

# **STRATEGIC LOGISTICS MANAGEMENT**



## **CHAPTER 4: SUPPLY MANAGEMENT**



# LEARNING OUTCOMES

At the end of this unit the student should be able to:

- Distinguish between purchasing, sourcing, and supply management concepts
- Explain the role of supply management in logistics and supply management
- Explain the strategic sourcing process
- Develop a sourcing strategy
- Evaluate and select potential suppliers
- Discuss how suppliers can be selected
- Discuss how agreements can be reached with suppliers
- Discuss and apply the concepts of supplier management and supplier development
- Briefly explain the purchasing cycle
- Discuss and apply integrity and ethics in supply management



# SUPPLY MANAGEMENT RELATED CONCEPTS

## **Purchasing:**

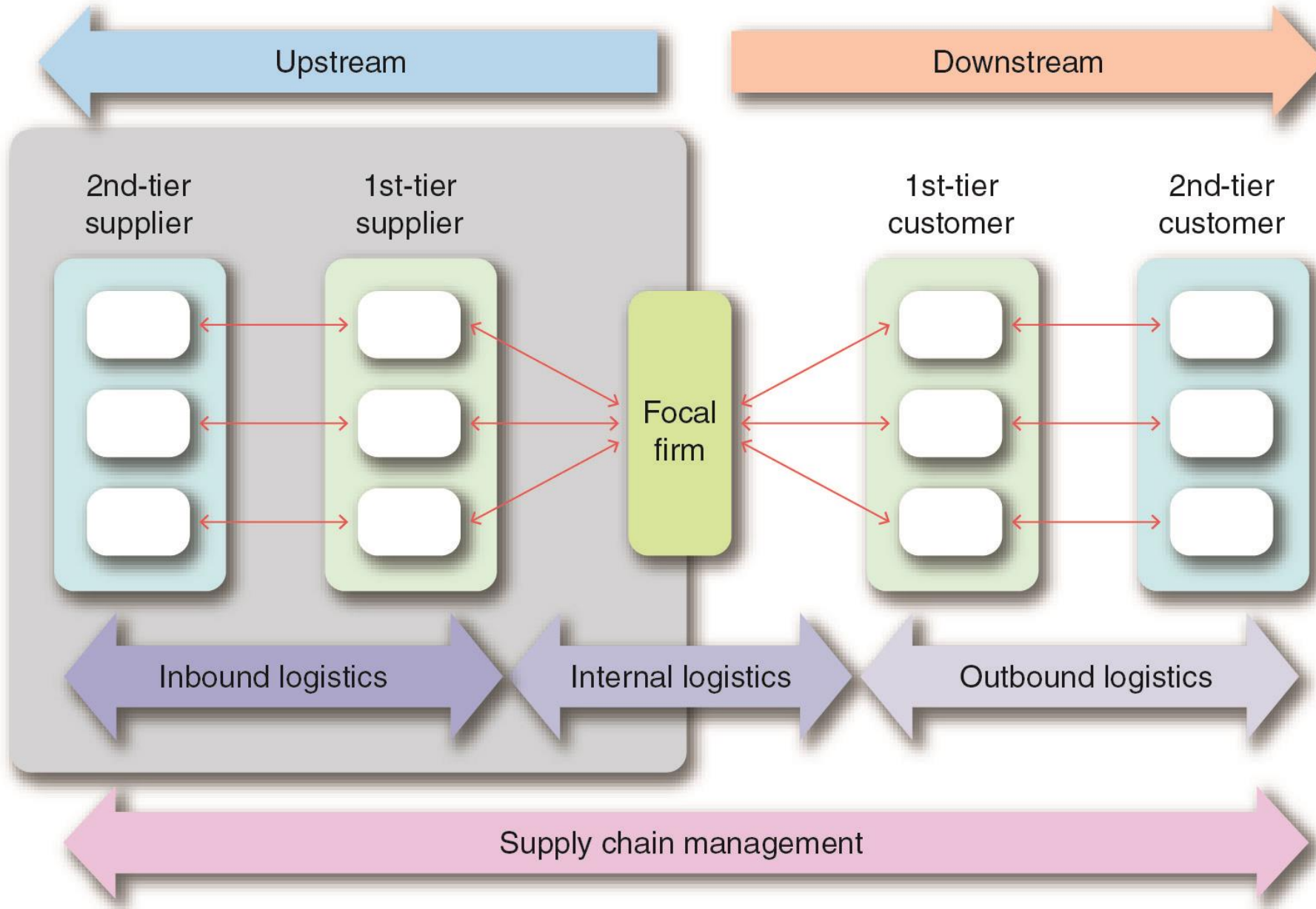
- Entails buying products/services from other firms in a legal and ethical manner
- Involves: supplier identification and selection; buying; negotiation and contracting; supply market research; supplier measurement and improvement; and purchasing systems development.

