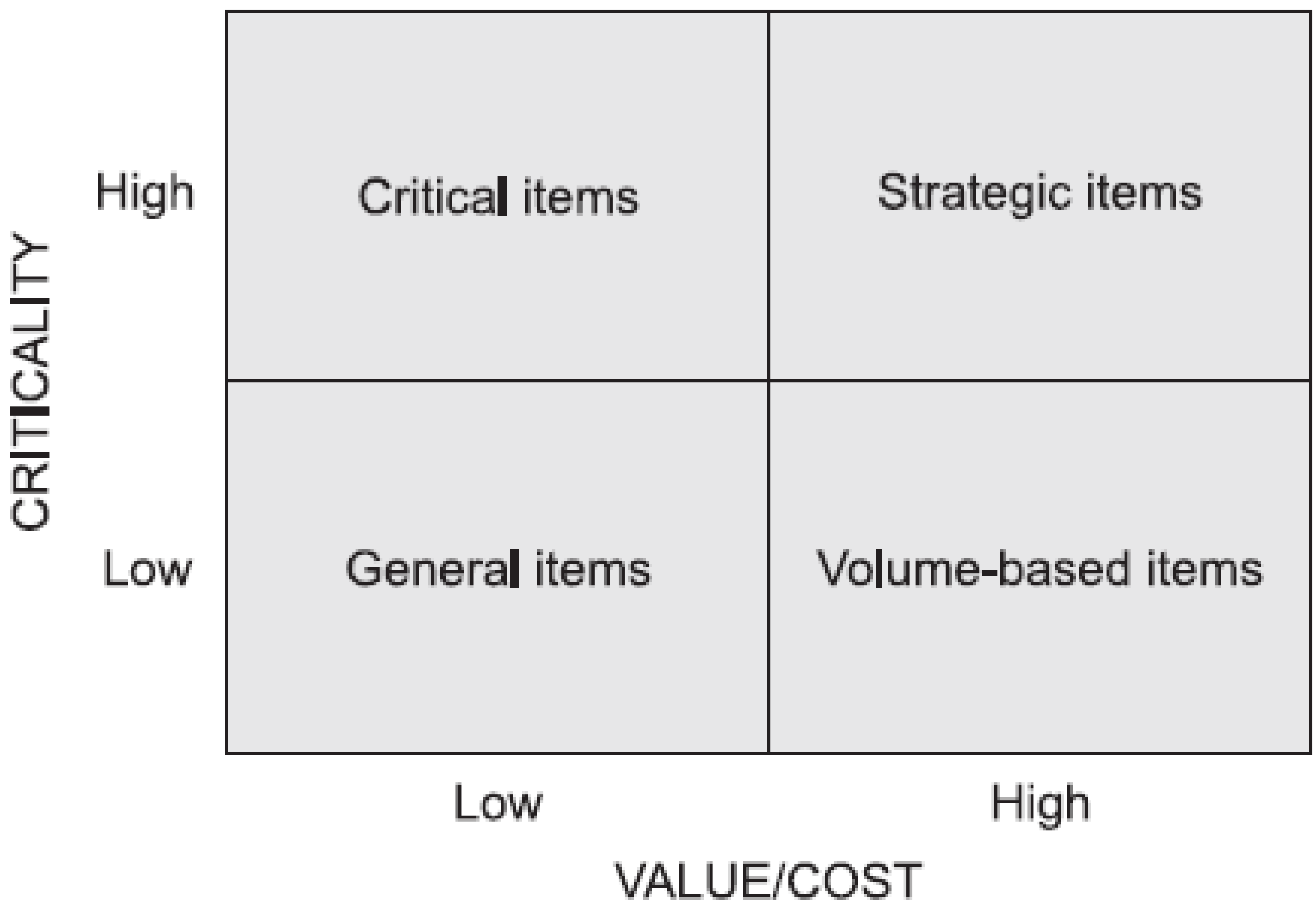
Chapter 4

Procurement and Outsourcing Strategies

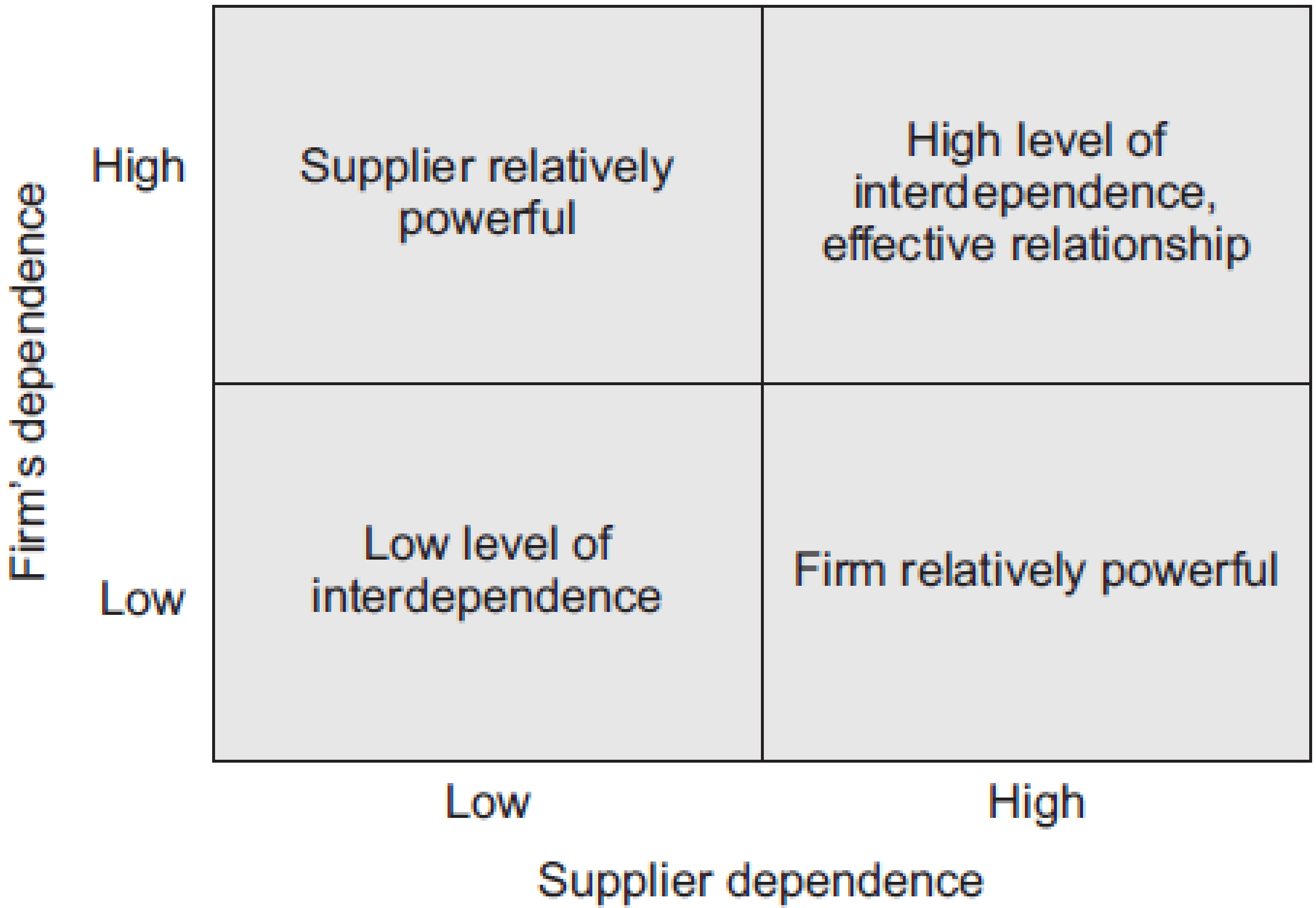
Purchasing, procurement and sourcing

- **Purchasing** would be more on the operational aspect of buying, which means acquiring goods or services to accomplish business goals as per policy
- **Procurement** is the process of acquiring goods or services from preparation of a requisition through receipt, and approval of invoice for payment
- **Sourcing** initiatives in supply management have to have a strategic orientation
  - A firm must have structured sourcing strategies executed through a procurement plan and efficient purchase processes

