the public authority's attractiveness as a customer, enabling strategies to improve attractiveness or target suppliers
  - understanding the favorability of a supply market to suppliers and buyers, and the potential for supply market failures<sup>6</sup>
  - understanding vulnerabilities and dependencies in the supply chain that contribute to the risk profile of a procurement
- informing decisions about whether to aggregate or disaggregate requirements
- identifying opportunities to increase competition and develop supplier bases
- identifying opportunities for innovation through improved market understanding and engagement
- understanding of what makes up the cost of delivering a good or service.

<sup>5</sup> Victorian Government Analyse the market, 2019, ([Market analysis of suppliers \(buyingfor.vic.gov.au\)](http://buyingfor.vic.gov.au))

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## The analysis process

Figure 1 summarises the key steps when undertaking supply market and supply chain analyses. Each of these steps are described in further detail below.

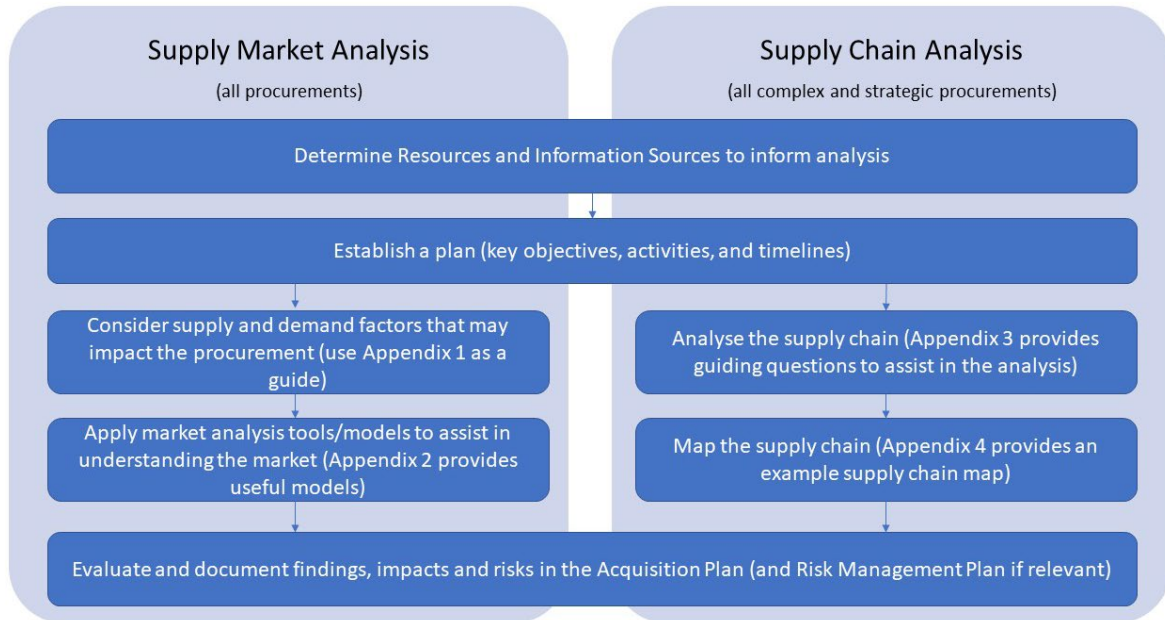


Figure 1- key steps

## Before You Start

A number of activities should be undertaken before commencing supply market and supply chain analyses.

### Analysis effort should be commensurate with the complexity of the procurement

The cost, time and effort spent in supply market and supply chain analysis should be commensurate with the potential benefits gained and the strategic importance of the procurement as determined by its complexity assessment.

While some level of supply market analysis is required across all procurements (commensurate with the complexity and value of the procurement), supply chain analysis must be undertaken for all complex and strategic procurements.

Refer to the *Complexity and Capability Assessments Guideline* for further information on determining the complexity of a procurement.

### Determine resources and information sources

Supply market and supply chain analysis should be carried out by people with the appropriate capability and subject matter knowledge. Where possible, retain those people for subsequent stages in the procurement process.

