

Guide to Complexity Assessment

Contents

The complexity assessment model	2
When to undertake a complexity assessment	3
Spend categorisation	3
Transactional Categories	3
Complexity assessment process	3
Procurement Strategic Analysis.....	4
Complexity assessment tools and templates	4
Initial complexity assessment	4
Detailed complexity assessment	5
When is complexity assessment not required?.....	5
Complexity Assessment Interpretation.....	5
Path to market options	6
Sourcing methods	6
Other factors to consider include:	6
More information	7
Disclaimer	7
Appendix 1: Complexity quadrant characteristics	8
Appendix 2: Complexity assessment process steps information	9

The complexity assessment model

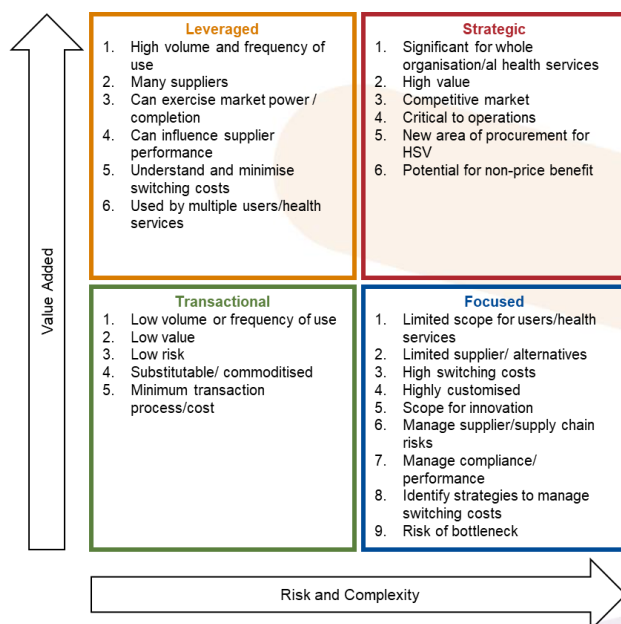
Complexity assessment is a process of segmenting purchasing categories based on the Kraljic Portfolio Purchasing Model. Segmentation is achieved by mapping the potential value created through procurement (Y axis) against the supply risks and the complexity of good or service subject of the procurement (X axis), to allocate the procurement to one of four complexity quadrants: Transactional, Leveraged, Focused and Strategic. This is illustrated in *Figure 1* (next column).

Table 1 (below) outlines the types of procurement activities generally associated with each quadrant. See Appendix 1 for details of Complexity Quadrant characteristics

Table 1: Complexity quadrant descriptions

Quadrant	Description
Transactional	Small-value and low-risk transactions where approved suppliers (e.g., HSV contracts suppliers) are not available.
Leveraged	Frequently used goods/services in a competitive marketplace that are procured by an individual mandated health service or whole of health sector, where the mandated health service has the ability to drive value.
Focused	Procured goods/services where a limited number of suppliers are available or where novel commercial arrangements are in place.
Strategic	Goods/services in a competitive market that are high value, where business criticality is high, and/or where the good/service is of state significance.

Figure 1: Complexity Assessment Matrix



When to undertake a complexity assessment

To achieve the best value-for-money outcomes, before starting any procurement activity, the analysis of the market and complexity assessment should be undertaken for each category of the organisation's spend.

Rather than assess each procurement activity on a case-by-case basis, procurement categories allow you to assess the complexity of groups of similar goods and services. Complexity assessment is not required for categories or procurements that are of low value, frequent and/or low risk to the organisation, i.e., which can be clearly identified as transactional procurements. A risk matrix may assist to align objective assessment and analysis.

Spend categorisation

For more information on categorisation, see the Guide to Procurement Categorisation

Complexity assessments at the category level take place often on an annual basis. For very 'stable' categories, where the complexity level is unlikely to change, complexity assessments may be more infrequent (e.g., once every three years). For example, the complexity level of office furniture is unlikely to change whereas a procurement category in an evolving market-place such as information technology is more likely to change. An additional complexity assessment may be required if there is a significant or material change to a procurement category during the year, or for any new spend categories.

Where you cannot identify a procurement category or, where the category has already been assessed, but the individual procurement is critical to operations or high risk to the organisation, a further complexity assessment at the individual procurement activity level should be completed for that procurement event. Otherwise, the initial category complexity assessment should suffice.