## **Sourcing:**

- Involves the process of identifying, evaluating, selecting and managing suppliers.
- Includes purchasing, but is a wider concept.

## **Supply management:**

- Identification, acquisition, positioning, and management of resources and capabilities that a firm needs to meet its strategic objectives



**Figure 4.1**  
**Supply**  
**management's**  
**focus within a**  
**supply chain**

*Source: Adapted  
from Harrison and  
Van Hoek (2011: 9)*



# SUPPLY MANAGEMENT RELATED CONCEPTS

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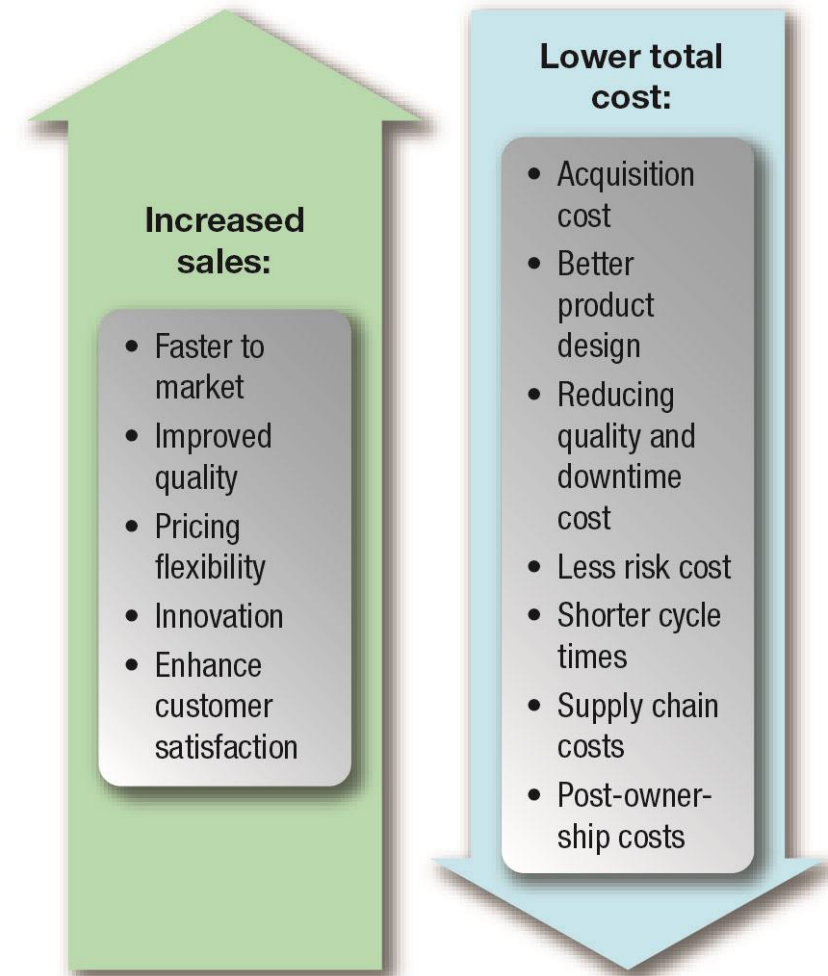


# THE ROLE OF SUPPLY MANAGEMENT IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

## Supply management's impact on a firm's bottom line

*Figure 4.2 Supply management's impact on a firm's bottom line*

*Sources: Adapted from Burt et al. (2012: 3) and Tate (2014: 6)*



# THE ROLE OF SUPPLY MANAGEMENT IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

- Supply management's impact on a firm's bottom line
  - Supply management's role in increasing sales
  - Supply management's role in reducing total costs
- Supply management's links with other departments in the firm