Product criticality and value/cost relationship



Interdependence between a firm and supplier



Classification of procurement goods

	Direct procurement	Indirect procurement	
Features	Raw material and production goods	Maintenance, repair and operating (MRO) supplies	Capital goods and services
Quantity	Large	Low	Low
Frequency	High	Relatively high	Low
Value	Industry specific	Low	High
Nature	Operational	Tactical	Strategic
Example from sugar industry	Cane from farmers	Lubricants, spare parts	Machinery like crushing mills, vacuum pans, boilers, turbines, and IT systems

Purchasing

- Purchasing refers to the activity of acquisition of raw materials, equipments, services, and supplies including consumables
- Purchase could be of routine and non-routine items, and capital and current budget items

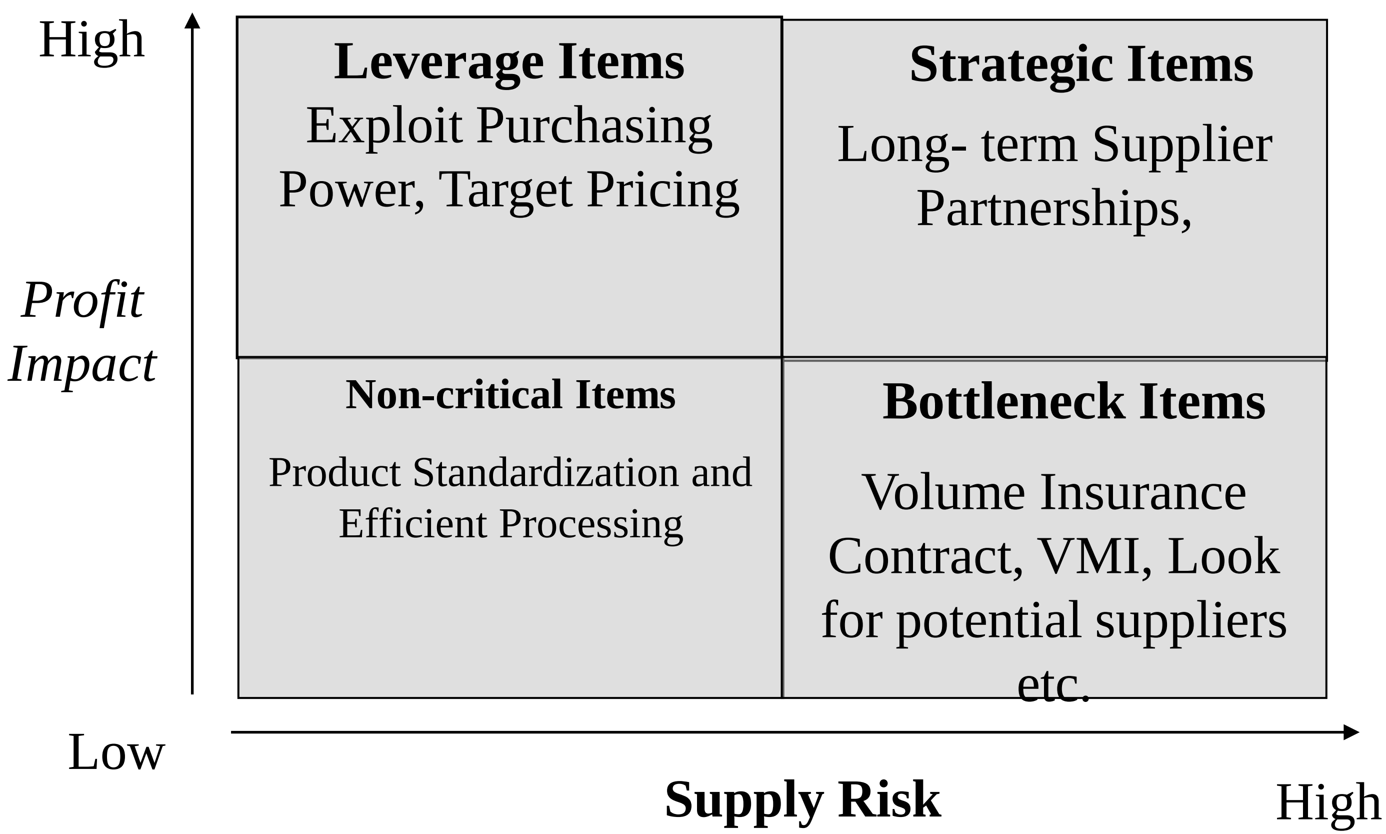
Procurement

- In line with the discussion on differentiating purchasing, procurement, and strategic buying
  – procurement function takes care of the planning function
- Types of procurement
  – direct or production- related procurement
  – indirect or non-production related procurement

Strategic Purchasing Portfolio

Kraljic Model

Purchasing Portfolio Management



Profit Impact:

The strategic importance of purchasing in terms of the value added by product line, percentage of raw materials in total costs, and their impact on profitability.

