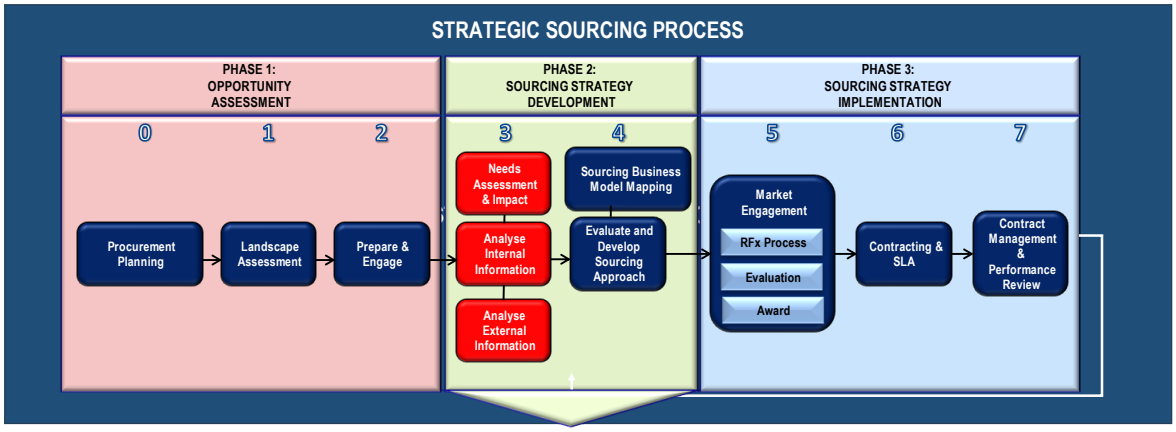
**S3(3.0)**
**SPF GOOD PRACTICE GUIDE**

# DATA COLLECTION AND ANALYSIS

**Using this guide**
This guide accompanies the National Treasury's Strategic Procurement Framework (SPF) for Strategic Sourcing in the Public Sector. For more information, visit the National Treasury website at http://ocpo.treasury.gov.za/
The SPF can be found here:
http://ocpo.treasury.gov.za/Resource_Centre/Documents/1A.%20Strategic%20Procurement%20Framework.pdf

## DATA COLLECTION AND ANALYSIS




3.0 DATACOLLECTION & ANALYSIS

3.1 Needs Assessment & Impact

3.2 Analyse Internal Information

3.3 Analyze External Information

### 1.0 Introduction

i. Data can only be helpful if it is trustworthy and can be relied upon.

ii. Inaccurate, incomplete, or incorrect data can lead to wrong decisions and subsequently wrong commodity mapping and sourcing strategies.

iii. The data must support the procuring institution's strategic needs, and such data can either be internal or external.

iv. The data integrity pf procuring institutions that want to develop credible strategic sourcing strategies, must be safeguarded. This must be done by ensuring the data can lead and optimise the quality of work, draw valuable insights, predict trends, prevent risks, save time, drive and support procuring institutional strategy and support data-driven decision-making.
v. The collected data must be interpreted and analysed to draw some conclusions.

### 1.1 Objective

i. To collect data that can be both qualitative and quantitative that can be used to construct a view of the commodity in terms of its impact on the institution.
ii. Such data can be about internal requirements, historical trends, future demand, total cost of ownership, external market drivers, value chain, supply chain or about understanding the value levers.

### 1.2 Output

i. Needs assessment and impact
ii. Analysis of internal information
iii. Analysis of external information

## 2.0 The narrative

### 2.1 Importance of data

i. Data can be classified as either qualitative or quantitative.
    a. Qualitative data is defined as non-numerical data or data that has not been quantified, such as text materials, and non-text materials such as videos, voice recordings of interviews, pictures, images e.g. process flow diagrams etc.
    b. Quantitative data is defined as data consisting of numbers or data that has been quantified, such as tables of figures.
ii. The following information is required for a concise overview of the commodity/category:
    a. Government situation overview (Needs Assessment & Impact)

i. Stakeholders
ii. Business needs
iii. Current procurement methods
iv. Specifications

b. Internal information (What, how many, price, etc.)
i. Demand analysis
ii. Spend analysis
iii. Price & cost breakdown analysis
iv. Value chain analysis

c. External Information (Market dynamics)
i. Supply market analysis
ii. Supplier analysis
iii. Competitive market dynamics

iii. Data can typically be sourced internally (inside the business) or externally (outside the business).