# Supply management's impact on a firm's bottom line

## Supply management's role in increasing sales

Supply management helps a firm to increase sales in the following ways

- By getting a firm's products faster to its markets
- By improving quality
- By providing pricing flexibility
- By being innovative
- By enhancing customer satisfaction





# Supply management's impact on a firm's bottom line

## Supply management's role in reducing total costs

Supply management can reduce costs in the following ways

- Reducing the acquisition costs
- Improving product design
- Reducing the costs of quality and downtime
- Risk costs
- Shorter cycle times
- Overall supply chain costs
- Part-ownership costs



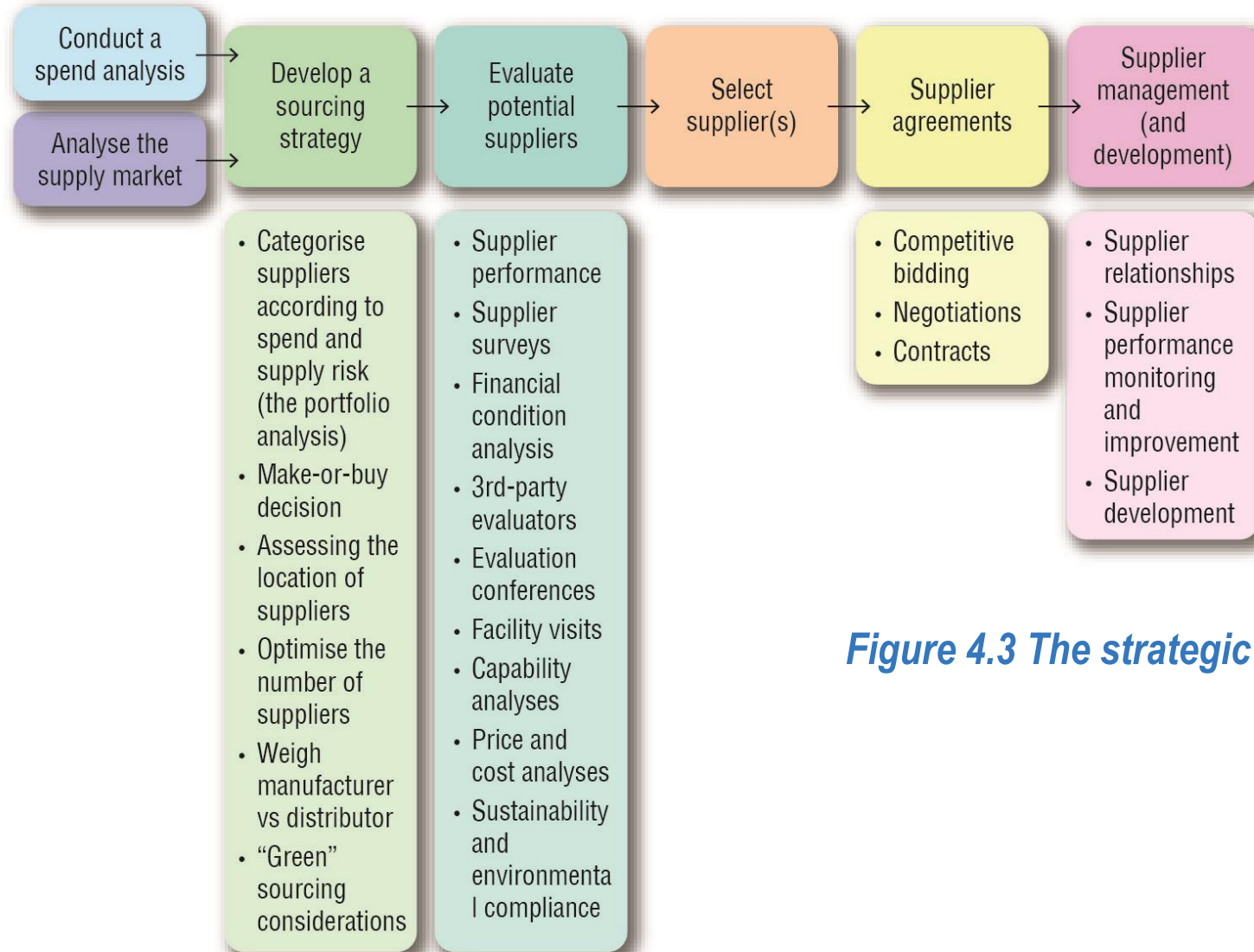
## Supply management's links with other departments in the firm

