Project Dissertation Report on

Technology Strategic Sourcing

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CERTIFICATE

This is to certify that the dissertation report titled **"Technology Strategic Sourcing"** is a bonafide work carried out by **Rishabh Kanuga (2K19/EMBA/543)** of EMBA (2019- 2021) and submitted to Delhi School of Management, Delhi Technological University, Bawana Road, Delhi-42 in partial fulfilment of the requirement for the award of the Degree of Executive Masters of Business Administration.

Signature of Guide Signature of Head (DSM)

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DECLARATION

I, **Rishabh Kanuga** student of **EMBA 2019-20** of Delhi School of Management, Delhi Technological University, Bawana Road, Delhi – 42, hereby declare that the dissertation report **"Technology Strategic Sourcing"** submitted in partial fulfilment of Degree of Executive Masters of Business Administration is the original work conducted by me.

The information and data given in the report is authentic to the best of my knowledge.

This report is not being submitted to any other University, for award of any other Degree, Diploma or Fellowship.

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CONTENT

ABSTRACT

Strategic sourcing is essential for companies that follow supply chain management principles. It focuses on effectively managing the supply base by identifying and selecting suppliers for strategic long-term partnerships, participating in supplier development initiatives by effectively allocating resources to improve supplier performance, providing benchmarks and continuous feedback to suppliers, and, in some cases, pruning suppliers. Currently, most strategic sourcing methodologies are subjective, with only a few objective decision models focused on supplier evaluation, which have their own set of limitations. This paper proposes an objective framework for effective supplier sourcing that takes into account a variety of strategic and operational factors. Suppliers are divided into groups based on their performance, which helps managers find candidates for long-term strategic partnerships, supplier development programmes, and pruning. In addition, this study looks into the differences between supplier groups when it comes to suggesting possible improvement strategies for underperforming suppliers. We also show how our framework is methodologically rich when compared to some of the traditional methods proposed and used for supplier evaluation. The study's supplier data came from a large multinational telecommunications corporation.

CHAPTER- 1: INTRODUCTION

Many companies involved in the newest supply chain management innovations face a critical challenge: strategic sourcing. Strategic sourcing that creates a long-term relationship with suppliers has become even more important and vital for enhancing organisational performance, especially with the recent weight on just-in-time (JIT) philosophy. Furthermore, in today's dynamic environment, a supply chain's strategic relationship with suppliers is a critical component of its success. Strategic sourcing decisions must include strategic dimensions and capabilities of suppliers, such as emphasis on quality management practises, process capabilities, management practises, design and development capabilities, and cost drop capabilities, in addition to operational metrics such as cost, quality, and delivery.

These supplier attributes provide information to a company's managers about the infrastructure and practises used by its suppliers, both of which are important factors in long-term strategic relationships (SR). The strategic supplier evaluation literature has long established that sourcing decisions have a significant impact on various aspects of a product, including cost, design, manufacturability, are two other studies that emphasise the importance of supplier evaluation. The supplier evaluation and justification problem has been identified as a critical role in operational management.

While several methods for evaluating and selecting suppliers have been proposed and used, they all have flaws, such as evaluating solely on operational metrix without considering strategic capabilities, using simple weighted scoring methods based on individual assessments, using inappropriate or random methods to derive factor weights, and lacking relative assessment.

While operational indicators such as price, quality, and delivery are vital and vital when assessing suppliers, strategic supplier assessment that leads to a long-term engagement requires consideration of supplier capabilities and practises. This is important because, as a company's goods evolve, it's crucial to build partnerships with suppliers that can successfully satisfy changing requirements in terms of new product development, design, production methods, and production capabilities, all while keeping costs low. Such suppliers are more likely to have the infrastructure and organisational capabilities to efficiently satisfy the changing demands of purchasing companies in the long run. Total quality management, zero defects, process improvement, statistical process control, and continuous process improvement, for example, are quality management methods with strategic implications that have been recommended in the literature to lead to concrete gains in quality and cost reduction. Design-based approaches have also been related to cost reductions and increased delivery performance, including efforts such as design for manufacturability, modularity, product redesign, concurrent engineering, and standardization. As a result, while assessing providers, these considerations must be considered.

Several techniques for evaluating suppliers assign subjective and/or arbitrary importance weights to various supplier evaluation factors. As the number of factors and alternatives considered in the decision-making process grows, assigning a consistent set of weights becomes more difficult. Finally, relative evaluation methods for comparing suppliers and identifying potential reasons for differences in supplier performance haven't been thoroughly investigated in the literature. The primary benefit of relative evaluation methods is that they allow for the grouping of suppliers based on performance, which helps management identify benchmarks for ineffective suppliers and makes decisions about supplier development initiatives (SDI) and programmes easier. This paper proposes a strategic sourcing methodology that addresses the aforementioned concerns. In order to estimate the efficiencies of alternative suppliers and the variability in their efficiency scores, the methodology employs a combination of traditional and advanced data envelopment analysis (DEA) models. Nonparametric statistical techniques are used to identify homogeneous groups of suppliers based on their efficiency

scores, which aids management in making decisions about strategic partnerships, SDI, and supply base rationalisation. Inter-group differences in a variety of factors are identified to help with benchmarking and process improvement efforts. In summary, our methodology addresses some of the questions that current supplier evaluation techniques do not adequately address. Are:

• Which suppliers should be considered for strategic alliances?

• Which suppliers are required to participate in supplier development programmes?

• Which vendors should be removed from the supply chain?

• What can suppliers do to improve their performance if they are ineffective? Who should they compare themselves to?

• What are the best ways for businesses to allocate resources to supplier improvement programmes?

The primary focus of our study is on managerial implications and the usefulness of the results in addressing strategic sourcing issues that companies face.

CHAPTER 2 :METHODOLOGY USED

TECHNOLOGY STRATEGIC SOURCING

Data collection can be performed through questionnaires by floating a query on SAP Ariba or any E – Procurement Software. The efficiency evaluations are performed by obtaining data on capabilities (inputs) and performance metrics (outputs) of suppliers being evaluated.

In general, any resource can be utilized as a possible input measure and outputs can encompass activity/performance measures.

The next step involves the evaluation of efficiency scores and ranking of suppliers based on Score Based Evaluation Method. Subsequently, the supplier groups are identified by a scoring procedure, which effectively incorporates variability in efficiency measures into the evaluation process based on questionnaire. (Mentioned on Next Page).

The framework addresses the managerial decisions associated with supplier evaluation that can be handled through Analysis of proper score and status of supplier before on-boarding or signing any long-term project.

Identify the differences among the supplier groups in terms of capabilities and performance metrics, and provide feedback to ineffective supplier groups regarding the necessary improvements across various dimensions.

Below are some questions that can be answered by the Score Based Evaluation Method.

1. How competitive is the supplier marketplace, and can buyers persuade potential suppliers to compete with one another?

2. How well do the organization's users understand the need for testing incumbent relationships versus the opportunity to do so? If a negative test could have a significant impact on the bottom line, it may be difficult to try a new supplier.

4 Steps to implement this mythology in Strategic Sourcing-

- Gathering guiding document or collection of feedback from stakeholder.
- Determine the Supplier performance metrics
- Apply grades scale by using SAP Ariba and other E-Procurement tool or traditional method.

In this project the evaluation is done by using E- Procurement Software- SAP Ariba

Below is the template of Supplier Scorecard-:

VENDOR SCORECARD TEMPLATE

CRITERIA CHECKLIST

*Prior to use, update criteria as needed to be consistent with RFP. Update basis for scoring to have qualitative scoring details.

Scores Available from 1-5. Basis for scoring must be listed with specific examples.

1. Adherence to RFP Instructions	VENDOR 1	VENDOR 2	VENDOR 3	BASIS FOR SCORE
Timeliness	5	5	5	Arrived by deadline receives all points
Completeness	5	3	2	Completed sections in same order as RFP receives all points
Overall Quality & Level of Professionalism	2	4	3	Technically compliant and attractive receives all points
Overall Response	5	4	3	Overall quality very high receives all points
Average Score	4	4	3	
2. Company Information	**VENDOR 1**	**VENDOR 2**	**VENDOR 3**	**BASIS FOR SCORE**
Financial Viability	5	5	5	Proof of financial viability receives all points (i.e., Dun & Bradstreet Report)
Organizational Structure	1	5	4	Explained structure and org chart receives all points
Experience with Similar Companies	2	4	3	Proof of similar sized and focused companies experience receives all points
Service Department	5	4	3	Service department 24/7 with appropriate language capability receives all points
References	2	5	3	Positive references from 4 provided (checked) receives all points
Partnerships	5	4	3	Proven external partnerships receives all points
Average Score	3	5	4	
3. Project Understanding	**VENDOR 1**	**VENDOR 2**	**VENDOR 3**	**BASIS FOR SCORE**
Overall Comprehension of Project Objectives	5	5	5	Written section shows comprehension
Understanding of the Business Requirements	5	3	2	Written section shows comprehension
Understanding of the Business Vision	2	4	3	Written section shows comprehension
Average Score	4	4	3	
4. Requirements	**VENDOR 1**	**VENDOR 2**	**VENDOR 3**	**BASIS FOR SCORE**
Completeness of Vendor Response	5	5	5	Response if fully technically compliant
Vendor Ability to Meet Requirements	1	5	4	Vendor details ability to meet requirements
Average Score	3	5	5	
5. Product Viability & History	**VENDOR 1**	**VENDOR 2**	**VENDOR 3**	**BASIS FOR SCORE**
Technology is Sustainable	5	5	5	Track record of product history
Product Roadmap	5	3	2	Detailed roadmap for future product development
Product Development Life-Cycle	2	4	3	Lifecycle is realistic for product updates
Criteria Checklist				Scores Available from 1-5. Basis for scoring must be listed with specific examples.
New Release Process	5	4	3	New release process is comprehensive
Average Score	4	4	3	
6. Terms & Conditions	**VENDOR 1**	**VENDOR 2**	**VENDOR 3**	**BASIS FOR SCORE**
Detailed Buyer Duties	5	5	5	Buyer duties favorable
Terms & Conditions	1	5	4	Terms & conditions favorable
Purchase Agreement Details	2	4	3	Outlines purchase details
Average Score	3	5	4	
7. Vendor Software Demonstration	VENDOR 1	VENDOR 2	VENDOR 3	BASIS FOR SCORE