Potential primary and secondary sources of information to inform supply market and supply chain analysis may include:

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- end users and buyers of goods and services
- suppliers and industry associations and sector peak bodies
- online databases, internet search engines and resources (noting that while online resources are a valuable tool to support supply market research, it is important to ensure source accuracy and credibility)
- specialist organisations such as:
  - [Australian Bureau of Agricultural and Resource Economics and Sciences](#)
  - [Australian Bureau of Statistics \(ABS\)](#)
  - [Australian Securities and Investments Commission \(ASIC\)](#)
- company/business-specific information e.g. annual reports, previous tenders
- specialist public sector organisations and public authorities
- comparative interstate (or overseas) government agencies
- private sector research or market analyst organisations.

### Establish a plan

Prior to undertaking supply market analysis and supply chain analysis, consideration should be given to:

- ensuring the procurement need is clear and understood, so that supply market analysis (and supply chain analysis if required) appropriately focuses on relevant industry and markets
- defining the objectives and elements of the analysis
- identifying potential sources and analysis methods (including industry engagement)
- determining the model to be used (example models that may apply are discussed in 'Undertaking Supply Market Analysis' below, and in Appendix 2)
- developing a plan, outlining the key activities and timelines for finalising the market analysis.

### Undertaking Supply Market Analysis

Appendix 1 lists a series of market supply and demand factors to consider and analysis that can influence a procurement strategy. This list is a guide only. In addition to the list, there are several useful models and tools that may be applied to support supply market analysis and inform acquisition planning including:

- Porter's Five Forces<sup>7</sup>

<sup>7</sup> M. E. Porter, Competitive Strategy: Techniques for Analysing Industries and Competitors, Free Press. 1980.

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- Supplier Preferencing (Steele, P. and Court, B.)<sup>8</sup>
- PESTLE analyses<sup>9</sup>.

Each of these models is summarised in Appendix 2.

The models set out in this Guideline are not an exhaustive list and are intended as a guide only. Public authorities should consider which tools will be most useful to the supply market analysis, depending on the objectives and outcomes desired from the analysis.

### Undertaking Supply Chain Analysis

While extensive supply chain analysis may require external support and expertise (for example, review of overseas suppliers' working practices and legislation) much can be done during acquisition planning to provide a greater understanding of supply chains and the level of risk to a public authority.

The questions at Appendix 3 can be considered when developing a Supply Chain Analysis.

Appendix 4 sets out an example process flow diagram for mapping a supply chain (for goods).

### Analysis outcomes

The findings of supply market and supply chain analyses are key inputs in determining an appropriate acquisition strategy. Findings should be evaluated and used to devise strategies to address any opportunities or risks identified. Public authorities must document supply market analysis and supply chain analysis in the acquisition plan, including:

- addressing supply-related risks, in terms of the nature of the supply market and supply chain, and the probability of supply failure
- opportunities for improving value for money.

Where relevant, identified supply market and supply chain risks should be documented in the risk assessment undertaken in accordance with the *Risk Management Guideline*.

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<sup>8</sup> P Steele & B Court, Profitable Purchasing Strategies, McGraw-Hill School Education Group, 1996, pp. 82–83

<sup>9</sup> P Steele & B Court, Profitable Purchasing Strategies, McGraw-Hill School Education Group, 1996, pp. 82–83.



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### Appendix 1 – Supply Market Analysis Checklist