iv. Internal data sources include:
a. Financial Systems
b. Purchasing systems
c. Asset management systems
d. Manual systems
e. Hard copy invoices
f. Purchase orders and contracts

v. External data sources include:
a. Trade journals and periodicals
b. Annual reports and other company documents
c. Internet
d. Business unit leaders, colleagues, and associations
e. Consultants and research providers
f. Industry associations and publications
g. Headlines
h. Suppliers

vi. Data type and source identification:

a. Define the type of data required (qualitative, quantitative), data standards and format.
b. Identify sources for the data (e.g. suppliers, purchasing systems, budgets, etc.).
c. Decide on the depth/level of spending and volume information required (i.e. invoice level data or consolidated data).
d. Gather data, validate and refine/clean data, where applicable.
e. Load data into a database or save in the desired format in preparation for the generation of information outputs.

### 2.2 Ascertain the level of detail required

i. Does the aggregate spend/volume at each level make sense?
ii. Have I covered all geographies and within each geography, each location, and each office?
iii. What is the trade-off between time and completeness?
iv. What further information do I need to source the category?
v. What is the item period or consolidation level that is most beneficial for the analysis?
vi. Figure 1 indicates the extent to which data can be drilled down.

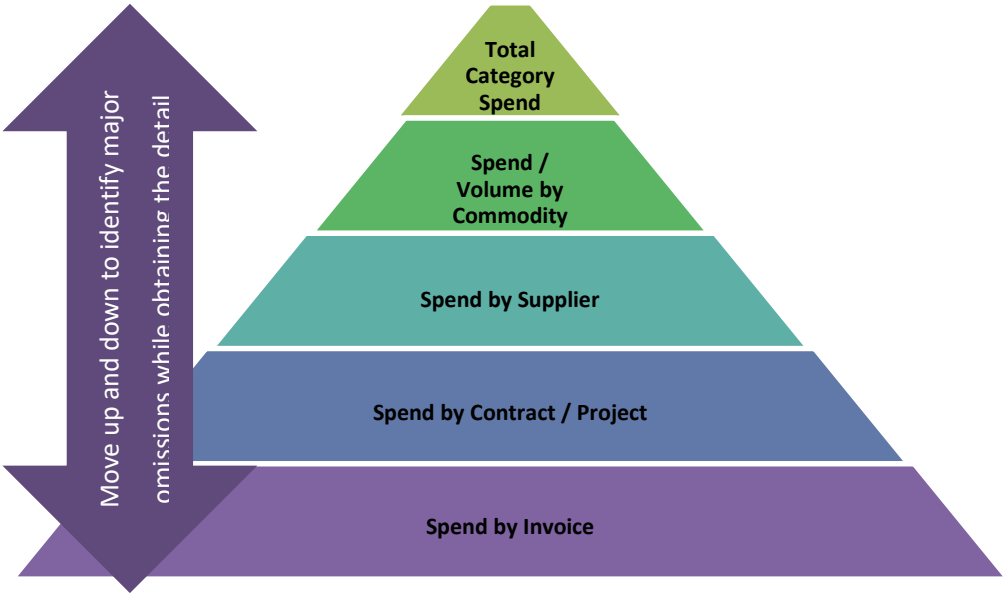



***Figure 1: Data Breakdown***

## 2.3 Needs assessment and impact

### 2.3.1 Preparing for Stakeholder Engagement

i. Stakeholders are the individuals and/or groups affected by and capable of influencing the strategic sourcing process.
ii. They usually consist of end-user groups, current suppliers, potential suppliers, industry bodies, quality testing bodies, subject matter experts, etc.
iii. During the previous stage – Prepare and Engage Stakeholders - stakeholders were identified, mapped and categorised.
iv. Their potential power and influence on the delivery of the project were determined.
v. With this valuable information at hand, it is possible to prepare and plan very effective stakeholder engagement meetings.

### 2.3.2 Identifying business needs and requirements

i. The quality of research and analysis, to identify the business needs, will impact the quality of the solutions and results that are achieved.