CRITERIA SCORES

CRITERIA SCORES	WEIGHT	VENDOR 1 WEIGHTED SCORE	VENDOR 2 WEIGHTED SCORE	VENDOR 3 WEIGHTED SCORE	NOTES
1. Adherence to RFP Instructions	0.05	0.21	0.20	0.16	
2. Company Information	0.05	0.67	0.90	0.70	
3. Project Understanding	0.20	1.20	1.20	1.00	
4. Requirements	0.30	0.15	0.25	0.23	
5. Product Viability & History	0.05	0.21	0.20	0.16	
6. Terms & Conditions	0.05	0.67	1.17	1.00	
7. Vendor Demonstration	0.25	0.18	0.17	0.15	
8. Fee Summary	0.05	3.00	4.60	3.60	
Total Score	1.00	6.28	8.68	7.00	

CHAPTER- 3: STRATEGIC PURCHASING PROCESS

Various elements and activities are separated during the purchasing process. Much research has been done in the field of purchasing in recent years, and as a result, many different types of models have emerged. These models are all based on distinct activities that take place during the purchasing process. In the various models, however, there are differences in the denomination as well as the grouping of the various elements. Some models identify four stages in a purchasing process, for example, developing and analysing requirements, preparing request for quotations (RFQ) and analysing quotations, committee-supplier negotiations, and finally post-negotiation evaluation and reporting. The number of four stages, on the other hand, is insufficient, as it does not adequately describe the phases. The book's foundation will be a process model that describes six stages, which will be explained further in the description. The model depicts the activities' interconnectedness, implying that the output of one stage influences the input of the next. Insufficient specification of requirements, for example, can result in poor quality goods that do not meet the needs of internal customers. The model is designed to assist managers in structuring the purchasing process in both decision-making and operations.

- **Specification Phase**

During the first phase, the internal customer determines the criteria for the focus product or service. Detailed (technical) and functional requirements are the two sorts of specifications that are naturally separated. The former is used to specify the product's unique features, such as technical pre-settings or supplier activities. Functional requirements indicate the breadth of capabilities that the purchase needs rather than a precise predefined strategy. This offers various advantages. First, since the provider is an expert in his industry, he may pick the best feasible solution without being bound by the consumer. This brings us to the second point: creativity is encouraged. It's vital that requirements match the company's overall demands. As a consequence, the needs of both internal and external consumers must be conveyed. The potential supplier's answer will be an unacceptable offer if the specs aren't stated effectively owing to a lack of communication with internal customers.

- **Selecting Phase**

The selection process can begin after the specifications have been established. Essentially, it entails looking for a variety of potential providers in the market who can meet the basic requirements. Following that, the number of suppliers is gradually reduced until the best fit partner in terms of price, value and services, delivery and previous order performance is recognized.

- **Contracting phase**

Contracts establish the legal agenda for the purchaser and supplier relationship, establishing prescribed trust between them. Contracts are the primary step in establishing a positive new purchasing connection, and they help to minimise and control the risk of nonfulfillment. Price, delivery terms, payment terms, warranty conditions, and many clauses are among the most common clauses. Contracting is an essential component of the purchasing process. It is not only necessary to sign the contract, but it is also necessary to manage the agreements. As a result, the fourth section will go over this topic in greater detail.

- **Ordering and Expediting Phase**

After then, the ordering procedure starts. Because of the employment of automated software that facilitates the automation of the ordering process, transaction costs are lowered as a consequence of less time exposure. The buyer gives purchase information such as an order number, delivery date, unit price and amount of purchased units, delivery address, and invoicing address, among other things. When the supplier gets it, he often provides a confirmation to show that the order has been authorised. The phrase

"expediting" suggests that the procedure is under careful scrutiny. The purpose is to guarantee that the requested items arrive in excellent condition, on schedule, with proper packing, and, most importantly, at the right place.

- **Phase of Evaluation**

The evaluation is represented by the final state. Not only should the performance of the suppliers be monitored, but so should the performance of the delivered product. This includes drawback clauses, warranty dues, and invoice management, but it can also include positive actions to keep suppliers motivated. The purchasing process described above and depicted in the diagram does not occur in every purchase situation. It simply depicts a first-time purchase fraught with risk, uncertainty, and novelty. Straight buybacks and modified buybacks don't usually required go to the entire process again.

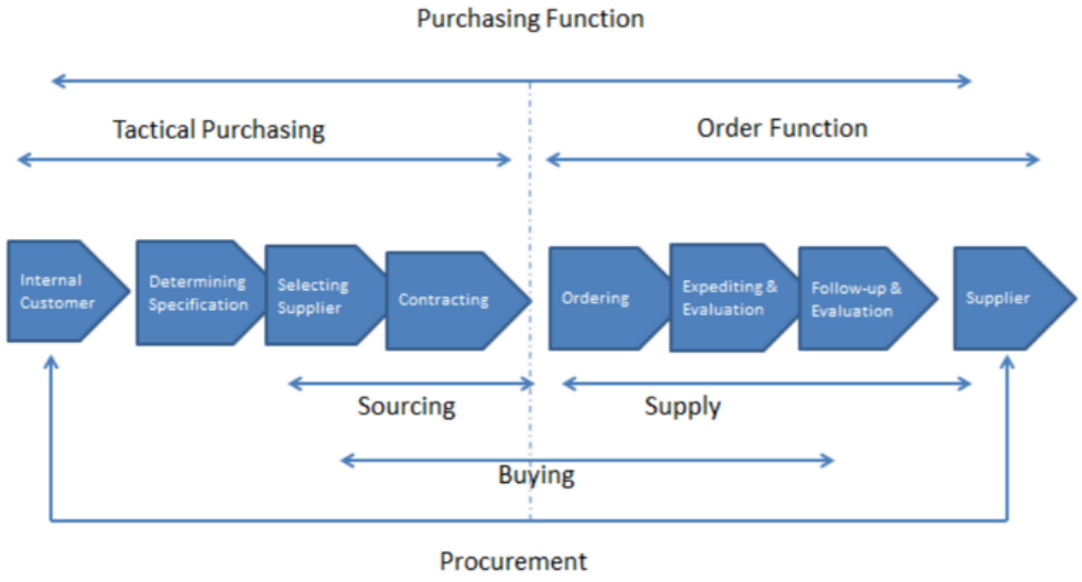
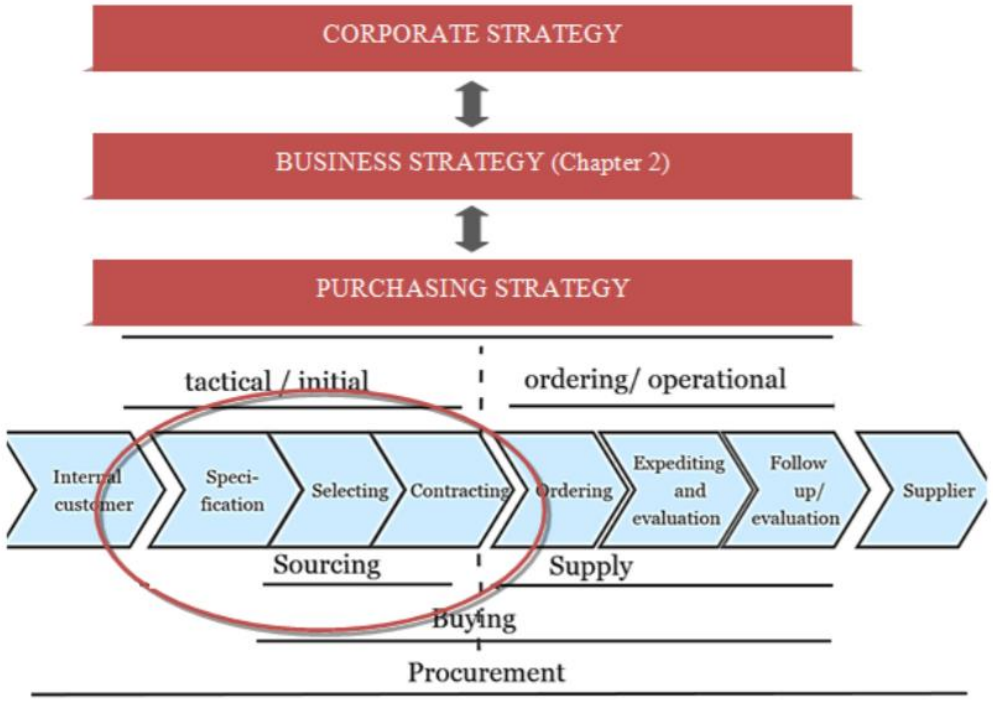