Supply Risk:

The complexity of the supply market gauged by supply scarcity, pace of technology and/or material substitution, entry barriers, logistics cost or complexity, and monopoly or oligopoly conditions.

Strategic sourcing

- Strategic sourcing involves activities of the purchase department towards long-term development of vendors wherein the effort and resources are invested for achieving competitive advantages in procurement
- Three aspects of sourcing
  - Decision to make or buy; criteria for outsourcing
  - Supplier development
  - Relationship with other functions

Outsourcing

- Strategic use of outside parties to perform non-core activities
- Involves organization restructuring
- Rationale
  - the organization can focus on its core competencies, adopt ‘best-in-class’ practices, be more competitive, and thereby reduce cost and advance technologies
- Three phases of outsourcing
  - Internal analysis and evaluation
  - Needs assessment and vendor selection
  - Implementation and management

Factors Affecting Make or Buy Decisions

- **The economies of scale and scope:**

  Economies of scale occur when a proportionate increase in all inputs leads to a more than proportionate increase in output. Economies of scope exist where several different outputs draw on common resources.

- **No of suppliers:**

  Large no of suppliers result in competitive pricing. In case of less no of suppliers it is batter to absorb the activity within the firm i.e. not to outsource.

- **Opportunism:**

  Unethical behavior by suppliers. More scope for opportunistic behavior when no of firms is small or where customer lacks information about the alternative suppliers.

- **Asset Specificity:**

  The degree to which resources are specific to their current use is measured by their opportunity cost. Assets are highly specific if their next highest value is as scrape. Higher asset specificity may refer to specific machines, materials and skills needing specific investment by the buyer also. To meet specific requirements buyers may enter into joint ventures with their suppliers.

- **Knowledge specificity:**

  If a firm’s competitive advantage is linked to R & D or conferred by a brand name, outsourcing may prove risky as it creates threats to security of specific knowledge.

- **Uncertainty:**

  Alternative sourcing option: In case of low value items the risk of losing a source or finding competitive supplier is relatively low. Cost benefits analysis for assessing the risk of choosing unknown suppliers or retaining the low performing existing vendor.

- **Economic considerations:**

✓ Investment in infrastructure required

✓ Limitation in product life

- **Strategic consideration:**

✓ Long term value

✓ Core competence

- **Environment considerations and regulations**

- **Supervision and control needs / quality requirements**

Strategic Sourcing

- It is a systematic process that directs supply managers to plan, manage and develop the supply base in line with firm's strategic objectives

- It is discipline approach that improves the value that the core firm receives from its suppliers