#### 2.3.2.1 Identify the needs through stakeholder consultation

i. Identify the needs through stakeholder consultation and consider the following:

    a. What is the purpose of the procurement?
    b. Who will be impacted by the procurement?
    c. Who are the key stakeholders and what are their expectations?
    d. Who are the internal clients /end-users and what are their needs?
    e. What similarities and differences become apparent between the needs of the various clients/end-users?

ii. The consultation should aim to ensure that:

    a. Stakeholders constructively engage and have "buy-in".
    b. Stakeholders can self-identify their current, predicted, and emerging needs.
    c. The consultation elicits information about individual and collective needs.

iii. From the consultation it will be important to:

    a. Distinguish 'needs' from 'wants' and 'desires."

b. Remove ambiguity, achieve clarity, and obtain consensus.
c. Bundle needs into related groups.
d. Prioritise groups and rank them.
e. Develop and articulate, a clear, comprehensive high-level statement of needs.
f. Obtain stakeholder verification and endorsement of the statement of needs.

iv. The statement of needs will later inform:

a. Type and extent of market research and analysis
b. Sustainability opportunities, issues, risks; linking social, economic, and environmental goals together.
c. Identify a range of solutions.
d. Solutions options appraisal
e. Development of specifications of requirements detailing the nature and scope of the goods/services that will be required to satisfy the needs.
f. Development of evaluation criteria and weightings

v. Apply the RAQSCI Model

a. The model applied is called RAQSCI (Regulatory, Assurance of Supply, Quality, Service, Cost/Commercial and Innovation)
b. Understanding the business requirements forms an integral part of strategic sourcing.
c. Business requirements is about what is right for the business.
d. The RAQSCI model helps to structure the definition of the business requirements in a way that reflects the overall needs of the entire business.

vi. Consider the following when determining the overall impact of the commodity on your organisation:

a. Expenditure impact. The percentage of this commodity's spend compared to the overall spend.
b. How much value does your organisation attach to this commodity? Is it core to your service delivery mandate?
c. Product differentiation impact. Differences in quality are usually accompanied by differences in price, differences in functional features or design.
d. Technology impact. How does technology impact the procurement of the commodity?
e. The impact on your organisation's service delivery mandate if there is a failure in supplying the commodity.

### 2.3.3 Obtain and review existing sourcing plans and contracts

i. A review of previous procurements, from the identification of needs through supplier selection, performance, and results, will inform how you proceed with your project.
ii. An assessment of rogue or off-contract spending may be an indicator of adherence to compliance and should be investigated.
iii. It provides an opportunity to apply lessons learned:

    a. If it is not a new initiative, there will be some history of previous procurement activity.
    b. If it is a new initiative for your organisation, other organisations may have current or recent experience of procuring the commodity. Talk to them if practicable.

iv. If a formal review of the previous procurement has been undertaken, obtain a copy of the report. Do not reinvent the wheel.
v. Actively seek feedback from everyone involved in the previous procurement to identify the lessons learned. Consider how these lessons can inform and add value to your procurement going forward.
vi. This may involve people such as:

    a. The CFO
    b. The Head of the Supply Chain Unit
    c. The Contract Manager
    d. The End-user
    e. The Supplier

vii. It may also be helpful to investigate the outcome of other government departments' procurement of similar goods/services. Consider the problems they have encountered and the successes they have achieved. How can this inform your thinking?

### 2.3.4 Collect, document and review technical specifications

#### 2.3.4.1 Defining a Specification

i. What is a specification?

a. A specification details the requirements of the procurement.
b. It is the basis of all offers and therefore the foundation for a contract.
c. A specification becomes an essential contract management document that is used to ensure that the chosen supplier provides what is specified.
d. It must be clear and accurately define what is expected of a supplier in terms of the outputs or the functional and performance requirements.

ii. What makes a good specification? A well-structured specification should:

a. Foster supplier interest.
b. Better engage with the market.
c. Facilitate a competitive environment.
d. Encourage innovation.
e. Apply a high standard in the delivery of requirements; and
f. Be clear and simple and avoid onerous or unnecessary requirements.

iii. Before preparing a specification, procurement practitioners should have a clear understanding of:

a. Customer, user, and stakeholder requirements.
b. Market information
c. The risk impacting the procurement; and
d. The evaluation criteria to be applied and the relative importance of each criterion.

#### 2.3.4.2 Reviewing the specifications

i. A good specification meets the basic needs, not the wants.

ii. As part of the review process, collect, document, and review all specifications:

a. Determine and document current functional, technical, and quality specifications.
b. Note that specifications may include qualitative issues driven by departmental needs, e.g. continuous improvement or reduced time to market.
c. Include any assumptions regarding the flexibility and potential change of the specifications.
d. Specifications must be prepared for all goods and services that will be procured to ensure uniform standards and a solid basis for the objective evaluation of supplier submissions.
e. Where no specifications exist, it is the responsibility of the user departments to produce this.

iii. Beware of over-specification:

a. Over-specification (gold-plating) is one of the most difficult aspects of TCO (Total Cost of Ownership) to determine and control. It is often necessary to interview the stakeholders to determine the flexibility of the specifications.

iv. There are three options for dealing with specifications:

a. Consolidate (disparate demand to one "standard").
b. Eliminate over-specified material (focus on market-available goods or services).
c. Revisit application and usage (determine the rationale behind the specification).