Fig: Procurement Model

CHAPTER - 4: SOURCING STRATEGIES IN CLOUD PROCUREMENT

The sourcing strategy position in relation to business and organisational strategies. As a result, the purchasing department's activities are iterated and envisioned in relation to the overall strategy. This is the foundation of sourcing strategy, because in order to be successful, alignment must always be kept in mind. Strategic sourcing encompasses a wide variety of doings, including developing an overall sourcing strategy, evaluating and selecting suppliers, procuring materials and services, and managing supplier relationships. Similarly, defines sourcing as a part of the purchasing process aimed at selection and handling suppliers who are associated with the strategic areas and objectives of the organisation. Sourcing strategy encompasses the acquisition of materials and/or services, as well as the selection and management of suppliers in accordance with the organization's goals. Sourcing has grown in popularity, and it now occupies a prominent position in most companies' purchasing processes.

The sourcing process, which is highlighted in red, includes a strategy for specification, selection, and contracting that is in line with both the corporate and business strategies. It's crucial to remember that corporate strategy, business strategy, and purchasing strategy are all intertwined. As a result, changes in the purchasing strategy may trigger changes in the business strategy or even the corporate strategy, implying that alignment is not solely determined from the top down.



- Cloud Catalogs Strategy
- Outsourcing Strategy- Data Centre Out Sourcing
- Score based selection of supplier.

CHAPTER – 5: GLOBAL TECHNOLOGY METHOD

Global sourcing is defined as the search for foreign supply sources to incorporate into a company's overall purchasing strategy. It refers to geographic decision made during the sourcing procedure regarding outsourcing. There are many definitions of outsourcing, including the one used in section two, which states that outsourcing is the "use of an outside agency to manage a function formally performed inside the company." The external agent who performs the outsourcing activity is the common denominator in all of these definitions. When thinking about outsourcing from a more global perspective, the term "offshoring" or "offshore outsourcing" comes to mind. This is similar to outsourcing, except that the specialised capabilities are accessed through external agents who work across national borders. As a result, this is also known as global outsourcing. When comparing outsourcing globally to outsourcing locally, different incentives are of interest. The main motivation for most multinationals is cost-cutting, which is aided by low labour costs. Despite the potential cost savings, corporates are further vulnerable to value issues due to differences in ethics and a lack of control. Furthermore, cost reductions due to economies of scale, experience, and higher supplier production quantities can lower the cost per unit of production. Aside from cost, it can be used to tap into previously unavailable capabilities or to supplement the firm's existing capabilities. This includes things like knowledge, innovative skills, access to technology and other resources, access to skilled labour pools, and competitive pressure. As a consequence, offshore is widely used in the pursuit of corporate transformation and company renewal.

Apart from the potential advantages of outsourcing, it's crucial to keep in mind that sourcing diverse operations from many vendors in various regions of the globe increases managerial complexity and costs. Furthermore, as businesses get more complicated, it becomes more difficult for managers to examine all key decision-making aspects before outsourcing, raising the risk of cost estimating errors and unanticipated expenses.

As a result, the factors for supplier selection, namely strategic and organisational factors, are provided to be taken into account for decision-making. Cost, quality, time, flexibility, and innovativeness are the competitive priorities that drive strategic performance metrics. Organizational factors concentrate on firm characteristics and capabilities, particularly culture, technology, and relationships.

- **Category Management**

According to conventional brand management, individual brand-oriented purchasers strive to enhance their economic performance by obtaining large quantities of goods at a low cost and then depending on retail pricing, promotions, and merchandising operations to deplete brand-level stocks as fast as feasible. However, the rising complexity of procurement operations is necessitated by the rising variety and quantity of items, competition requiring effective work, customer segmentation, variety of rivals as a result of globalisation and expanding product ranges, and plenty of technology and information. Category management is defined as a "process for managing entire product categories as strategic business units... with an emphasis on delivering consumer value" as an alternative to the traditional approach. In other words, category management shifts the focus from individual brand performance to product category performance by recognising product interrelationships. Its goal is to make category management a win-win-win situation for suppliers, purchasers, and consumers.

In theory, all parties' outcomes can be improved because category management allows for the operation of a category as a business, with purchasing and selection of the best product mix carried out per

category to meet customer needs. It's thought to help with cost-cutting and effective consumer-oriented practises. Furthermore, an increase in profit is assumed. Category management is also associated with consumer decision-making and the way in which consumers determine their demands, enabling companies to take a sales position and get closer to their consumers. In addition, sales development possibilities and strategic concerns may be dealt with more effectively at the level of the category.

The findings are, however, varied, and others contend that the advantages are overstated. The approach's major purpose, according to the definition, is to give customer value, while category management might result in higher retail pricing and a limited product range since only the most lucrative goods are offered. In addition, category management may have little impact on consumer happiness and, as a consequence, profit.

Although category management can be accomplished without supplier collaboration, the results will be improved when collaboration occurs due to the use of complementary knowledge. Furthermore, purchasers may have a large number of products from a variety of categories, making it impossible to manage all of them intensively. As a result, the company can choose a lead supplier or category captain to tap into resources and capabilities. A lead supplier is defined as "the category supplier with the most influence (in comparison to other suppliers) over the retailer's CM decisions and actions." The category captain is a step further, in which a supplier, usually the category leader, assumes a significant role in the retail management of the category, including competing suppliers' brands. This approach, however, is divisive and fraught with dangers. The category captain or lead supplier can take advantage of the situation by favouring own brands and thus excluding or raising the cost of competing suppliers. In other words, it has an impact on competing supplier relationships and reduces competition, potentially leading to price increases, a reduction in product variety, and a decreased focus on innovation, all of which lead to a decrease in consumer value.

To get the most out of lead suppliers or category captains, buyers should keep a close eye on them, implementing clear detection and punishment policies, and encourage all suppliers to report opportunistic behaviour. Furthermore, becoming a lead supplier or category captain is projected to offset the short-term advantages of opportunistic behaviour in the long run.

- **Best value procurement**

A more traditional bidding (low-bid) or a best-value structure are often used in procurement.

Prices are the main focus of traditional bidding, with the lowest cost proposal being the goal. The company sets minimum standards and puts pressure on suppliers to provide discounts. While this method implies cost savings, the economic-envisioned end-results or best value are not always achieved. This approach may cause suppliers to submit unrealistically low bids as well as an unbalanced risk allocation, resulting in unfavourable economic outcomes. Furthermore, in order to fulfil the firm's criteria, the supplier is forced to use tight cost-cutting tactics rather than quality-enhancing ones, limiting the possibility of providing high-quality products. Because of all of the criteria, the provider has less leeway to use his or her knowledge and skills to come up with the optimal solution. The rings symbolise hard requirements; when more criteria are added, the flexibility to develop answers diminishes, resulting in a single-minded emphasis on the standards and inability to achieve quality.

In a price-based industry with high competition, where the focus is on the best contract for the short term, the low-bid approach works best. It will be more difficult to build long-term relationships because it is focused on the short term. It's best to link to leverage products because they have a low supply risk but account for a significant portion of the end product's price. As a result, a slight change in cost has a fairly large impact on the price of the final creation, while minimising risk. Furthermore, the short-term

and cost-focused nature of leverage products allows for negotiation and the ability to switch suppliers, making them ideal for this type of product.

In addition to this narrowdown focus on cost-cutting & requirement control, the best worth procurement exists. In contrast to traditional bidding, best-value procurement considers not only price but also technical criteria and qualifications, and claims that in order to increase efficiency, the need for management must be reduced. The main goal is to increase the value added for each monetary unit added, resulting in the best possible price-performance ratio. There is no widely accepted definition for value-procurement because the concept is still somewhat ambiguous. Provide a succinct definition of best value procurement, such as: The risk is passed to the suppliers to show value by dominating knowledge, with the understanding that specialists minimise both risk and disbursement, resulting in the highest value for the least cost. By transferring control and risk to the vendor, the buyer/client relies on the vendor's expertise for the best results and minimises technical decision-making and management by the buyer/client. More specifically, the responsibility for project completion and performance is delegated to the supplier's expertise and experience without any specification, direction, or inspection. The buyer/client is solely responsible for quality assurance, while the supplier is in charge of quality control and risk management. The project's control, as well as the fact that the supplier is at risk, will encourage the supplier to deliver high-quality work. Furthermore, the supplier will be graded on their performance at the end of the project, which will affect their future chances of getting work.