Consideration	Details
Size of the supply market in terms of market share, volume and turnover.	What are the number, size and distribution of competitors in the market that could affect the purchasing of the procurement or the negotiations? Are there any existing ownership structures emerging? Or whether the supplier is purely local or part of a large national or international organisation which may indicate whether major decisions are made in Australia or overseas.
Number of suppliers in the procurement category to which the procurement relates.	Are there sufficient suppliers in the marketplace that would be likely to respond to a procurement requirement?
Supply market has the capability and capacity to carry out on the procurement.	To what extent can the market sector deliver the procurement requirement? The supply market must demonstrate it has both the capability and capacity. Reliance on one aspect alone could significantly increase the risk of not achieving an effective procurement outcome. What factors influence the comparison of similar suppliers and products? Consider price, reliability, stability, location, freight, supplier history/background,
Degree of competition in the supply market sector.	This is relevant where pricing of a good or the cost of a service is an important factor in supplier selection. What is the likelihood of achieving competitive pricing and performance in response to a procurement requirement? If the supply market is competitive, could the aggregation of the requirement leverage better value for money?
Supply market influencers	Are there key suppliers and supply market influencers that drive business directions? Do they help other organisations access information about current trends and markets? Are there particular suppliers that /have significant influence over the direction of the marketplace?
Barrier to entry/exit.	Is the degree of competition affected by the type and level of barriers for new suppliers to enter and exit the market? For a market to be competitive there must be potential for new suppliers to enter in order to achieve more competitive pricing and improve service outcomes. Will a better procurement outcome be achieved if the requirements are bundled (i.e. aggregated) or separated (disaggregated)? Are consortia offers or subcontracting arrangements encouraged? Are opportunities for participation SMEs maximised?
Cost drivers of the good or service.	What are the main cost drivers? What are the influences on these? Where are the goods/services sourced? Are they subject to foreign exchange fluctuations? What influence does the supplier have over these and/or their suppliers? How can the risk of price variations be mitigated or the impact minimised? If suppliers bear the risk, the cost will be factored into the price offered.
Product/service lifecycle.	What is the typical lifecycle of the product (or service)? This will be determined by the level of technological change and/or the potential for new products or services to replace the current. Understanding the position of the

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Consideration	Details
	<p>goods/services in the product lifecycle will assist in identifying suppliers' likely marketing strategies and how suppliers compete.</p> <p>Have the principles of a circular economy been considered? A circular economy aims at eliminating waste and use of resources. It can reduce environmental pressure, improve security of the supply of raw materials, increase competitiveness, stimulate innovation, and boost economic growth.</p>
Risk of supply failure.	<p>What is the level of risk of failure inherent in a particular market sector? This is critically important for government provision of essential services to the community although may be less critical where a panel of multiple suppliers exists or there is a well-established supply base. Criticality occurs where the principal supplier is reliant on a single or small number of suppliers in the supply chain. Consider how resilient the supplier market and supply chain is in responding to significant and unforeseen incidents.</p>
Supply market is responsive to innovation, alternate contracting and collaborating with other suppliers when responding to a desired procurement outcome.	<p>To what extent can the market sector respond with an innovative response to a complex procurement requirement? Are suppliers operating in particular market sectors familiar with non-standard supply arrangements, risk and benefit sharing, approaches such as alliance contracting, market-based solutions and forming project specific contracting entities to cover the full scope of the procurement requirement.</p>
Availability of substitute goods/services.	<p>What is the likelihood that there is the availability of substitute goods/services to meet the business requirements? Often substitute goods/services are missed because of a narrow focus, existing specification is too rigid or there is too much attachment to a particular brand. Focus on the outcome, and not on existing goods/services. This often opens up a wider range of solutions and suppliers.</p>
Impact of environmental, social and ethical objectives.	<p>Are there any environmental, social or ethical risks impacting the supply market (for example modern slavery in the supply chain).</p>
Extent of supply market representation at the state/regional and local levels.	<p>Is the market sector represented where the procurement requirement is needed or is to be delivered? Consider objectives of the South Australian Industry Participation Policy.</p>
Suppliers require high level of management oversight.	<p>Will the organisation need to apply additional resources or risk management processes when managing the contract?</p>



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## Appendix 2 – Market Analysis Models

### Porter's Five Forces

Figure 2, based on the Queensland Government's 'Supply Market Analysis' guidance<sup>10</sup> and Porter's 'Five Forces Model of Competition'<sup>11</sup>, shows that supply market analysis can be structured around five key elements.



Figure 2 Porter's Five Forces

The five forces include:

#### 1. Market structure

Understanding market structure involves determining the relevant market or segments, total size of the market, key suppliers and market share, market concentration (i.e. monopoly, oligopoly, competitive), ownership structures and profitability of the different suppliers.