- Logistics and supply department
- Manufacturing and operations
- The engineering department
- The quality department
- The marketing department
- The finance department
- Information technology (IT)
- The legal department





# THE STRATEGIC SOURCING PROCESS



*Figure 4.3 The strategic sourcing process*

# 1. Conduct a spend analysis

# 2. Analyse the supply market

## Sources

- Trade journals and trade directories
- Suppliers' websites and annual reports
- The internet and social media
- Supplier catalogues
- Suppliers' sales staff
- Trade shows and conferences



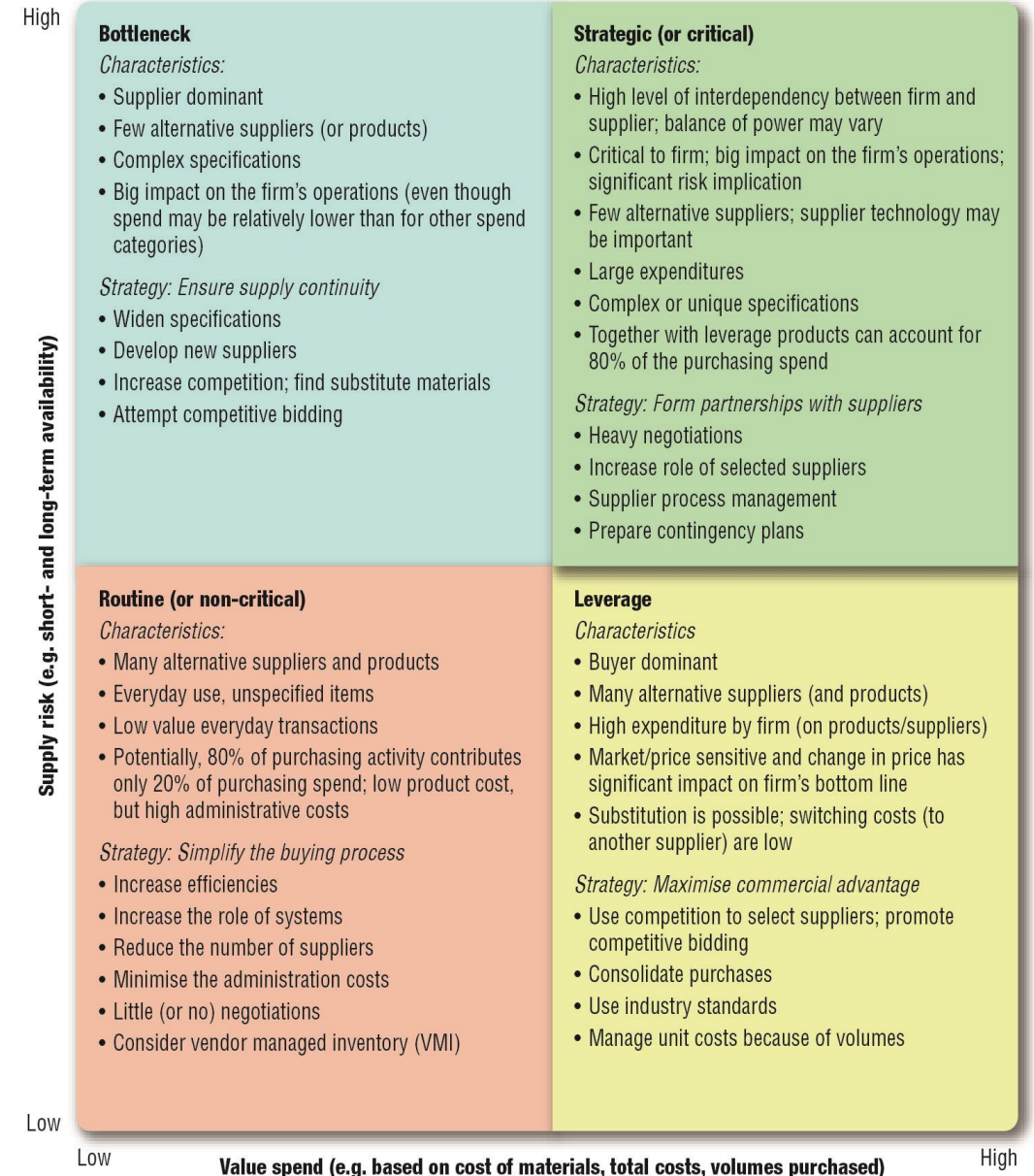


### 3. Develop a sourcing strategy

Categorise suppliers according to spend and supply risk (the portfolio analysis)

Figure 4.4 Kraljic portfolio matrix

Sources: Compiled from Monczka et al. (2021: 224) and Lysons & Farrington (2012: 62)







Develop a sourcing strategy continued

Figure 4.4 Kraljic portfolio matrix continued

High

and long-term availability)

### Bottleneck

*Characteristics:*

- Supplier dominant
- Few alternative suppliers (or products)
- Complex specifications
- Big impact on the firm's operations (even though spend may be relatively lower than for other spend categories)

*Strategy: Ensure supply continuity*

- Widen specifications
- Develop new suppliers
- Increase competition; find substitute materials
- Attempt competitive bidding

### Strategic (or critical)

*Characteristics:*

- High level of interdependency between firm and supplier; balance of power may vary
- Critical to firm; big impact on the firm's operations; significant risk implication
- Few alternative suppliers; supplier technology may be important
- Large expenditures
- Complex or unique specifications
- Together with leverage products can account for 80% of the purchasing spend

*Strategy: Form partnerships with suppliers*

- Heavy negotiations
- Increase role of selected suppliers
- Supplier process management
- Prepare contingency plans





Develop a sourcing strategy continued

Figure 4.4 Kraljic portfolio matrix continued

Supply risk (e.g. short- an	Value spend (e.g. based on cost of materials, total costs, volumes purchased)	
	Low	High