CHAPTER- 6: SUPPLIER SELECTION

Purchasing, which includes sourcing, scouting, and selecting suppliers as previously stated, has evolved from a tactical and more operational function to a strategic function that influences the success or failure of a focal organisation. The purchasing process, which includes selecting and forming partnerships with external suppliers, is divided into five stages and corresponds to the purchasing process. The five stages are as follows:

- Determine strategic needs, assemble a team, and ensure top management support
- Identifying potential partners
- Screening and selecting potential partners
- Establish a relationship by paying close attention and providing timely feedback.
- Evaluate the relationship: should it be maintained, expanded, or reduced

Only after organisations have determined the importance and potential profits of products, components, and services can the strategic sourcing process begin. Scaling the goods in one of the quadrants of the previously mentioned purchasing estimates the different items a company wants to outsource and the potential supply risk. After determining which quadrants, the various products fall into, the strategic sourcing process continues with deciding whether to seek out new and unknown suppliers outside of the existing supply base. Another option is to select suppliers who have previously or currently supplied the organisation. To put it another way, it's about deciding whether to make a completely new purchase, a modified rebuy, or a straight rebuy. The buying organization's requirements vary depending on the variables and complexity of the goods.

- New purchase: This situation occurs when an organization starts with a complete new product, component or service. The organization has not purchase goods in this area of the supply market before and therefore needs to walk through the whole purchasing process again and decide from which supplier they will buy the new product or service. This takes a lot of time and effort to establish and the uncertainty and chance of disruptive events are relatively high.
- A modified repurchase: In this case, the organisation must choose between purchasing the new product, component, or service from a supplier it already knows and has worked with in the past, or searching for a completely new supplier. Furthermore, it is possible that in the case of a modified rebuy, the purchasing organisation previously purchased a good from a specific supplier but now decides not to do so because the product's characteristics have changed or the supplier has received a negative evaluation.
- A straight repurchase: In this case, the company purchases an existing product, component, or service from a reputable vendor. Because the purchase is of a repetitive nature, costs such as transaction costs can be kept low, and the level of risk and uncertainty can be kept low.

The relationship between the newness of the goods and the supplier, as well as the level of risk and uncertainty this entails, is depicted. Nowadays, most businesses recognise that scouting and selecting new suppliers is a costly and risky endeavour, so having a supply base that has proven to be trustworthy, dependable, and long-term is preferred in most cases. The composition of the supply base and the selection criteria are described below in terms of their complexity and importance.

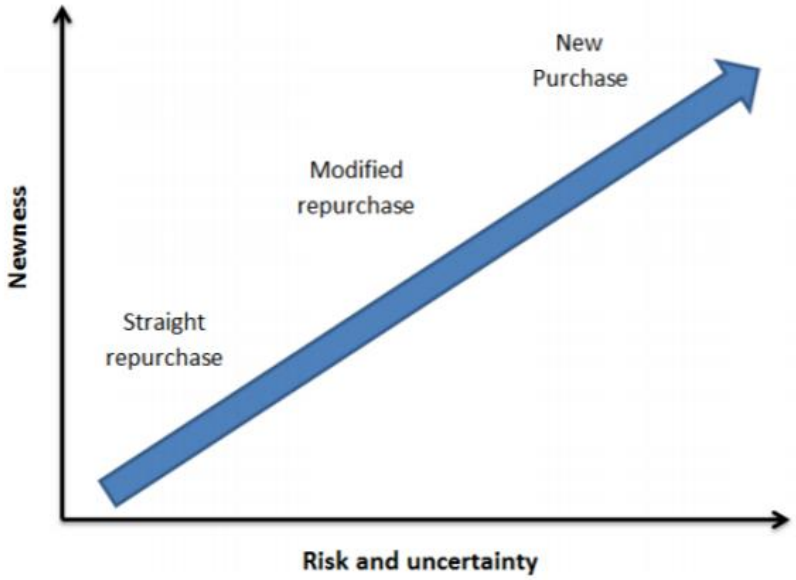


Fig: New, Modification and repurchase

- **Supplier base**

The buying company's supply base is defined as the portion of the supply network that it actively manages and controls. This means that the focal organisation manages, controls, and purchases goods from suppliers on the supply side, including both direct and indirect suppliers. The diagram depicts the relationship between the focal organisation and first-tier (directly linked), second-tier, and third-tier suppliers. The blue lines in the diagram represent first-tier supplier partnerships with second- and third-tier suppliers. Is it possible, for example, that second or third-tier suppliers hired by the focal company will not deliver their goods or services directly to the focal organisation, but rather to other suppliers in the supply base before reaching the focal organisation.

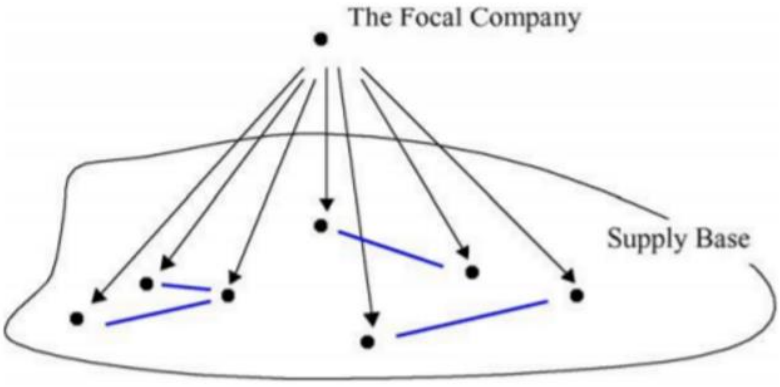


Fig: Supplier Base

Contracts must be signed with suppliers for the purchase of products, components, raw materials, and services in order for the focal company to manage and control its suppliers. The complexity of the supply base is an important managerial consideration, with three dimensions that the focal organisation must consider:

• The supply base's total number of suppliers.

• The degree to which these suppliers differ from one another.

• The quality of the supplier relationships.

Due to the increased search for lower costs and higher quality nowadays, purchasing organizations expand their scope to outsource and purchase different goods all around the world. The result is that the complexity of the supply base has become even more difficult to manage for most focal organization. The global nature of trading have made it for the buying organization critical to take the supply base complexity dimensions very seriously in order to compete in the highly competitive global markets. Furthermore, the complexity and composition of the supply has major impact on the focal organization and affect the height of the (transactions) costs, the degree of supply risk, suppliers responsiveness and the degree the focal organization perceives the supplier(s) as innovative. For instance, the smaller the number of suppliers and the closer the relationship the more it reduces the potential of risk, the negotiation costs and stimulates the supplier to be innovative. Therefore, it is an essential to take these dimensions into account in the strategic supplier selection.

The supply base refers to the number of suppliers from which a focal organisation purchases goods and the degree to which suppliers' characteristics differ from those of the focal organisation. When selecting suppliers, other new suppliers must be taken into account. Because of the global outsourcing trend, the focal organisation must consider the various environmental and cultural circumstances as well as the differences among suppliers, as well as assess the potential risks that those suppliers may pose. This means that a certain level of expertise is required; the more suppliers you have and the more different they are from one another, the more difficult it is to manage and control the partnership. This is due to the fact that suppliers are more involved in the new product design process and decision-making about how to cut costs or improve product or service quality these days. As a result, most buying organisations are unable to manage a large number of different suppliers with diverse influences and backgrounds. In order to reduce unnecessary (negotiation) costs and remain competitive, the focal organisation must also reduce and optimise the number of suppliers, buying higher quantities from only a few.

When the focal organisation decides to reduce its supply base, it must recognise that its management style must become more strategically focused. By limiting the supply base to just one or a few suppliers, for example, there is a risk that the supplier will gain an advantage in negotiations and decisions. To avoid losing bargaining power in partnerships with only a few suppliers, strategic elements such as coordination, cross-functional work, clear agreements, and close collaboration of the focal company with its supplier(s) are required. In order to maintain a healthy partnership, it is critical that the focal organisation develop new skills and competencies. The impact of the number of suppliers on the focal organisation, as well as topics like supplier relationships, contracts, and required purchasing skills.

- Single Vs Multiple Sourcing In Cloud Procurement

The number of suppliers has an impact on whether or not an organisation will use a single or multiple sourcing strategy. A focal organisation must not only decide how many suppliers it wants to buy from, but also how this decision will affect the probability of risk and what consequences this will have for the organisation, such as financial consequences.

All the advantages and disadvantages of single and multiple sourcing.

	Single Sourcing	Multiple Sourcing
Advantages	• Partnership between buyers and suppliers allows cooperation, shared benefits and long-term relationship based on high levels of trust. • Reduction of risk of opportunistic behavior. • Large Commitment of the supplier that is willing to invest in new technology or new facilities. • Lower purchase prices resulting from reduced production costs, due to better knowledge of the manufacturing process by supplier and achieved economies of scale.	• Alternative sources of materials in case of delivery stoppage by a supplier. • Reduced probability of bottlenecks due to insufficient production capacity to meet peak demand. • Increase competition among suppliers leads to better quality, price, delivery, product innovation, and buyer's negotiation power. • More flexibility to react to unexpected events that could endanger supplier's capacity.
Disadvantages	• Great dependency between the buyer and the supplier. • Increase vulnerability of supply. • Increased risk of supply interruption, especially for asset specific products.	• Reduced efforts by supplier to match buyer's requirements. • Higher costs for the purchasing organization (greater number of orders telephone calls, records and so on).