#### 2. Competition

Understanding how suppliers compete in a market involves determining:

- the basis of competition between suppliers (e.g. price, service, distribution, product types, brand image)
- barriers to entry and exit (e.g. government regulations, licenses, intellectual property/patents, economies of scale, start-up capital, existing contracts, scarcity of inputs)
- potential changes to competition

<sup>10</sup> Supply Market Analysis, State of Queensland (Department of Housing and Public Works) 2018

<sup>11</sup> M. E. Porter, Competitive Strategy: Techniques for Analysing Industries and Competitors, Free Press, 1980.

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- position of a good/service in the product life cycle (e.g. introduction, growth, maturity or decline).

### 3. Supply chains

Supply chains need to be examined to identify:

- the value that each element adds, and the resultant or overall costs
- supply chain dependencies that may create risk or lead to supply chain failure
- sustainability impacts and opportunities e.g. raw material carbon emissions
- unacceptable supply chain practices such as fraud, corruption, modern-day slavery, human trafficking and the use of child labour
- where/at what point to buy in the supply chain (e.g. through a retailer, manufacturer or wholesaler)

### 4. Substitute goods and services

Analysing substitute goods or services can provide insight into alternative ways of meeting a public authority's requirement. Sourcing substitute goods and services may reduce risk due to instances such as monopolistic markets, where there are significant sustainability and ethical impacts, or other business risks. The identification of substitutes may also assist in the development of clear, unbiased specifications and reveal opportunities for improving value for money.

### 5. Public authority's value as a customer

Understanding the public authority's value to the supply market will assist in identifying changes the public authority may need to make in order to be seen as a more attractive customer and increase competition. The 'Supplier Preferencing' model described below can assist in determining value as a customer to suppliers.

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### Supplier Preferencing

The following Supplier Preferencing Model<sup>12</sup> can assist public authorities to understand their value to the market and determine how important the procurement is to suppliers. This model evaluates the willingness of suppliers to meet the public authority's needs. Suppliers will put in less effort when they perceive a customer as unimportant.

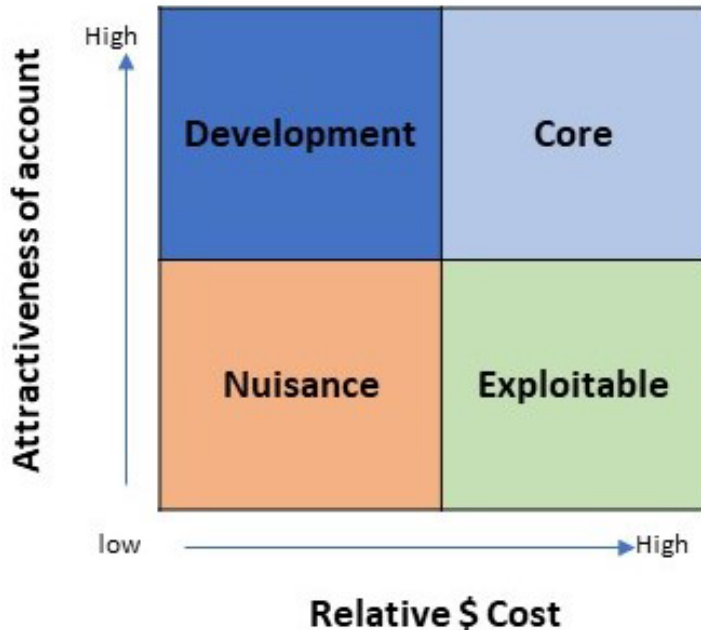


Figure 3 - Supplier Preferencing Model

The model maps the procurement against two key aspects, namely the attractiveness of the account to the supplier and the relative dollar cost to deliver the goods or service.

The 'relative dollar cost' axis relates to the size of the procurement relative to the supplier's total sales. The attractiveness of the procurement to suppliers is determined by various factors including the:

- level of expenditure
- scale of customer demand compared to others
- profitability of the customer
- reputation of the public authority
- potential for the supplier to grow the account
- ease of managing the account.