Low	<p><b>Routine (or non-critical)</b></p> <p><i>Characteristics:</i></p> <ul style="list-style-type: none"> <li>• Many alternative suppliers and products</li> <li>• Everyday use, unspecified items</li> <li>• Low value everyday transactions</li> <li>• Potentially, 80% of purchasing activity contributes only 20% of purchasing spend; low product cost, but high administrative costs</li> </ul> <p><i>Strategy: Simplify the buying process</i></p> <ul style="list-style-type: none"> <li>• Increase efficiencies</li> <li>• Increase the role of systems</li> <li>• Reduce the number of suppliers</li> <li>• Minimise the administration costs</li> <li>• Little (or no) negotiations</li> <li>• Consider vendor managed inventory (VMI)</li> </ul>	<p><b>Leverage</b></p> <p><i>Characteristics</i></p> <ul style="list-style-type: none"> <li>• Buyer dominant</li> <li>• Many alternative suppliers (and products)</li> <li>• High expenditure by firm (on products/suppliers)</li> <li>• Market/price sensitive and change in price has significant impact on firm's bottom line</li> <li>• Substitution is possible; switching costs (to another supplier) are low</li> </ul> <p><i>Strategy: Maximise commercial advantage</i></p> <ul style="list-style-type: none"> <li>• Use competition to select suppliers; promote competitive bidding</li> <li>• Consolidate purchases</li> <li>• Use industry standards</li> <li>• Manage unit costs because of volumes</li> </ul>

### 3. Develop a sourcing strategy

#### Kraljic's portfolio matrix

- **Strategic/critical products**
  - High supply risk (few suppliers)
  - High value spend
- **Bottleneck**
  - High supply risk (few suppliers)
  - Low value spend
- **Leverage**
  - Low supply risk (many suppliers)
  - High value spend
- **Routine/non-critical**
  - Low supply risk (Many suppliers)
  - Low value spend



### Supply risk

- Availability
- Number of suppliers
- Competitive demand
- Make-or-buy decisions
- Substitution possibilities

### Value spend/profit impact

- The volume purchased
- Percentage of total purchase cost
- Impact on product quality
- Impact on business growth



### Example

Vida Café is the largest coffee retailer operating at Universities in SA. Vida Café sells a total of more than 5 000 cups of coffee per day. Dr. Steph Nkosi, the vice-president of logistics and operations, is in charge of the supply chain for all the Vida Cafe Coffee subsidiaries.