Transactional Categories

A detailed complexity assessment may still result in identifying a category or individual procurement as transactional.

Complexity assessment process

An assessment of complexity will analyse:

- a) internal and external factors that affect the procurement;
- b) the characteristics of the good or service being procured;
- c) the capacity, capability, and motivation of the market;
- d) the value created by the procurement to the health service;
- e) opportunities to improve value for money;
- f) the potential for aggregating purchasing demand;
- g) the potential to improve the opportunities for Australia and New Zealand small to medium sized enterprises to participate in government procurement; and
- h) the best way to approach the market that is cost-effective to suppliers and buyers while considering opportunities for local businesses to participate.

Complexity category	Description
Transactional	Small value and low-risk transactions where approved suppliers (e.g., HSV collective agreements) are not available or viable.

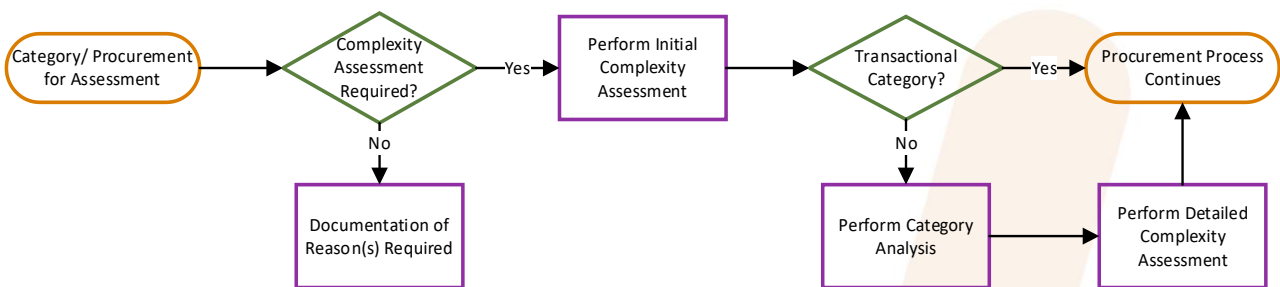
Complexity category	Description
Leveraged	Frequently used goods/services in a competitive marketplace procured by an individual mandated health service or whole of health sector, where the mandated health service has the ability to drive value.
Focused	Procured goods/services where a limited number of suppliers are available or where novel commercial arrangements are in place.
Strategic	Goods/services in a competitive market that are high value, where business criticality is high, and/or where the good/service is of significance.

Procurement Strategic Analysis

For more information on the analysis steps above, see the Guide to Procurement Strategic Analysis.

Figure 2 (below) illustrates the complexity assessment process, including the above steps. The accountability, responsibility, inputs, timing and processes for the key steps of this process are summarised in Appendix 2.

Figure 2: Complexity Assessment process



Complexity assessment tools and templates

HSV have developed a number of tools to support procurement market and risk analysis, and complexity assessment:

- Market analysis tools consisting of Porter’s Five Forces, and PESTEL (Political, Economic, Social, Technology, Environmental and Legal) analysis tools
- A risk analysis tool and register template
- An initial complexity assessment tool and template to assist in determining whether a procurement/category is
- ‘transactional’
- A detailed complexity assessment tool and template to assess categories or procurements that are unlikely to be transactional.

These tools, and a guideline for their use, are available on the HSV website.

Initial complexity assessment

The initial complexity assessment involves answering five basic questions about the procurement category, shown in *Table 2*.

If all of the answers to these questions are 'yes', the category is considered 'transactional'.

Detailed complexity assessment

The detailed complexity assessment process for categories not identified as transactional in the initial assessment uses a scoring system to determine the complexity quadrant for each procurement category/activity based on a set of questions concerning the procurement.

When is complexity assessment not required?

Health services may not be required to carry out an assessment of complexity of a procurement activity where the procurement is from an aggregated demand contract where it is a sole supplier arrangement.