Table 3.12 (Dis)advantages of Single & Multiple sourcing strategies (Costantino & Pellegrino, 2009)

Since the introduction of the Just in Time (JIT) and lean philosophies, single sourcing has evolved into a long-term and closely related partnership with only one or a few suppliers. Both the focal organisation and the supplier(s) are working together to achieve mutual benefits. This creates an environment in which suppliers are encouraged and supported to deliver high-quality products, invest in new technologies, and form long-term partnerships. Single sourcing results in lower prices because the local organisation purchases larger quantities from one or a few suppliers. However, because the focal organisation of only one or a few suppliers is more reliable than with multiple sourcing, these organisations are more vulnerable in the event of disruptive events. This could result in an inability to meet demand, as well as catastrophic financial losses if a focal organisation is unable to recover.

A focal organisation decides to buy the same products, components, or services from multiple suppliers in a multiple sourcing strategy. Multiple sourcing is defined as being more focused on the short term and less collaborative than single sourcing. Suppliers compete for the order, resulting in low prices for the focal organisation, and the focal organization's ability to switch between suppliers if necessary. By using this method of sourcing, the risk of something going wrong with suppliers is spread out, and the company is always able to meet demand. The main reason for using multiple sourcing is to reduce risk, especially given the global nature of focal organisations.

Despite the clear (dis)advantages of both single and multiple sourcing, and the fact that reducing the supply base is necessary to remain competitive, many authors disagree about whether single or multiple sourcing should be used exclusively. Despite the fact that many leading organisations consider single sourcing to be the best option. In a global and highly competitive environment, a single sourcing strategy does not always result in faster customer response, lower costs, or better product quality. A shortage of suppliers could result in higher costs, lower product quality, and an inability to meet demand and respond to disruptive events.

In a world of globalization, as an effective way to prevent the focal organization of disruptive events at the suppliers. Most suppliers are much more flexible and effective to meet demand changes nowadays. It is therefore not always necessary to have only close and long-term partnership with supplier(s). Thus, just a decision between single or multiple sourcing strategy is in some case insufficient, but an optimal composition of the supply base, depending on the circumstances of both the suppliers and the focal organization could be a serious option for many focal organizations.

- **Selection criteria**

After determining the commodities it wants to outsource, the relevance of the products to the organisation, the newness and complexity of the goods, the required number of suppliers, and the degree to which suppliers differ from one another, the focus organisation must decide on which criteria it will use to pick suppliers. These standards are intended to strengthen and reinforce the selection process.

Modern techniques examine individual expenses such as transaction, transportation, and inventory expenses in greater depth. A supplier's capabilities, financial status, and environmental record are all taken into consideration. Furthermore, most criteria are centred solely on quantitative metrics, while qualitative variables such as the target organization's culture and the supplier's culture should be taken into account as well. However, it is critical that the purchasing organisations receive the products, components, or services at a reasonable price and in sufficient quantities. As a result, traditional criteria should not be overlooked, according to the fact that they are more suited to short-term relationships and multiple source tactics. On the other side, if there are too many diverse factors, it will become complicated rather than efficient and effective supplier selection.

These criteria are as follow:

- Financial: Every type of partnership, especially long-term and trusting relationships, requires financial stability and solid economic performance in the past. This ensures the partnership's continuity and reliability, as well as the performance standards, quality, and timely delivery of items.
- Organizational culture and strategy: By this criterion, both parties must share the same values and outlook on the future. They believe there is mutual confidence and that the focus organisation and the supplier have a strategic match. Aside from the level of education and training, the buying organisation will look into safety records, staff working conditions, supplier infrastructure, facility location, and legal circumstances. Particularly in a worldwide market when vendors from all over the world differ greatly on these issues. Furthermore, international laws and regulations regulate the worldwide market.
- Technical capabilities: Suppliers should be able to deliver a constant and continuous supply of products, components, and services that meet the agreed-upon quality, quantity, pricing, and delivery standards. Furthermore, the supplier's ability to meet future enhancements, design changes, and development pace are significant aspects of the technical requirements. Ability to produce novel and distinctive technologies could also be a criterion for a new purchase.
- Support resource: The supplier its resources need to be adequate to support product or service development production and delivery. Criteria need to consider the supplier its facilities, information systems and provisions for education and training. When considering international suppliers, a firm needs to carefully examine the industrial infrastructure that supports the supplier. With international suppliers, a firm also needs to establish appropriate mechanisms to handle financial transactions and product deliveries, as well as any related legal or regulatory matters.

- Risks globalisation and localization: The purchasing organisation should weigh the benefits and drawbacks of both local and global suppliers. Furthermore, this encompasses various types of hazards or disruptive events that may occur for individual suppliers in various regions. It must be determined whether these risks can be minimised, the likelihood of occurrence, and whether the benefits to a certain supplier and location outweigh the potential risk.

CHAPTER-7: SUPPLIER RELATIONS MANAGEMENT

One of the goals of strategic purchasing is to reduce the number of suppliers. The goal with these providers is to establish a long-term connection. Supplier relationship management is required to sustain and regulate long-term connections. The management of suppliers will be explored in this section, from simple dyadic interactions to sophisticated worldwide supply networks. Long-term relationships are typically made possible by involving the supplier in various organisational processes, as well as the other way around. Supplier involvement can be critical to the success of supplier partnerships. Contracts are signed after the development and engagement of suppliers. However, the purchasing department's relationship with the supplier does not end there. After the contract is signed, it must be handled, which is also known as contract management. Contract management entails keeping track of and evaluating vendors during the purchasing process. Not all supplier partnerships go as anticipated; this can be due to a variety of factors, including cultural differences, supplier trustworthiness, and so on. Relationships are becoming more difficult to sustain, especially as purchasing processes become more globalised. This will be explored in the section on supplier relationships' motivations and barriers.

Supplier Relationship Management

The competitiveness of enterprises is influenced by market globalisation, product complexity, customer diversification, and efficient supply management. Because the expenses of purchasing and outsourcing account for a bigger portion of the total costs of the cloud process, efficient supply chain management necessitates a well-organized and performing purchasing department. As a result, in today's economy, supplier relationship management has become increasingly vital. Supplier relationship management, defined as the activity of establishing, maintaining, stabilising, and dissolving partnerships with in-suppliers, as well as the observation of out-suppliers in order to create and enhance value within connections, believes that it is more necessary to build a set of lasting supplier connections rather than moving between them on a regular basis. Back in the day, switching suppliers was a regular practise; however, greater competition and cost pressure in the sales marketplaces necessitate long-term supplier partnerships. Organizations should immediately convert to supplier relationship management after selecting suppliers. ‘'Companies can gain a competitive edge by focusing on long-term rather than short-term buyer–supplier relationships with their main suppliers." Organizations respect key suppliers because of their extensive understanding of the supply marketplace, historical experiences, and early contribution in the development of new goods. As a result, maintaining a strong connection with suppliers is critical for developing a long-term competitive advantage. Buyer-supplier partnerships can take a variety of forms. Today, indirect supplier ties and supplier partnerships are just as vital as direct supplier ties. Currently, supply networks play a significant part in how strategic purchasing is organised. Identified four distinct types of buyer-supplier partnerships.

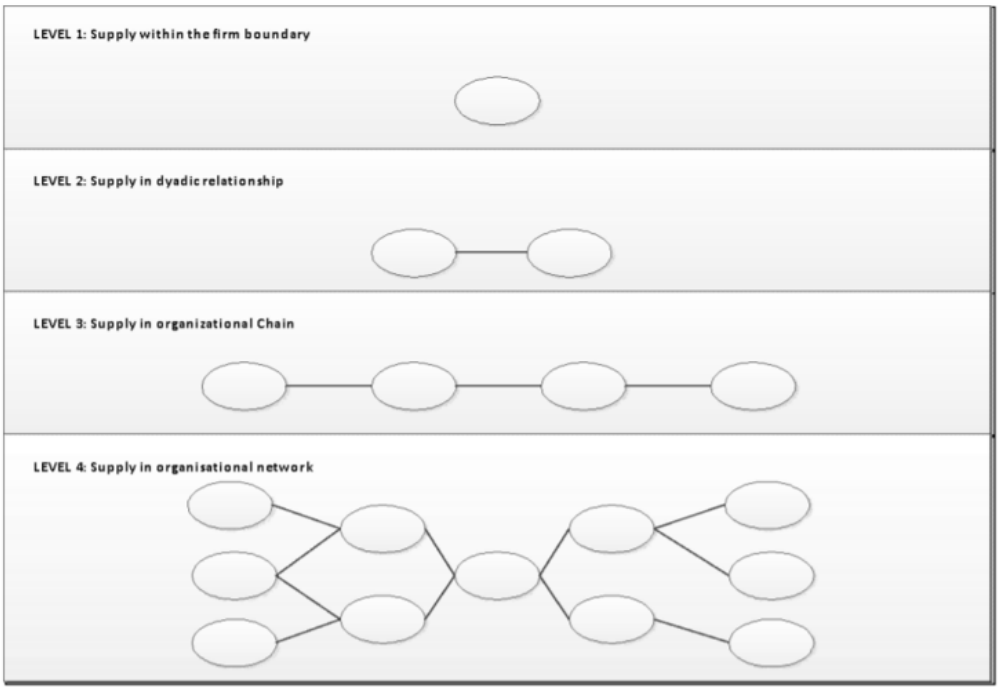


Fig: Supplier Network

Level 1 exclusively refers to internal supply; no outside vendors are involved.