### 2.4 Analyse internal information

#### 2.4.1 Data gathering

Commodity or category data gathering can be classified into various categories:

2.4.1.1 Spend data

2.4.1.2 Usage data

2.4.1.3 Supplier data

2.4.1.4 Market data

#### 2.4.1.1 Spend analysis

##### 2.4.1.1.1 What is spend analysis?

i. The success of any organisation's supply management programme is largely dependent on the ability to access and interpret its spending data.
ii. Spend analysis enables the organisation to consolidate historical spending to develop an appropriate sourcing strategy.
iii. Spend analysis can be classified as identifying who is buying what, from which suppliers, how often and on what terms.
iv. This provides a structured approach for the identification and selection of sourcing and cost optimisation opportunities.

v. Spend analysis is conducted using quantitative data and is the process of collecting, cleansing, classifying, enriching, and analysing expenditure data to reduce procurement costs, improve efficiency and monitor compliance.

vi. It can also be leveraged in other areas of business such as inventory management, budgeting, and planning.

vii. There are three core areas of spend analysis: visibility, analysis, and process. By leveraging all three, organisations can generate answers to the crucial questions affecting their spending, including:

    a. What am I spending?
    b. With whom am I spending it?
    c. Am I getting what's been promised for that spend?

viii. Spend analysis is often viewed as part of a larger domain known as spend management which incorporates spend analysis, commodity management and strategic sourcing.

#### 2.4.1.1.2 How can spend data be analysed?

i. Once data is collected, it is consolidated into the required format, it is then cleansed to remove any duplicates or errors, grouped, and categorised.

ii. These processes are necessary to ensure accurate organisation and correlation of spending data and to enable actionable analyses.

    a. Grouping and categorising spending data should be done by adopting an internal taxonomy or by adopting an industry-standard classification scheme.
    b. Higher-level classification of spend at the category or supplier level is the first step in grouping and categorising spending data. Examples include:
        i. Categorising goods and services that are being procured.
        ii. Determining how many suppliers are being used for specific categories.
        iii. Determining how much the organisation is spending on specific categories, in total and with each supplier.
    c. Item-level detail of spend data enables a precise view of spending with each supplier and for each commodity on an organisational, departmental, project, and buyer basis.
    d. Additional enhancements should also be applied to the collected spending data. These include but are not limited to:
        i. Contract terms

ii. Socio-economic goals
iii. Industry pricing indexes
iv. Average selling prices
v. Supplier financial risk scores
vi. Performance information
vii. Lead times
viii. Inflation

#### 2.4.1.2 Usage data gathering

i. The gathering of internal data centres around both the category and how the organisation uses the category and intends to do so in the future.
ii. The gathered data will help to form perspectives around the commodity or category in line with the organisation's current and future needs.

| Potential data to collect | Possible sources of data |
|---|---|
| **Organisational usage data** | |
| • Business requirements (RAQSCI) | • Business requirements |
| • Volumes, now and future | • Purchase orders, invoices, (Accounts Payable) |
| • What are we buying | • Ledgers |
| • Where are we buying | • Interviews with key internal staff - users |
| • How the product is used | • Sales information |
| • Sourcing process | • Quality records |
| • Current performance or satisfaction | • Internal R&D or NPD experts, end-users |
| • Usage or process requirements | • Organisational strategy and objectives |
| • Future needs (in line with organisational strategy) | • Internal product plans |
| • Inventories and logistics | • Internal RFI |
| **Category Data** | |

| Potential data to collect | Possible sources of data |
|---|---|
| • Product life cycle | • Technology roadmap |
| • Technical and specification data | • Industry publications and websites |
| • Related categories (potential synergies) | • Technical papers |

***Table 1: Data Gathering***

### 2.4.1.3 Supplier data gathering

i. The supplier data gathering includes research on current and previous suppliers.