By understanding these factors from the supplier's perspective, the public authority can develop more effective acquisition strategies that make the procurement more

<sup>12</sup> Paul Steele and Brian H Court, 1996, *Profitable Purchasing Strategies*, McGraw Hill.

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attractive to suppliers or capitalise on the opportunity to maximise value.

The following table outlines how suppliers perceive the needs of procurements that fall in the ‘Development’ and ‘Core’ quadrants of the model. Conversely, procurements that fall in the ‘Nuisance’ and ‘Exploitable’ quadrants present risks for public authorities as suppliers may show less interest or seek to maximise profits through bidding higher prices or showing inflexibility in tenders and contracts.

The table also outlines the key aspects of each quadrant from the potential supplier point of view and describes what the public authority might consider in developing an appropriate acquisition strategy and framing a market approach.

In developing an acquisition strategy for procurements that fall into the ‘Nuisance’ and ‘Exploitable’ quadrants, public authorities should seek to make the procurement more attractive, whereas those that fall into the ‘Development’ and ‘Core’ quadrants may provide opportunities for public authorities to maximise value.

Supplier’s View			Acquisition Strategy Considerations
Quadrant	Description	Supplier Actions	
<b>Development</b>	<b>Opportunity:</b> <ul style="list-style-type: none"> <li>Low relative \$ cost</li> <li>But still attractive</li> </ul>	<ul style="list-style-type: none"> <li>Nurture customer</li> <li>Expand business</li> <li>Seek new opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Capitalise on opportunities to maximise value</li> <li>Improve supplier capability and performance of the</li> <li>Develop good business relationship</li> </ul>
<b>Core</b>	<b>Key Customer:</b> <ul style="list-style-type: none"> <li>High relative \$ cost</li> <li>Highly attractive</li> <li>Supplier’s core business</li> </ul>	<ul style="list-style-type: none"> <li>Retain customer</li> <li>Defend rigorously</li> <li>High service and response</li> </ul>	
<b>Nuisance</b>	<b>Indifferent:</b> <ul style="list-style-type: none"> <li>Low relative \$ cost</li> <li>Minimal profit</li> </ul>	<ul style="list-style-type: none"> <li>Low interest</li> <li>Low attention</li> <li>Lose without pain</li> </ul>	<ul style="list-style-type: none"> <li>Involve suppliers early in the process via market sounding and promoting awareness of the procurement opportunity;</li> <li>Reduce the costs of participation in the procurement process via streamlined/simplified procurement processes;</li> <li>Increase the procurement value by aggregating/ budling like business;</li> <li>Ensure a fair allocation of risk between the parties.</li> </ul>
<b>Exploitable</b>	<b>Interested:</b> <ul style="list-style-type: none"> <li>High relative \$ cost</li> <li>But not attractive</li> </ul>	<ul style="list-style-type: none"> <li>Maximise profits</li> <li>Drive premium price</li> <li>Short term advantage</li> <li>Risk losing customer</li> </ul>	

It is useful for public authorities to compare the results of the Supplier Preferencing model with the procurement’s complexity (i.e. transactional, routine, complex or

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strategic) in order to address any significant contradictions or inconsistencies.

For example, if the proposed procurement is considered complex or strategic to a public authority, yet the supplier considers the public authority or procurement activity as either a nuisance or exploitable, the public authority will need to develop strategies to address this (for example, by making the business more attractive to the supplier and provide greater incentives).

Where the supplier sees the public authority as being either development or core, the public authority may also be able to consider strategies to take advantage of this situation (for example, by developing a good business relationship to maximise value).

### PESTLE (Political, Economic, Social, Technological, Legal, Environmental)

PESTLE analysis<sup>13</sup> provides an overall analysis of the external context that may impact a supply market, against the following factors:

- Political
- Economic
- Social/cultural
- Technological
- Environmental/sustainability
- Legal

Understanding the context in which a supply market operates can assist in highlighting risks that otherwise may be overlooked. The table below (taken from the Queensland Government’s ‘Supply Market Analysis’ guidance<sup>14</sup>) provides key questions to consider against the PESTLE framework.