She only purchases coffee cups from Sebantis Cups as they are one of the two coffee cup distributors in South Africa who produce cups from 100% recycled material



## Example

Vida Cafe has placed a considerable focus on managing their coffee, due to its popularity in South African universities. In addition to water, Vida has realised that in order to meet the monthly demand for coffee at the University of Pretoria Hatfield campus they need:

- 120 kg of dark roast coffee beans @ R 150 per kg = R 18 000
- 15 kg of sugar @ R7 per kg = R 105
- 240 liters of milk @ R14 per liter = R 3 360
- 5000 cups @ R0,5 per cup = R 2500



## Example

During their search for suppliers, the Vida Café's Coffee's sourcing departments determined that across South Africa there are three suppliers of dark roast coffee beans, two suppliers of coffee cups, 40 suppliers of sugar, and 15 suppliers of milk.







Develop a sourcing strategy continued



## **The make-or-buy decision**

- The decision (outsourcing)
- The make buy decision (insourcing)

## **Assessing the location of suppliers**

## **Determining the optimal number of suppliers to use (supply base optimisation)**

## **Deciding to use a manufacturer or a distributor**

## **“Green” sourcing considerations**

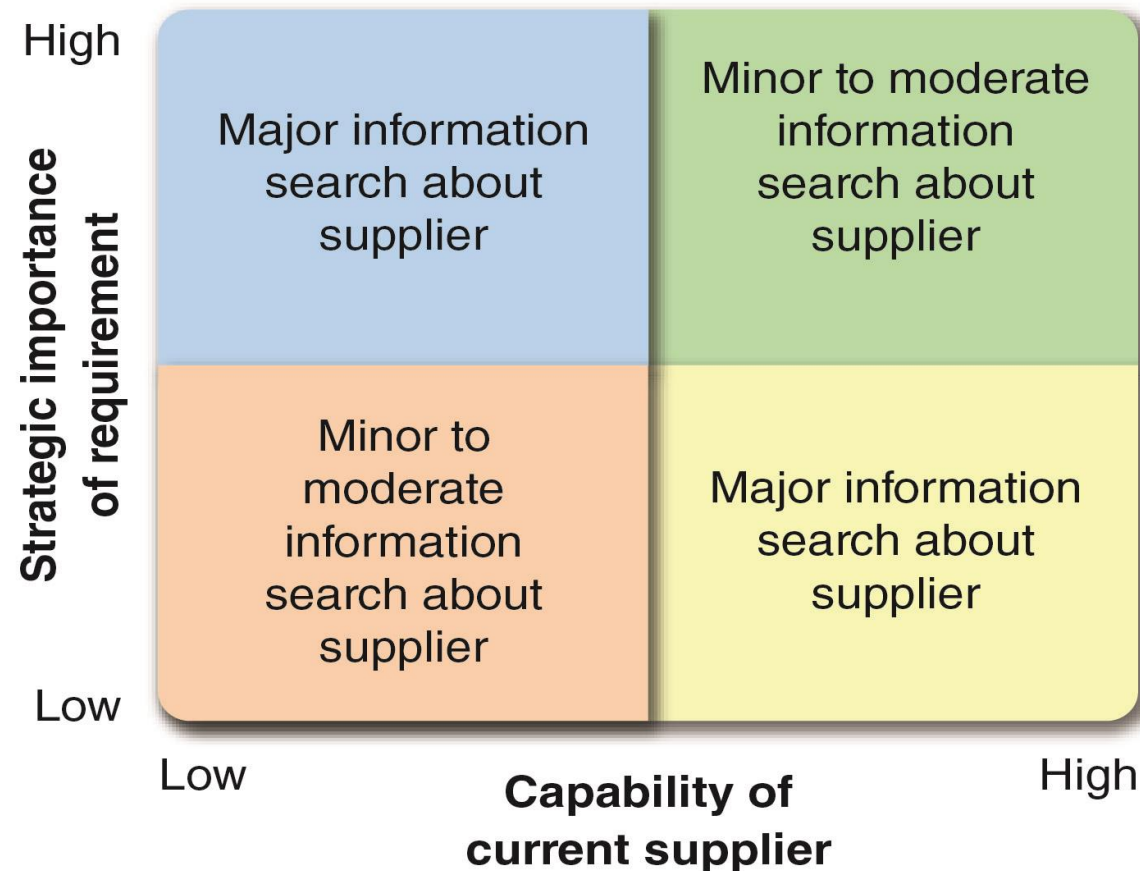




## 4. Evaluating potential suppliers

*Figure 4.5 Extent of information search to evaluate suppliers*

*Source: Compiled from Monczka et al. (2021: 254)*



## 5. Supplier selection

Category	Weight	Supplier A	Supplier B	Supplier C
		Rating	Rating	Rating
Quality systems	40%	5	3	2
Financial stability	25%	4	4	4
Management experience	20%	3	4	5
Price	15%	2	4	4





## 5. Supplier selection

Category	Weight	Supplier A		Supplier B		Supplier C	
		Rating	Score	Rating	Score	Rating	Score
Quality systems	40%	5	2.0	3	1.2	2	0.8
Financial stability	25%	4	1.0	4	1.0	4	1.0
Management experience	20%	3	0.6	4	0.8	5	1.0
Price	15%	2	0.3	4	0.6	4	0.6
Total score			3.9		3.6		3.4

## 6. Reaching agreement with suppliers

### *Competitive bidding*

- RFQ
- RFP





## *Negotiations*

- Adversarial (or win–lose) negotiations
- Collaborative (or win–win) negotiations