| Potential data to collect | Possible sources of data |
|---|---|
| • Range of products or services | • Request for information (RFI) leading to Request for Proposal (RFP) or Request for Quotations (RFQ) |
| • Geographical coverage (district, provincial, national) | • Purchase orders/invoices (Accounts Payable) |
| • Financial information | • Supplier's literature |
| • Quality performance history | • Supplier's websites |
| • Accreditations (e.g. ISO, SABS etc) | • Industry publications and experts |
| • Directors' interests | • Quality records |
| • Research and Development pipeline/where they are heading | • Supplier visits or interviews |
| • Other key customers | • Alliance organisations |
| • Other suppliers in the marketplace | • Benchmarking activity |
| • Suppliers who do not currently supply this category but could adapt easily | |
| • Possible new entrants | |
| • Previous performance on a similar project or work | |

***Table 2: Supplier Data Gathering***

#### 2.4.1.4 Market data gathering

i. The gathering of market data includes the marketplace for the category and other potential suppliers.
ii. Such data might assist in exploring more opportunities brought about by new suppliers and emerging markets.
iii. The market data is used to get insight into the supply market dynamics and how they impact sourcing strategy, for example, applying the Local Economic Development (LED) strategy of buying farm produce for hospital meals within the locality whilst there are no suitable suppliers may impact negatively on the sourcing strategy.

| Potential data to collect | Possible sources of data |
|---|---|
| • Market conditions and factors | • Industry publications |
| • Trends | • Interviews/discussions with suppliers |
| • Suppliers in this market today | • Interviews/discussions with experts |
| • Quality performance history | • Financial reports |
| • Potential future suppliers in the market | • Business newspaper articles |
| • Competitiveness within the market | • Specialist consultants |
| • Technology trends/emerging technology | • Published indices (e.g. commodity prices) |
| • Market segmentation (geographical, by product, service) | • Trade shows |
| • Possible future opportunities | |
| • Possible future threats to this market | |
| • Our relative power within this market | |

***Table 3: Market Data Gathering***

### 2.4.2 Data collection sources and methods

i. Data collection forms a crucial part of the category management process.
ii. The extent of the data collection is influenced by the complexity of the category or commodity to be sourced.
iii. The key data-collection methods are classified into three key areas: category/internal, supplier and market data.
iv. This data is collected throughout the category management process.

| Sources of information | Category & internal data | Supplier data | Market data |
|---|---|---|---|
| Defining business requirements | Yes | | |
| External RFI (request for information) | | Yes | Yes |
| Internet and desk-based research | Yes | Yes | Yes |
| Stakeholder interviews | Yes | Yes | Yes |
| Supplier visits | Yes | Yes | Yes |
| Engage expert | Yes | Yes | Yes |
| Tradeshows and exhibitions | Yes | Yes | Yes |
| Books and published papers | Yes | Yes | |
| Government bodies | | Yes | Yes |
| Conferences and network events | Yes | Yes | Yes |

***Table 4: Data Collection Sources and Methods***

### 2.4.3 Value levers

i. Value levers provide a high-level insight into the category management process in terms of potential sources of value.
ii. Use value levers to drive social values.

| Value Lever/ Opportunity | Element | Strategy to drive value creation |
|---|---|---|
| Category | Change specification | • Change, consolidate or standardise specifications<br>• Make generic to support inclusivity<br>• Add some feature or function to drive growth e.g. sustainability<br>• Review organisational culture & re-align<br>• Identify & drive social values |
| | Change design | • Review "fit for purpose" & value engineer.<br>Incorporate innovation to drive growth and inclusivity |
| | Aggregate spend | • Aggregate spend across the business/department<br>• Consortium buying with other organs of state<br>• Consolidate volumes<br>• Consider transversal contracts if applicable |
| **Value Lever/ Opportunity** | **Element** | **Strategy to drive value creation** |
| Process | Improve efficiency | • Make the process more efficient.<br>• Use "Lean" or "Six Sigma" approaches<br>• Reduce or eliminate waste.<br>• Improve transactional effectiveness (e-catalogues, e-billing, e-tendering, e-requisitioning, e-auctions, reverse auctions etc) |
| | Analyse & remove cost | • Understand the total cost of ownership (TCO)<br>• Identify if each cost is something the customer will pay for<br>• Identify & pursue improvement objectives to tackle specific cost areas<br>• Use the appropriate Sourcing Business Model |
| | Increase capacity | • Improve the capability & skills of people.<br>• Improve process capability.<br>• Change or improve SCM organisational structure & and environment.<br>• Improve enabling systems (automate where possible)<br>• Drive in shared objectives & values with common aim & purpose |