The most tangible connection in the buying process is that between the customer and the supplier, which is addressed by **Level 2**.

Level 3 depicts the supply of goods from the standpoint that, before a product reaches a client, it has passed through numerous phases (suppliers) in the supply chain, from raw material to final good. To build a dependable purchasing process, businesses should maintain relationships with second- and third-tier suppliers.

The supply in an organization's network of suppliers and purchasers is defined at **Level 4**. The complicated network of numerous relationships between suppliers and buyers, from raw materials to ultimate end consumers, is defined by this organisational structure. Purchasing operations have gotten more difficult as supplier networks have gotten increasingly internationalised, necessitating a stringent relationship management approach.

The social rule, which recognises the value and value creation of social constructions including as connections, networks, organisations, and individuals, is central to supplier relationship management. Many academics suggest that social capital allows organisations to access and use resources found in their relationships. Through the creation of a common vision, trust, and social links, social capital also minimises conflicts and improves collaborative behaviour. As a result, they can provide enterprises with both functioning and, more importantly, strategic profits. Social capital can be classified into three types:

• Mental faculties

• Relationships

• Architectonic

In different ways, all three kinds can influence outcomes and performance. However, social capital has drawbacks that may limit an organization's ability to react to shifting market demands. If social capital builds up, it can lead to a lack of impartiality, the risk of opportunism, unsuccessful executive, and a costly investment compared to the returns, all of which can jeopardise the buyer's performance. The various supply networks will be discussed in the following sections. Interactions and then categorise supplier relationships based on the change in buyer-supplier relationship perception. The buyer-supplier relationships will next be used to discuss the organisational chain and network.

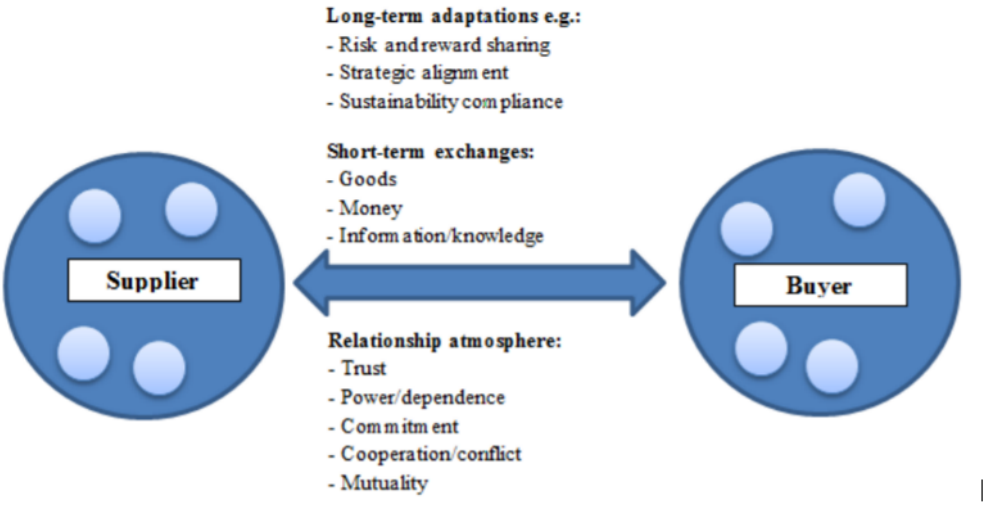


Fig: Interaction Model

The interaction model distinguishes between short-term and long-term interactions, emphasising the relevance of long-term adjustments in the buyer-supplier relationship. However, it merely differentiates between connection lengths and does not go into detail about buyer-supplier interactions. Furthermore, not all short- and long-term suppliers are the same or are equally significant to the purchasing company. The following part will go through these topics in further depth by classifying buyer-supplier relationships.

Supplier Classification

The four C's of supplier relationships describe the various buyer-supplier connections. This framework builds a greater and deeper understanding of buyer-supplier relationships, which is critical for effective management. Transactional connections (counterproductive connections & competitive connections) and collaborative partnerships are two types of relationships (cooperative relationships & collaborative relationships).

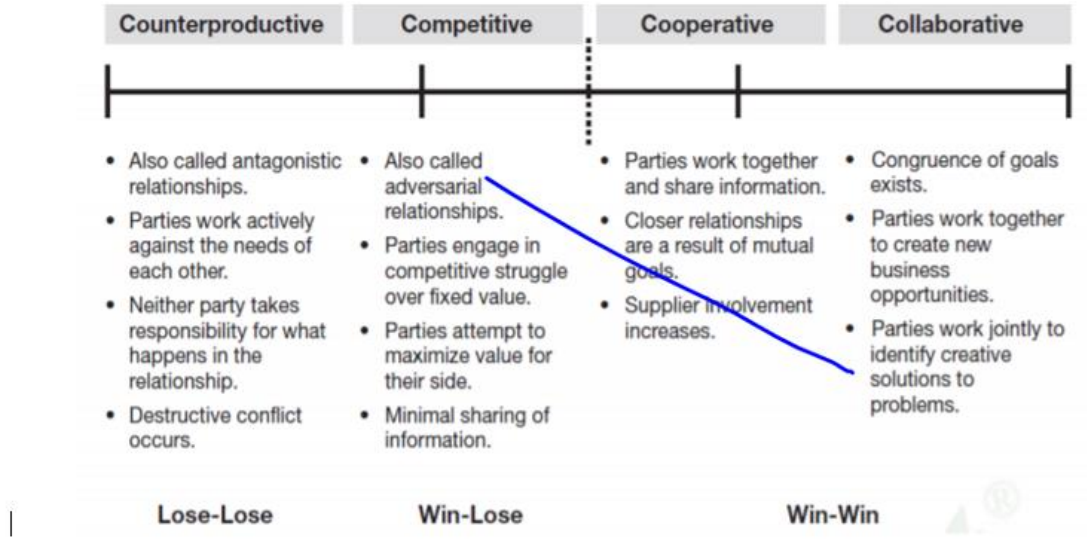


Fig: Four C's of Supplier relation

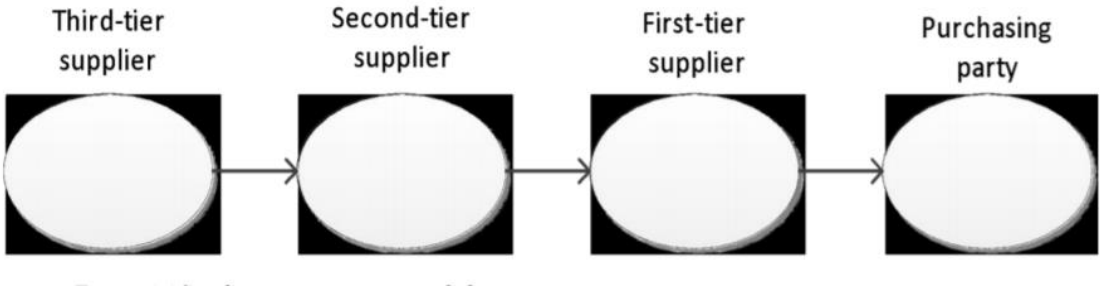
A lose condition exists when a buyer and a provider are working against each other in a counterproductive relationship. Short-term emphasis, disagreement, and no one taking responsibility for what transpires in the relationship are all characteristics of these relationships. ‘'Not only does this scenario flop to generate new-fangled value, but it also jeopardises short term and long term performance." Buyer control, a persistent hunt for price reductions by threatening or actually shifting suppliers, and insufficient data sharing are all examples of counterproductive relationships. Buyers and sellers only trade when they stand to benefit the most from each transaction. They envision themselves in two distinct industries.