Factor	Key Questions
<b>Political</b>	Are there any changes to government assistance or restrictions to trade which will have impact on this industry and marketplace, such as the Australia-United States Free Trade Agreement (AUSFTA)? Political instability can affect global supply chains with varying degrees of damage to government and public authorities. Supply chain considerations include the impacts of government and foreign trade policy, tax policy, consumer protection, employment, data protection laws, tariffs, overseas workers and visa protocols.
<b>Economic</b>	What are the prevalent economic factors? What impact does the local and overseas economic climate have on this industry? This may include exposure to exchange rate and interest rate fluctuations.
<b>Social / cultural</b>	Are any specific social groups that may have a significant impact on, or be impacted by the marketplace? Are there any culture-related sensitivities or issues that may influence the procurement process and

<sup>13</sup> [PESTLE Analysis - SWOT and Business Analysis Tools](#)

<sup>14</sup> op. cit.

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	the outcome of procurement?
<b>Technological</b>	<p>What technological innovations are likely to affect the supply chain? How fast is the rate of technological change in the industry and what is the impact on product lifecycles? What suppliers are leading the introduction of new technologies and products to market?</p>
<b>Legal</b>	<p>Is there current legislation that regulates the industry, or will there be any changes in legislation for the industry?</p> <p>What federal or state legislation impact on this industry? For example, labour, workplace health and safety, or environmental legislation. What specific government policies apply to this industry? Consider any <i>Competition and Consumer Act 2010 (Cwlth)</i> implications of actions which may potentially reduce competition in the industry.</p> <p>Suppliers may be subject to multiple legal jurisdictions, and this may reduce or increase their capability and risk exposure. State level governing law and legal jurisdictions are important supply chain considerations in any cross-border contracts with potential suppliers.</p> <p>It is important to know the legal impact of the governing law and jurisdiction. Contract clauses allow parties to specify the system of law that will apply to the interpretation of the contract and its effect if a dispute arises once suppliers are engaged.</p>
<b>Environmental / sustainability</b>	<p>What are the environmental concerns for the industry? Is this industry inspected by government to ensure compliance with environmental standards? What are the key environmental impacts or issues of the industry? What suppliers are leading the introduction of more sustainable / environmentally friendly products to market? Sustainability impacts though the whole life of a product or service should be considered.</p> <p>This may include: • CO2 emissions entailed in the life cycle of the product • use of recycled or recovered materials • product reusability and/or recyclability • durability • energy efficiency and consumption • water efficiency • waste prevention • end-of-life disposal method.</p> <p>The labour or workforce used to produce or manufacture products should also be considered. Public authorities should monitor their supply chains to identify and avoid any modern slavery risks and demand responsible and transparent supply chains from suppliers.</p>

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## Appendix 3 – Supply Chain Analysis Questions