Table 2: Initial Complexity Assessment questions and considerations

Initial Complexity Assessment Questions	Considerations
Does the procurement category have a low risk of impact on the health service's core operations?	Are there any high or very high risks to the organisation's operations identified in the risk analysis?
Is the procurement category's total cost of ownership low (relative to total health service expenditure)?	The definition of low will depend on the overall spend profile of a health service, but typically this is less than 1% of spend on goods and services. Organisations may decide to set a threshold value above which all procurements complexity must be assessed in detail. This may form part of the risk assessment.
Would there be a limited impact on the supplier market by purchasing the procurement category?	Does the health service's procurement in the category make up a significant (>20%) proportion of the market? One should consider the overall size of the market and any geographical characteristics, e.g., a health service in the regional area may have a small part of the market for the state, but make up a significant proportion of the market locally.
Is the benefit of demand aggregation low?	Is the category not generally utilised throughout the health service; i.e., is it a specialised requirements for a limited number of users? If so, it is unlikely that aggregating the requirements will deliver significant benefits.
Does the procurement category purchase result in no or a limited impact on the organisation's ability to meet their social, economic and environmental policy objectives?	There is little opportunity to significantly advanced social, economic or environmental policy objectives (of the organisation or government, more generally) though the procurement process.

Complexity Assessment Interpretation

The standards in both complexity assessments can be refined to ensure they are interpreted in the most appropriate way for your health service. For example, defining a low level of interruption to an health service's core services is likely to differ significantly between a health service providing utility services (e.g.

electricity) and an organisation delivering social services (e.g. provision of interpreter services). Comparing market analysis knowledge with other organisations can provide reassurance that your procurement categories are appropriately assessed.

Path to market options

Table 3 (below) outlines the path-to-market options that are typically appropriate sourcing strategies for each quadrant of complexity.

Note: The below path-to-market options are indicative only. A definitive path-to-market decision should build on the market analysis and review stage of the procurement process. Where the complexity assessment at the category level is applicable to individual procurement activity, it is possible to move directly to the market approach stage of the procurement process. For further assistance with this process refer to the Guide to Procurement Strategic Analysis and the Guide to Market Approach.

Table 3: Potential path to market options for complexity quadrants

Quadrant	Typical sourcing methods in order of preference
Transactional	Quotation, open tender, multi-stage tender
Leveraged	Quotation, open tender, multi-stage tender
Focused	Multi-stage tender, limited tender, open tender
Strategic	Limited tender, multi-stage tender

Sourcing methods

- Quotation: An approach to one or more potential suppliers applying simple standard engagement procedures and systems (e.g., p-card, purchase order, standard forms, etc.) that reflect the transactional nature of the procurement
- Open tender: A one-stage approach to the open market
- Multi-stage tender: An approach to the market involving one or more stages commencing with notification to the open market of the supply requirement; including proceeding with a two stage selective tender or conducting a multi-stage tender or electronic auction
- Limited tender: A direct approach to one or more potential suppliers without notification to the open market

Other factors to consider include:

- For open tender and multi-stage tenders an offer is put to the market and the market can determine whether to participate in the supply opportunity
- For quotations or limited tender, the organisation determines the extent of market participation by suppliers. In the case of conducting a limited tender, the market analysis would clearly identify those suppliers able to respond to the requirements of a project of high complexity, high risk and possibly critical to the business
- Quotation and a simple open tender approach to the market are relevant to maximising participation by local businesses and small and medium enterprises
- The requirement to maintain standard operating systems, security issues or high risk or strategic procurement activity may justify a limited tender approach to the market.
- Example of aligning category spend with complexity quadrants (value allocation)

The organisation may elect to develop a summary of procurement complexity by value (illustrated in *Table 4*). This summary would be based on the results of the complexity assessment, and knowledge of procurement category spend, and may assist in the procurement planning process.

Table 4: Example of procurement complexity by value summary

Quadrant	Total Spend \$M	Total Spend %
Transactional	\$XM	X%
Leveraged	\$XM	X%
Focused	\$XM	X%
Strategic	\$XM	X%
Not assessed	\$XM	X%
Total	\$XM	X%

More information

Related documents and templates are available on the HSV website.

Disclaimer

The information presented in this document is general in nature and based on HealthShare Victoria's interpretation of the *Health Services Act 1988 (Vic)* and any ancillary legislation and regulations in effect at the time and should not be relied upon as legal advice. Please consider seeking professional and independent advice from your legal representative as to the applicability and suitability of this information and the legislation to your own business needs or circumstances.