Relationships that are competitive are win-lose situations. Buyers and suppliers are only concerned with their own profits, competing for current value rather than producing new value. The majority of buyer-supplier partnerships should be competitive, according to the author. ‘'The overall worth of the things and services offered by these providers frequently, it is asserted. The buyer benefits the most in competitive interactions because he can demand price reductions without rewarding the supplier by using purchasing leverage. This may cause the supplier to become hostile, resulting in a reduction in the buyer's resource investments. As demonstrated, there are two types of win-win relationships: cooperative and collaborative. Buyer-supplier connection is intimate, there is a long term attention, and there is a culture of open data allocation in cooperative relationships. The buyer and provider are in constant communication on ways to improve performance (e.g. quality, costs, packaging and inventory management). Suppliers are frequently involved in the development of new products. Conflicts are resolved through dialogue, and both parties perceive business transactions as fair. Finally, because collaborative connections necessitate a lot of resources and dedication, collaborative connections have a very fine supply base that financial records for the essential goods and services. There is a lot of cooperation going on since both the customer and the supplier want to better their present operations and compete in the marketplace. These collaborations are marked by joint strategy development sessions, executive-to-executive engagement, and resource sharing. Through this cooperative effort, collaborative techniques minimise operating costs and acquisition prices. Both connections have a higher level of trust between the buyer and the supplier; trust will be discussed in greater depth later in this section. Because, as previously said, buyer-supplier partnerships necessitate a lot of resources and commitment, they should not always be collaborative. Furthermore, there may be decreasing returns in investments amongst supply chain organisations in collaborative agreements. Furthermore, when the

occasion calls for it, firms are completely acceptable to conduct arm's length transactions. In this case, the supplier's level of criticality is critical. This is how the purchasing firm sees the supplier as a key success element. The buyer-supplier relationship is also determined by factors such as strategic relevance to the company and complexity. Financial (i.e. big financial investments) or trade (e.g. interconnected and/or interdependent technology, cloud processes and shared development) may be complex.' Buying companies would use open market conversations at press rates and get the best bargain if strategic significance and complexity is small. Collaborative interactions are employed when strategic importance and complexity are high. If strategic significance is low but complexity is high, cooperative links are often exploited. As previously said, counterproductive connections are never good. In this way, the market, product and partner factors impact the choice of the connection between the customer and provider to be used in a specific circumstance. A single-size formula to describe a certain relationship is not available. However, mitigating risks and building on the potential of supply bases is crucial for companies by recognising which suppliers provide value and exploiting their skills across the complete supply chain.

Supply Chain Networks

Before the ultimate product is given to the purchasing party, a couple of suppliers supply to each other in the organisational chain.



When a purchasing party orders from the first-tier, for example, the first-tier supplier manufactures the ordered products. The parts utilised by the first-tier provider, on the other hand, can be manufactured by the second-tier supplier. This can extend to a third-tier supplier and beyond. Maintaining ties with second and third-tier suppliers is also vital for the purchasing party. When a second or third-tier supplier goes out of business, it has an impact on the purchasing party. They will not receive their items since the first-tier supplier will be unable to make them due to a lack of materials. As a result, the trustworthiness of the chain's other suppliers is critical. Knowing where your Maintaining links with other suppliers in the chain is an excellent example of the value of doing so.

The fourth level is inter-organizational supply networks that are complicated networks of interacting suppliers and purchasers. A great description of the supply network Supply networks are networked organisations, which are inter-connected to bigger inter-organizational networks and whose main objective is to buy, use and transform resources in order to deliver products and services. While smart purchases attempt to decrease the number of suppliers, it is frequently inevitable to have more than one. It is unusual for an enterprise to have only one dyadic connection; most organisations have a supply chain similar to a rooted tree with branches and roots. These branches and roots symbolise the broad networks of suppliers and consumers. Other than the national boundaries these large-scale network activities often span the world. For trans-national transactions consistent with strategic buying, long-term partnerships with a limited core group of suppliers are generally built. The purchasing functions

build communication systems such as EDI and ERP so that orders are placed automatically and the purchaser may focus on maintaining their supplier relationships.

In the preceding paragraph, several types of buyer-supplier relationships were addressed. It identified and defined dyadic and network interactions, as well as the changing perceptions of buyer-supplier interactions.

Supplier Participation

Good provider relations can lead to the supplier becoming more involved in the company, but it can also happen the other way around. The term "supplier engagement" refers to involving a supplier in various organisational operations. The topic has recently sparked a lot of interest due to the potential benefits for businesses in terms of increased effectiveness and efficiency. Supplier involvement refers to the resources (capabilities, investments, information, knowledge, and ideas) that suppliers contribute, the tasks they perform, and the responsibilities they accept in the creation of a part, process, or service for the benefit of a buyer's present or future product development initiatives. Early Supplier Involvement (ESI) , proposed as a method of participating suppliers' abilities into the supply chain system and procedures of the buying organisation. The idea of supplier involvement refers to the buyer-supplier exchange relationship, which is determined by the amount to which the supplier participates in co-improving and new invention development processes. Supplier involvement can help speed up the creation and quality of new products while also lowering production costs. Supplier involvement is very important in NPD since it:

- Expands project performance and
- Overall growth time reduces

Integrating the supplier into the organization's procedures is one method to involve them. Communiqué and data exchange, project engagement, and organization creation of combined initiatives with important providers are three factors that can be used to categorise supplier integration approaches. According to this expert, supplier engagement procedures should be based on market stability. Because the influence of market stability differed, the effect of supplier integration was greater in stable markets, whereas in unstable markets, the time-to-market was better when the supplier was integrated.

There are several procedures that must be followed in order for supplier integration to occur. It will begin with the identification of an organisational need, which will lead to the requirement for a supplier. Supplier engagement may be crucial to consider during the supplier selection stage, as taking this into consideration may lead to alternative options. Supplier engagement has various benefits, one of which is shared issue solving, which may be beneficial in incorporating the supplier.

CHAPTER -8: CONTRACT MANAGEMENT

According to the research, contract management is the process of methodically and professionally management agreements from development to implementation and analysis with the goal of improving operational and monetary supplier performance and lowering risks. It's all about ensuring that you get what you agreed on. So contract management is the process of managing contracts within an organisation from the time they are formed until they are evaluated and finally terminated.

Order, expedite, and review are the three processes of contract management. Where these three steps additionally encompass the contract's order and execution phases, the purposes of CM should, for example, be

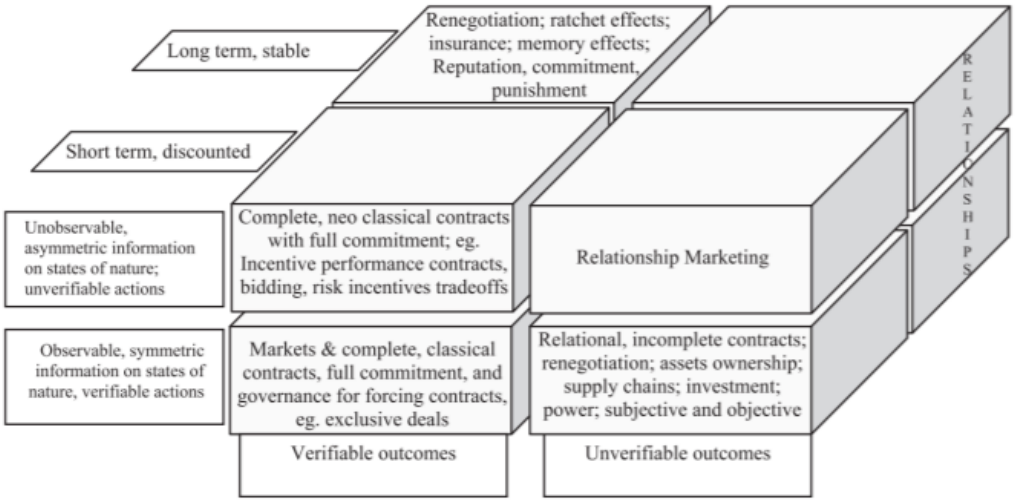
(1) performance report review,

(2) escalation issues and basic opportunity modifications,

(3) indexing price, and

(4) continual development are all things that need to be addressed. Because continuous development as a consequence of evaluation leads to improved performance of collaborating firms/contracts and relations, they should be handled in terms of relationship management at all times.

According to the statement, contracts also offer a dynamic governance framework for interactions. The structure below depicts the dynamics of markets, contracts, and relationships. This framework is useful for establishing the sort of connection that applies to a contract with a supplier. When the contract manager has to manage the contract and the results aren't verifiable and the actions aren't visible, for example, relationship marketing should be used. Relationship marketing encompasses all marketing actions targeted at building, developing, and sustaining effective relational exchanges. Because mutual trust is necessary to do business in these scenarios, the connection should be great.



Dynamics Of Market And Contract

A more cooperative negotiating method will lead to a more contractual control governance of a buyer/supplier with competitive relationship experience. However, the effect on cooperative connections will be harmful.

Discovery that extensiveness and collaboration have an interactive impact, i.e. that when contracts are more comprehensive, given opportunities for higher performance, emphasises the importance of

contract management in relationships. He also discovers that the contribution of buyer-supplier cooperation to performance is a linear connection. As a result, collaboration leads to improved performance. As a result, contract management and relationship management can be considered as being extremely closely intertwined.

Contractual design should go beyond simply offering a safety net. Contracts, they argue, should be supplemented by other practises like monitoring and socialising. They discover two sorts of fairness: procedural fairness and substantive fairness. Procedural fairness refers to the allocation decision-making process. The second type is distributive fairness, which refers to how results associated with sharing verdicts are assessed. Portion of the influence of contractual difficulty on the exchange outcome is explained by procedural fairness (how allocation choices are made). The impact of contract recurrence on the exchange relationship's results is partially explained by distributive justice. The exchange outcome will benefit if the parties involved regard the relationships to be more fair.