Factor	Considerations
What firms comprise the supply chain?	Public authorities should identify which suppliers, service providers, manufacturers, firms or industry sectors are potential suppliers.
What does each member of the supply chain contribute to the end product or service (what is their level of value-adding)?	Supply chains should be examined to identify if all elements in the chain are value-adding and if the level of added value is worth any cost increase. Procurement officers should not underestimate the value added by suppliers or their expertise. It may appear cheaper to bypass the supply chain, however, procurement officers need to evaluate whether the opportunity cost of managing the procurement internally – with associated risks – is less than paying a supplier to undertake the activity.
What are the key sustainability impacts along the supply chain?	<p>Sustainability impacts of goods and services occur throughout the supply chain. In order to identify and develop an understanding of areas of sustainability impact, the complete supply chain of the products or services should be examined. This will identify sustainability risks as well as opportunities to improve sustainability outcomes.</p> <p>The complete supply chain of goods or services should be examined to identify sustainability, local supply, economic contribution and manufacturing practices that have modern slavery implications, and that if publicly exposed could create legal and reputational risks to Government and public authorities. These risks can present as opportunities to deliver improved sustainability and socio-economic objectives.</p>
How complex is the supply chain?	<p>Supply chain complexity is caused by a variety of factors and is often the result of rising customer expectations for faster lead times, expanded products and services, and tailored experiences.</p> <p>Collaborating with suppliers can help manage supply chain complexity so when challenges arise a loyal supplier may offer extra support.</p>
Are suppliers dependent on other suppliers for key components?	Any stage of the supply chain in which a single supplier is dominant represents a risk. Without agreements with suppliers further up the supply chain, public authorities may be unable to recoup losses or manage service disruption due to supply chain failure. Procurement officers need to be aware of dependencies and the impact a dominant supplier may have on the supply chain, or if their performance becomes unsatisfactory. Public authorities need to manage the risk or develop alternative approaches to ensure risk is managed. This might include improving the existing supply chain; buying from a different part of the supply chain; or choosing a supplier from a different supply chain.
Is the supply chain risk best managed in its current location?	Facility location decisions play an important role in the logistics activities involved in supply chain management. The location and allocation decisions are often preceded by an evaluation of the existing distribution network system
What are the risks with supply chain transportation,	The National Heavy Vehicle Regulator administers the national law and the <a href="#">Performance-Based Standards (PBS) Scheme</a> helps suppliers and distributors to use the right vehicles to transport and deliver goods



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Factor	Considerations
regulations or delivery methods including products or services that have high transport intensity?	<p>purchased by public authorities.</p> <p>Consider national and international distribution and transportation. Significant volumes of air freight travels in the holds of passenger airliners. Distributors may look to ocean freight, where the International Maritime Organization's IMO 2020 regulation, means ship operators are converting vessels to alternative fuels, such as liquefied natural gas, which is increasing freight costs.</p>
Is the current storage location appropriate? Are stock levels high?	<p>Holding inventory comes with numerous risks that can negatively impact project management and procurement costs. Underestimating demand can result in stock loss or delay project implementation, while over ordering may result in wastage.</p>
Are there any areas of supply vulnerability within the chain?	<p>Supply chain systems are becoming increasingly lengthy and complex, reflecting the volatility and dynamics of the global marketplace. Analysing vulnerability in a supply chain system can reduce risk and establish the relationship between threats and risks. It identifies the consequences that determine the vulnerabilities and enables businesses and customers to manage and avoid the consequences.</p>
Are there more efficient or more sustainable sources of supply?	<p>Supply-side inventory risks include the reliability of a supplier to deliver to the agreed lead time and adhere to stock quality and quantities. An unreliable supplier is when they quote one lead time then deliver early or late, creating fluctuations from having too much to too little stock. The wider the gap between early and late deliveries, the greater the level of risk, supply and uncertainty.</p>
Is the agency buying at the correct level in the supply chain?	<p>Many goods and services required are purchased from retailers. However, there may be circumstances where the public authority could realise better value for money by approaching the wholesale market or the manufacturer directly and negotiating costs. The ultimate test of where in the chain the purchase should be made is whether the price mark-up at the subsequent stage is outweighed by the value added at that stage. Even when a decision is made to purchase from a retailer, the whole supply chain should be analysed to ensure that this decision is, appropriate and achieves value for money.</p>
Has the value chain of the procurement been analysed?	<p>Value chains streamline processes that take a product from concept to market. Value chain modeling reduces costs, differentiates the competition, increases profitability and efficiency and decreases waste to deliver higher-quality products at lower costs.</p>
Does the supply chain recognise and utilise South Australian materials, labour and capital equipment?	<p>The <a href="#">South Australian Industry Participation Policy</a> establishes the framework for assessing the economic contribution of tenders and grants within a broader value-for-money framework. The Policy is designed to deliver economic development by promoting:</p> <ul style="list-style-type: none"> <li>▪ Employment for residents of South Australia.</li> <li>▪ Investment and capital expenditure that builds capacity in the South Australian economy.</li> <li>▪ Use of businesses and supply-chains that employ South Australian residents and benefit the South Australian economy.</li> </ul>

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### Appendix 4 – Supply Chain Mapping (Goods)

A supply chain consists of the organisations that participate in the flow of goods or services from their original source to the public authority as the final end user.