Supplier Selection Process

Prerequisites for Bidding

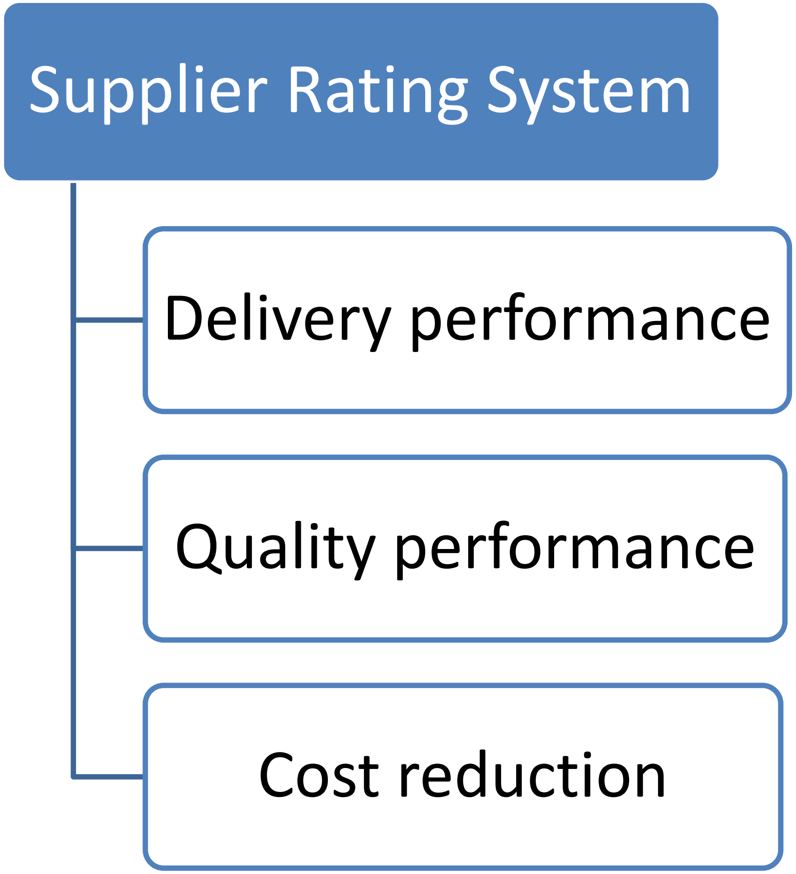
- ✓ Large value of specific purchase
- ✓ The specifications of the items/services to be purchased must be explicitly clear to both buying and selling firms.
- ✓ The market must consist of an adequate no of sellers
- ✓ The sellers must be technically qualified and willing to be price competitive
- ✓ The time available must be sufficient for using this method of pricing

Prerequisite for Negotiation

- ✓ Situations in which it is impossible to estimate costs with a high degree of certainty (high technology items, long development time, economic uncertainty etc.)
- ✓ Where price is not the only important criteria (quality, delivery, service etc.)
- ✓ Situations in which the buying firm anticipates a need to make changes in the specification or in some other terms and conditions.
- ✓ Situations in which special tooling or setup costs are major factors.

Supplier Development Process

Any activity that a buying firm undertakes to improve a suppliers' performance and capabilities to meet the buying firms' supply needs.



Types of Supplier Rating System

- Categorical System
- Weighted Point System
- Cost Base System

Categorical System:

- Buyer decides the performance category and assigns rating to each selected performance category
- Different departments, such as material receipts, quality etc. provide inputs regarding suppliers' performance.
- It is more subjective, less reliable and normally suited smaller firms where supplier evaluation system is in developing face.
- It is more based on individual's perceptions, however it involves less costs.

Weighted Point System:

- This system weighs and quantifies the score of a performing supplier across different performance categories.

- It combines both quantitative and qualitative performance factors into a common system.

- The user selects the performance category to measure e. g. delivery, quality, price, service etc. and then decide to assign weight to each performance category on a relative basis.

Vendor Performance Measure (VPM) $= \sum_{i=1}^{n} WiSi$

Where …

i = no of performance category factors from 1 to n

W= weights assign to each factor

S= score of vendor on a scale of 1 to 5

- The weights assign would depend on corporate level performance objectives as well as strategic priorities during a particular time frame when vendors are being access.
- Thus the system is flexible in terms of weights assigned.
- It has higher reliability and only moderate implementation costs.

Cost Base System:

- This approach quantifies the total costs of doing business with a supplier
- The major decision is identification and recording of the costs associates with the suppliers nonperformance.

Supplier Performance Index (SPI) = (A+B)/A

Where…
A= Purchase price
B= Cost of nonperformance in any category

Preferred SPI = ?

Barriers to Supplier Development Process

- Poor communication, feedback, and general complacency
- Misguided improvement objectives
- Lack of clarity and commitment for performance, and its improvement
- Misaligned sourcing and performance metrics
- Hiding of operations and materials problems by either party
- Resources limitations
- ‘Always blame the supplier’ –culture
- Lack of trust, sharing of information, and confidentiality issues
- Poor contractual planning and execution
- Imbalance of power in the relationship with the supplier
- Misconceptions regarding purchasing power

Trends in Supplier Development

Early Supplier Involvement (ESI)

- To bring the expertise and collaborative synergy of suppliers in to the design process
- ESI can be a win-win opportunity in developing alternatives and improvements to materials, services, technology, specifications and tolerances, standards, lead-times, processes, packaging, transportations, redesigns, assembly changes, design cycle time, inventory reduction time etc.