## *Contracts*


- Typical contract content
  - Deliverables
  - Terms of the contract
  - Contract pricing arrangements
  - Penalty clauses and dispute prevention



## Supplier relationships

**Figure 4.6 Characteristics of transactional versus collaborative relationships**

**Sources: Compiled from Foster et al. (2016: 174) and Burt et al. (2012: 74)**

Continuum of buyer-supplier relationships		
		
Activity/ attribute	Transactional	Collaborative
Duration	Short	Long
Critical items	No	Yes
Switching cost	Low	High
Information sharing	No	Yes
Importance of technology	Low	High
Supply risk	Low	High
Focus	Price	Total cost
Connected-ness	Independence	Inter-dependent
Level of trust	Low	High

## *Supplier performance monitoring and improvement*

- Performance measurement categories
  - Price and cost
  - Quality
  - Timeliness and responsiveness
  - Order completeness and correctness
  - Social responsibility
  - Regulatory compliance
  - The perfect order as a measure of performance

$$\frac{\text{Total orders} - \text{error orders}}{\text{Total orders}} \times 100$$



Supplier management (and supplier development) continued

*Supplier performance monitoring and improvement continued*

- ~~Supplier performance measurement using categorical evaluation and rating~~
- ~~Supplier performance measurement using a weighted points evaluation system~~
- Supplier development



# THE PURCHASING CYCLE

Three types of purchasing situations:

- New buy
- Modified rebuy
- Straight rebuy



## Steps of purchasing cycle

- The recognition and description of a need
- Ordering
- Follow-up and expediting
- Receipt and inspection
- Invoice clearing and payment
- Maintenance of records





# INTEGRITY AND ETHICS IN SUPPLY MANAGEMENT

Examples of unethical behaviour

- Reciprocity
- Personal buying
- Accepting supplier favours
- Sharp practices
- Financial conflicts of interest





# SECTIONS TO LEAVE OUT

## 4.6 INFORMATION SYSTEMS AND TECHNOLOGIES IN SUPPLY MANAGEMENT

Supplier performance measurement using categorical evaluation and rating

Supplier performance measurement using a weighted points evaluation system