Figure 4 sets out a typical example of a supply chain.

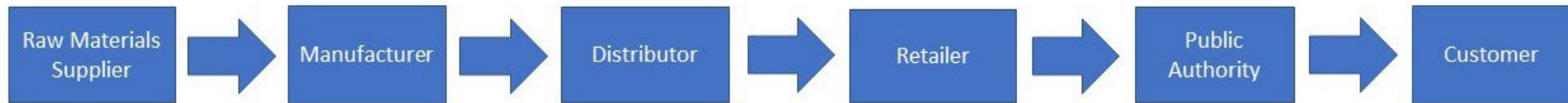


Figure 4 Example Supply Chain

## Supply Market and Supply Chain Analysis Guideline

Supply chain mapping is the process of documenting the source of every material, every process, product and shipment involved in purchasing goods or services. Figure 5 sets out an example process for mapping a product’s supply chain.

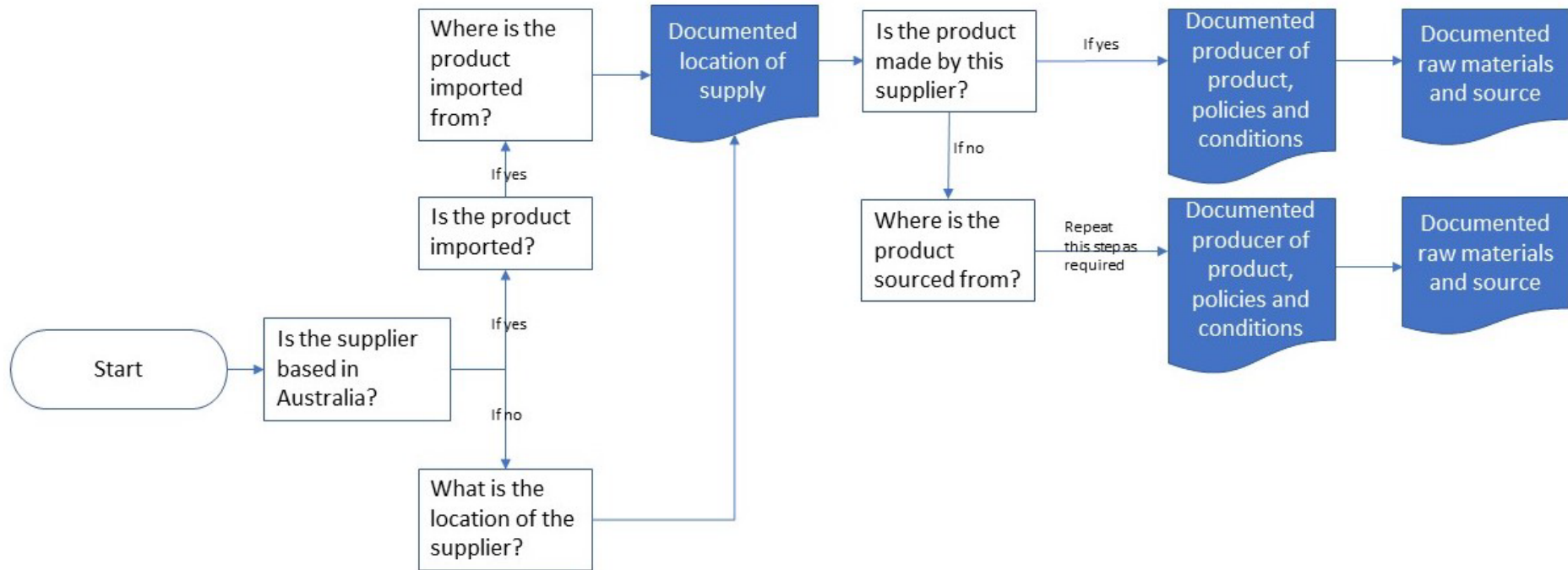


Figure 5 - Example Process Map -Supply Chain Mapping