Appendix 1: Complexity quadrant characteristics

The table below describes the typical characteristics of goods and services in each quadrant. Please note that characteristics may vary across procurement categories and are indicative only.

Table 5: Complexity quadrant characteristics

Complexity Driver	Transactional	Leveraged	Focused	Strategic
How customised are the requirements?	Standard goods or services. Typically, an 'off the shelf' good.	Commoditised goods/ services, generally requiring no or a low level of customisation	Complex/novel specifications. May include project specific requirements.	Complex/novel specifications. Scope of specification may not be fully known i.e., supplier innovation required.
Critical to business	Low criticality to business. Goods/services generally used in back office functions or that are consumables. Goods/services easily replaced if supplier defaults. Limited security implications.	Low criticality to business. Goods/services generally used in back office functions or that are consumables. Goods/services easily replaced if supplier defaults. Limited security implications.	Medium to high criticality to business. May involve servicing or maintaining a critical asset. An interruption to core services would occur where supplier defaults. Potential for security implications.	High criticality to business. Significant interruption to core services where supplier defaults. Potential for significant security implications.
Substitutes/ suppliers	Competitive supply market exists, typically with many alternate goods/services or suppliers.	Competitive supply market exists, typically with many alternate goods/services or suppliers.	Limited number of alternate goods/services or suppliers exist. Sometimes prior intellectual property has been co-developed with vendor.	Competitive marketplace or volume of spend creates competitive leverage with a smaller number of suppliers.
Supply market dynamics	Procurement will have no material impact on completion or financial sustainability of the market. Typically, no impact on local market.	Procurement will be material to the market but may not impact the competitive landscape. Potential for impact on local suppliers.	Procurement may result in a significant impact on the market in reducing competition. Potential for impact on local suppliers.	Procurement may result in the creation of a monopoly or potential gain in market power by government. Potential for impact on local suppliers.
Procurement spend/cost	Total cost of ownership (TCO) is low. Minimal support or maintenance.	TCO is typically large value, usually made up of a high volume of low to medium value individual transactions. Minimal support or maintenance requirements. Cost of implementing new vendor across multiple departments should be incorporated.	TCO is typically a medium to large value. Can require ongoing support or specialised/dedicated skills to manage procurement activity.	TCO is typically a large value. Can require ongoing support or specialised/dedicated skills to manage procurement activity.
Impact of demand aggregation	Size/volume of procurement activity is usually too low to offset the cost of the demand aggregation process.	Commercial involvement and/or pooled demand can impact price and/or service quality of good/service.	Complex or novel specification limit the ability to leverage volume as required generally only apply to one organisation, business unit or project.	Volume/size of spend may create market leverage, but good/services may be organisation specific with limited benefit of demand aggregation.
Indirect impacts	Procurement aligns with all objectives of an organisation's environment, social and/or economic policies.	Procurement aligns with all objective of an organisation's environment, social and/or economic policies.	Some consideration may be required of potential trade-off between objectives of the procurement organisation and the objectives organisation's environment, social and/or economic policies.	Some consideration may be required of potential trade-off between objectives of the procurement organisation and the objectives organisation's environment, social and/or economic policies.

Appendix 2: Complexity assessment process steps information

The table below describes the typical characteristics of goods and services in each quadrant.

Table 6: Accountability, responsibility, inputs, timing, and process/tools for key steps in complexity assessment process

	Step 1: Is a complexity assessment required?	Step 2: Perform initial complexity assessment	Step 3: Perform detailed complexity assessment
Accountable	AO	AO	AO
Responsible	CPO	Delegated by CPO	Delegated by CPO
Inputs	Knowledge of the procurement category, send data and preliminary market analysis.	Knowledge of the procurement category and supply-market conditions	Knowledge of the procurement category and supply-market conditions
Timing	Annually and where a new procurement category is created, or there is a one-off procurement event during the year.	Annually where a procurement category is unlikely to be transactional, and where a new procurement category is created and unlikely to be transactional.	Annually, for categories or procurements not identified as transactional in the initial complexity assessment, and where a new procurement category is created, or there is a procurement event where the procurement is uncategorised, or the need for a further complexity assessment is identified for the category.
Process/tools	Complexity guidance material	Initial complexity assessment tool	Detailed complexity assessment tool.