| Value Lever/ Opportunity | Element | Strategy to drive value creation |
|---|---|---|
| Market | Increase competition | • Switch suppliers<br>• Run a tender or competitive market exercise.<br>• Each quadrant within the Kraljic matrix has a specific strategy.<br>• Use e-auctions or competitive bidding |
| | Find new markets & embrace localisation | • Look beyond current market (localisation, SMMEs, townships)<br>• Skills transfer/ capability transfer<br>• Embrace Local Economic Development (LEDs) |
| | Restructure the supply base | • Make or buy / insource vs outsource (Sourcing Business Models)<br>• Rationalise supply base.<br>• Review Central Supplier Database and group by commodity.<br>• Create new suppliers.<br>• Backwards integration |

| Value Lever/ Opportunity | Element | Strategy to drive value creation |
|---|---|---|
| Supplier | Performance development | • Supplier performance measurement, monitoring & and evaluation.<br>• Drive in supplier improvement plans<br>• Provide support to develop supplier capability.<br>• Introduce performance incentives (these should not be monetary, but even recommendation letters) or penalties.<br>• Apply the appropriate Sourcing Business Model |
| | Restructure the relationship | • Change or develop the relationship in line with the strategy.<br>• Agree on a structure for how the relationship works.<br>• Manage supplier interfaces better (based on the quadrant)<br>• Joint working and collaboration to drive joint improvements.<br>• Apply sourcing business model mapping |
| | Seek innovation | • Check for potential innovation and value-added opportunities with suppliers.<br>• Collaborate and align innovation initiatives.<br>• Look for new capabilities for growth |

| Value Lever/ Opportunity | Element | Strategy to drive value creation |
|---|---|---|
| Demand management | Buy less or eliminate | • Reduce need or buy less.<br>• Synchronise annual procurement plans and start the process earlier.<br>• Eliminate need where necessary – consider procuring from other organs of state. |
| | Policy & compliance | • Introduce or review policy to manage demand.<br>• Elevate the role of SCM, to be involved early in the planning stage.<br>• Align & consolidate multiple policies (National Treasury, Local Government etc) to create harmony.<br>• Track and manage compliance to policy.<br>• Develop and implement organisational procurement policy. |
| | Increase asset utilization | • Improve/optimise asset management (consider whole-life costing).<br>• Optimise asset disposal.<br>• Consider lease vs buy decisions.<br>• Understand and maximise the return on investment |
| | Market-related prices | • Ensure that the prices are market-related.<br>• Measure and justify price competitiveness.<br>• Conduct Price Reasonableness Analysis |

***Table 5: Value Levers***

***Source: Adapted from Jonathan O'Brien***

### 2.4.4 Demand planning

#### 2.4.4.1 What is demand planning?

i. Understanding the specification and volume requirements of the business ensures that needs can be appropriately met and that resources are not being wasted.

ii. Demand planning:

   a. Is not about reducing volumes, but rather ensuring that volumes are appropriate for meeting the needs and objectives of the organisation.
   b. Is done to support the strategic objective of the organisation.
   c. Includes understanding the relevant legislation that governs demand management in the Public Sector ,and the needs analysis, to support the strategic objectives of the organisation.

d. Leads to the development, management, and implementation of a procurement plan.
e. Assists with compilation of specifications and/or terms of reference and evaluation criteria.


***Figure 2: Demand and Supply Balance***

iii. Demand planning is done at two levels of detail:

a. For strategic planning purposes (done during the annual performance planning stage)
b. For commodity-specific procurement requirements (during the procurement activity stage)

iv. Demand planning includes the following activities:

a. Forecasting future needs (for both the first-time and repetitive procurement);
b. Analysing expenditure based on past spending patterns;
c. Determining the specifications;
d. Conducting a commodity analysis;
e. Conducting an industry analysis;
f. Identifying the frequency of need;
g. Identifying critical delivery dates; and
h. Linking the requirement to the budget.

### 2.4.5 Conduct price and cost analysis

i. Price and cost analysis are two different approaches to making decisions on the appropriate value of goods or services before purchase.

ii. These types of analyses are used by government organisations as well as private businesses and consumers to evaluate contract work or goods being considered.

#### 2.4.5.1 Price and Cost Analysis

i. Purpose

a. Cost and price analysis are two different approaches to making decisions on the appropriate value of products or services before purchase.
b. These types of analyses are used by government organisations as well as private businesses and consumers to evaluate contract work or goods being considered.

ii. What is price analysis?

a. Price analysis is essentially price comparison. Price analysis is the process of deciding whether the purchase price is fair and reasonable without analysing any of the separate cost elements that it is composed of.
b. It is a process of comparing a price with known indicators of reasonableness.

iii. What is cost analysis?

a. Cost analysis is the element-by-element examination of the estimated or actual cost of the item (e.g., labour, materials, etc.) that make up a contractor's total cost proposal or price, to determine if they are allowable, directly related to the requirement and ultimately, reasonable.
b. The goal is to form an opinion on whether the proposed cost is in line with what reasonably economical and efficient performance should cost.