- The selection process involves intensive competition between two or three carefully prequalified potentials suppliers.

- The selected supplier for ESI becomes the single/ primary source of supply for the life of the item.

- Effective ESI practice results in to considerable cost saving *(for e.g. Delphi Automotive Systems' suppliers helped designed the 1998 Honda Accord and as a result saved over 20% of the cost of producing the car)*

Supply Base Consolidation

- Reduction of supply base through reducing the variety of items procured and consolidating items previously procured from different suppliers into one supplier.

  - Xerox reduced its supply base in early 1980s from 5000 to 400 suppliers.

  - Chrysler reduced its supplier based from 2500 in the late 1980s to 300.

- Such accomplishments generally required significant research and development expenditures and / or capital investments coupled with extensive supplier development program.

  - MUL & Tata Motors have followed vendor rationalization in a big way

Single v/s. Multiple Sourcing

Single sourcing may be justified when…

- Quality considerations hold paramount significance
- Lower total costs results from a much higher volume (economies of scale)
- The buying firm is having influence or clout with the supplier
- The quality control or coordination is required in JIT manufacturing environment source

- Special tooling is required and the use of more than one supplier is impractical or excessively costly
- Significant reduction in freight costs is the objective
- Total systems inventory is to be generally reduced
- More reliable, shorter lead times are required
- Time to market is critical

Multiple sourcing may be justified in following conditions…

- Protecting the purchasing company from shortages, strikes and other emergencies at suppliers end
- Maintaining competition and providing backup source
- Meeting local content requirements for international manufacturing locations
- Meeting customers' volume requirements
- Avoiding complacency on the part of a single source supplier
- Having certainty in unpredictable or unstable technology
- Avoiding situations when suppliers tend to leapfrog each other technologically

Alternative approach…

- 70-30 sourcing approach: Awarding 70% of volume to one supplier and 30% to a second supplier

- This will ensure economies of scale from big supplier while competition from small supplier

- When big supplier misbehave its business can be transferred to small supplier

Green Purchasing

Henry Ford was very explicit in the dimensions and quality of the lumber used in constructing the packing crates his suppliers used to ship parts to Ford.

One day one of the suppliers asked a Ford employee why a throwaway packing crate had to be made to such explicit specifications.

The answer was… *"because we use the good to build the floorboards of out Model T"*

So Henry Ford was environmentalist as well as a good business man

Environmental Sensitive Supply Management Comprises Two Components

- The purchase of materials and items which are recyclable
- The environmental and liabilities issues associated with the use, storage and disposal of hazardous materials anywhere in the supply chain

Net Sourcing and E-procurement

- Web based ERP
- E-tendering
- E-sourcing
- E- reverse auctioning
- E-informing
- E- payment

Reverse Auctions:

- It is tool used in industrial B2B procurement.
- Here in this auction the roles of the buyer and sellers are reversed with the primary objective to drive purchase prices downward
- In normal auction buyers compete to obtain a good or service
- In reverse auction sellers/suppliers compete to obtain business from the buyers by quoting lowest prices and offering better conditions

Benefits of E-tendering:

- Reduce tender processing cycle time

- Fast and accurate pre-qualification and evaluation enabling automatic rejection of suppliers failing to meet tender specifications

- Faster response and clarifications during the tender period

- Reduction in the labor incentive tasks of receipt recording and distributions of tender submissions

- Reduction of the paper trail on tendering exercises thereby reducing costs to both buyer and suppliers

- Improved integrity and transparency of the tendering process

IT Enabled Suppler Relationship Management

A typical SAP-SRM has the following elements…

- ✓ Purchasing governance (global spend analysis and category management)
- ✓ Sourcing (auctioning bid evaluation and award)
- ✓ Contract management (contract planning, execution and monitoring)
- ✓ Collaborative procurement (Special content procurement)
- ✓ Supplier collaboration (Supplier networking and integration including its web enablement)
- ✓ Supply based management (Supplier selection, categorization and performance management)