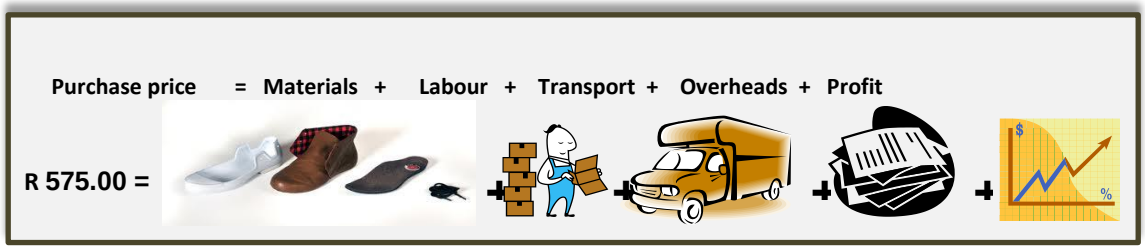



***Figure 3: Cost Analysis***

### 2.4.6 Value chain analysis

i. Purpose:

   a. To add value at each step of the process and identify the areas of inefficiencies and bottlenecks.

ii. What is Value chain analysis?

   a. Value chain analysis (VCA) is a process where a government institution identifies its primary and support activities that add value to its final service delivery mandate and then analyse these activities to reduce costs or increase levels of efficiency.
   b. Value chain represents the internal activities of an institution when transforming inputs (goods and/or services) into outputs (service delivery).

iii. Value chain analysis should answer some key questions:

   a. What is the number of individual steps in the value chain and the value that each adds to the process?
   b. What opportunities are there for reducing or containing cost at each stage of the value chain?
   c. What opportunities are there to improve efficiency in the process that can lead to indirect cost reduction?
   d. What scope is there for increasing the value and benefits for the government at each stage?
      i. Better quality
      ii. Improved delivery
      iii. Lower stock levels
   e. Can you examine each stage of the chain with the view of maximising efficiency and operational effectiveness?
   f. Where do the bottlenecks occur in the supply chain that hamper efficiency and effectiveness?

iv. The government's priorities in the value chain are service delivery focused.

v. Business activities can be grouped under two main headings:

   a. Primary activities – those that are directly concerned with obtaining and delivering a product/ service.
   b. Support activities – which whilst they are not directly involved in service delivery, may increase effectiveness and efficiency (e.g. human resource management, infrastructure, technology, procurement).

### 2.4.7 Needs analysis

i. The concept of determining needs in an institution:

   a. To inform the institution's procurement plan, a needs analysis must be performed to identify the goods and services required to achieve the outcomes envisaged in the institution's strategic plan.
   b. This is an exercise to be performed by the end-user (programme manager/responsible manager) in conjunction with the supply chain practitioner and with the assistance of a technical strategic sourcing specialist/analyst as required by the department.
   c. It aims to ensure that value for money is achieved.
   d. Both current and future needs should be determined based on the strategic plan of the department.

ii. These needs should be documented in the form of a business case and must contain the following:

   a. High level statement of needs.
   b. Links between the needs and the programme's strategic outcomes.
   c. Comprehensive understanding of the market and operating environment.
   d. Indication of whole-of-life costs; and
   e. Costs/benefits/risks analysis.

## 2.5 Analyse external information

### 2.5.1 Supply Chain Analysis

i. What is supply chain analysis?

   a. The supply chain refers to the number of stages or links that can exist in the supply process from primary processes (manufacture, creation of a service) through to final delivery.
   b. It is an analytical tool that examines the number of elements within a supply chain and seeks to determine where the key cost drivers lie (as opposed to value chain analysis, which looks at internal value-adding activities).
   c. The rationale for the approach is that since the price paid and the quality of the product or service is determined by the number of previous transactions that there have been in the chain(especially if the transactions are inefficient or process "waste"), the scope for cost and value improvement at each stage can be considerable.

d. Supply chain analysis is one of the key analysis tools that facilitate a better understanding of the dynamics of supply markets to ensure that you identify opportunities to control them.

ii. Objectives of Supply Chain Analysis

a. The purpose of the analysis is to determine which stages of the process can be improved, refined, or made better, to shorten the time it takes to deliver the product to customers (government end-users) without sacrificing the quality of the product or the customer service.
b. To understand the inter- and intra-organisation value-add process.
c. To assess the supply chain's ability and motivation to deliver value to the purchasing organisation.
d. To identify opportunities for cost, value, and risk improvement.
e. To ease identification of sources of waste, to reduce/remove it (over-production, waiting, transport, processing, inventory, defects).
f. To help visualise the types of relationships.
g. To form the basis for procurement strategies.
h. To meet customer requirements (quality, delivery, cost).
i. To identify where in the supply chain the procuring organisation has the greatest leverage.

### 2.5.2 Supply market analysis

i. The objectives of conducting a supply market analysis are to identify:

a. Which supplier(s) offer the most competitive advantage?
b. Are we sourcing from the correct suppliers?
c. Which is the lowest cost producer or supplier?
d. Who is the market leader?
e. What is driving market change?
f. What is driving technology change?

ii. The reason for conducting a supply market structure is to understand who the main players are:

a. Competitive nature – Porter's Five Forces
b. Market difficulty – Portfolio Analysis
c. Size and Potential
    i. Growth
    ii. Investment
    iii. Profit margins
    iv. Capacity
d. Main players
    i Current

ii. Emerging

iii. Ambitious

iii. However, as part of the analysis, certain considerations are made:

a. Competing suppliers
b. Market structure
c. Individual suppliers
d. Market trends
e. Technical trends
f. Who are the other purchasers?
g. How does our volume or account attractiveness compare?

iv. Supply market structures:

a. Decision is made based on information.
b. By conducting a supply market analysis, procurement gets to understand the forces that drive change.
c. VUCA economy:
   i Volatile – due to regulatory or economic frequent and unexpected changes both local and globally, e.g., pandemics, wars, etc.
   ii Uncertain – the difficulty to predict the future due to the ever-changing market forces (STEEPLED)
   iii Complex – SCM operates in a highly complex environment both internally (regulations and social needs) and externally.
   iv Ambiguous – This comes because of poor visibility and conflict in policy interpretation which may affect procurement decisions.

| Sellers active in the market (suppliers) | Buyers active in the market (purchasers) | | |
|---|---|---|---|
| | Many | Few | One |
| Many | Pure competition | Oligopsony | Monopsony ← Best for buyer! |
| Few | Oligopoly | Oligopolistic oligopoly | Quasi Monopsony |
| One | Monopoly | Quasi monopoly | Bilateral Monopoly |

Worst for buyer!

***Figure 4: Market Structures***

### 2.5.3 Supplier differentiation assessment

**Analyse supplier behaviour**

i. While the previous market analysis tools looked at how the market functions, this piece of analysis attempts to "walk in the suppliers' shoes" and understand how suppliers view government's business and how they behave as a result.

ii. The purpose of this exercise is to assess how much importance the supplier places upon the government's business and adds another dimension to the results of the Portfolio Analysis.

iii. The model can be used in two ways:

   a. As a diagnostic tool, assessing current supplier relationships and the associated strengths, weaknesses, opportunities, and threats.
   b. As a decision support tool, assessing the likely position of future/potential suppliers.

iv. By understanding the government's value to suppliers, different strategies can be developed based on the willingness or reluctance of suppliers to meet the government's needs.

v. This analysis may identify changes the government department may need to make to be seen as a more attractive customer. If this happens, there will be more competition amongst suppliers to get your business.

vi. It is important that you accurately gauge your value as a customer to suppliers as this will determine the extent to which you can influence a market and achieve better procurement outcomes.

### 2.5.4 Identify potential suppliers

i. In some cases, many suppliers will be easily identified, but in others a real effort will have to be made to trace suppliers. When potential suitable suppliers are being identified, all possible sources of information should be identified.

ii. The following information sources can be used to trace suppliers:

   a. Organisations Supplier Register (Supplier Database) (Current and previous Suppliers)
   b. Sales and technical personnel
   c. Sales representatives and other visitors

d. Visits to industrial exhibitions and displays
e. Organised trade and industry and other associations
f. Purchase records
g. Trade journals
h. Guides such as the Yellow Pages and telephone directories
i. Catalogues, brochures, and price lists
j. Buyers guides and computerised information
k. Advertisements
l. Internet

### 2.5.5 Supplier's pricing approach

i. Suppliers use different mechanisms to inform their prices.
ii. Not all prices are informed by cost.
iii. In deciding on the acceptable price, the procuring institution must understand such factors.