As a result of the foregoing observations, it may be stated that contracts and relationships complement each other by providing a structure for interactions. Increased control (assessment and monitoring) may be required under contracts; while this is beneficial since it leads to a more cooperative bargaining technique, it has a detrimental impact on the buyer-supplier relationship's relational experience. Furthermore, full contracts foster better teamwork, which leads to improved performance. Contracts should do more a mechanism to build security in a connection; they should also provide a mechanism to achieve the connection to achieve better results. Fairness is a crucial aspect in this connection, since higher perceived justice leads to better transaction results (i.e. relationship performance).

Supplier Evaluation in Contract Management- Evaluation & Monitoring

1. Although supplier evaluation occurs at the conclusion of the procurement process, its critical for procuring organisations to supervise and monitor their suppliers. Evaluation is done to determine whether a supplier is performing as agreed or to conduct a preliminary assessment of potential new suppliers. Globalization, shifting customer preferences, and the complexity of purchasing decisions have all enhanced the relevance of supplier evaluation in recent years. Says that procurement organisations should employ (KPIs) because if suppliers are not measured, they will not perform according to the agreement. Those KPIs should represent a company's purchasing strategy. According to research, if buyers don't track provider evaluation, decision-making becomes erratic, and performance falls to poor levels. Introducing KPIs, however, has a disadvantage in that it is anticipated that providers will attention on the set of KPI and ignore variables that are not included or cannot be taken by KPIs. A balanced score card is one technique to track KPIs and supplier development.

2. Instead of putting KPIs on the supplier, they should be used to start a discussion with them, jointly generated and used collectively. It could be utilised to solve difficulties and recover supplier performance because of clarity it brings to the provider. The foundation of relationship development is supplier evaluation, which is critical in the establishment of buyer-supplier relationships. Countries, on the other hand, have different approaches to evaluating suppliers. For example, unlike American companies, Japanese companies do not use a formal rating system to evaluate their suppliers. They review suppliers on a regular basis, and the review determines the level of support provided by the buying firm. Supplier development, as well as other buyer-supplier relationship drivers and barriers, are explored further down.

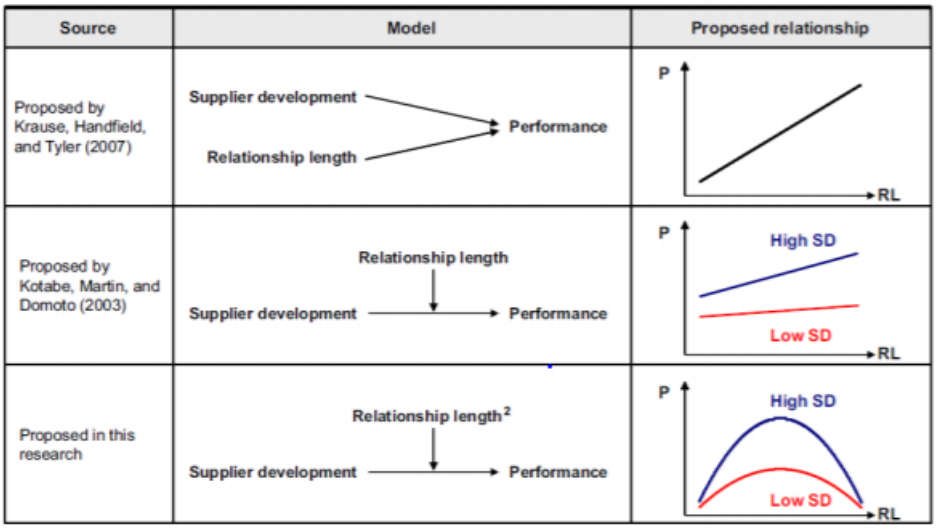


Fig: Dynamic buyer-supplier relationship

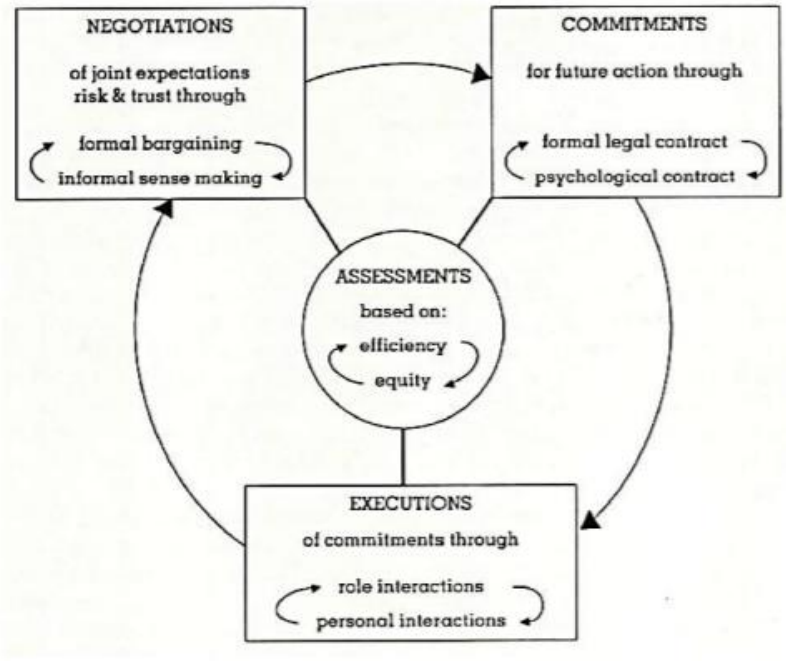


Fig: Continuous buyer-supplier development model

Contract Management Cycle in Technology Sourcing

Contract management is the process of monitoring and controlling vendor performance in order to get the best possible results from a agreement. Establishing communication paths and procedures, tracking progress toward contract deliverables, managing payments, regulating differences, evaluating vendor performance, and closing out the contract are all part of this process.

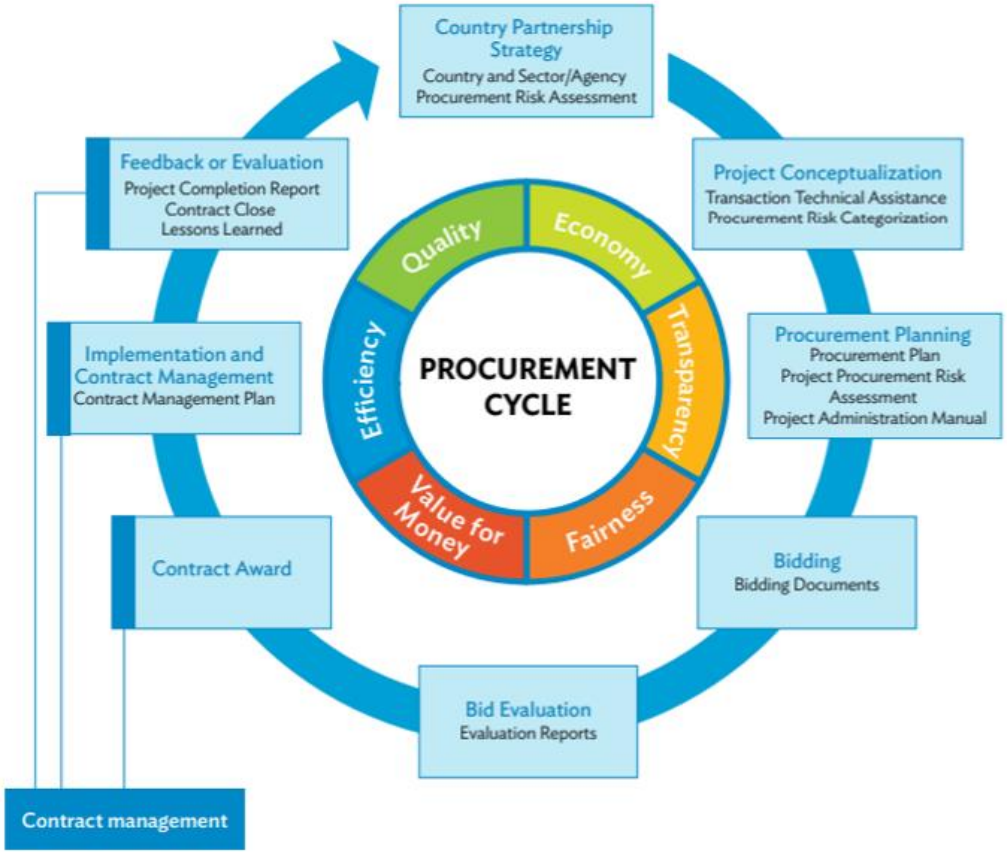


Fig: Contact Management Process Cycle

Fig: Benefits of Good Contract Management

Benefits impact on two reasons

- Contract management helps to realise available at the time of contract award by increasing the possibility that the contractor will achieve the project requirements.
- Contract management helps in lowers risk in contract approval and publishing, improving the chances to get the predictable score

Increased and more timely loan disbursements are also facilitated by more efficient and effective contract administration. Poor contract management, on the other hand, might jeopardise portfolio performance and cause delays in development goals, according to a list of common contract management difficulties.

From the supplier's standpoint, the contract management process is divided into 3 stages:

- Pre-contract award
- contract admin
- contract close

Contract publishing refers to the contractor's work under the clauses and occurs at same time as the supplier's contract management stage that is; all the responsibilities are transferred to the supplier administration after implementation.

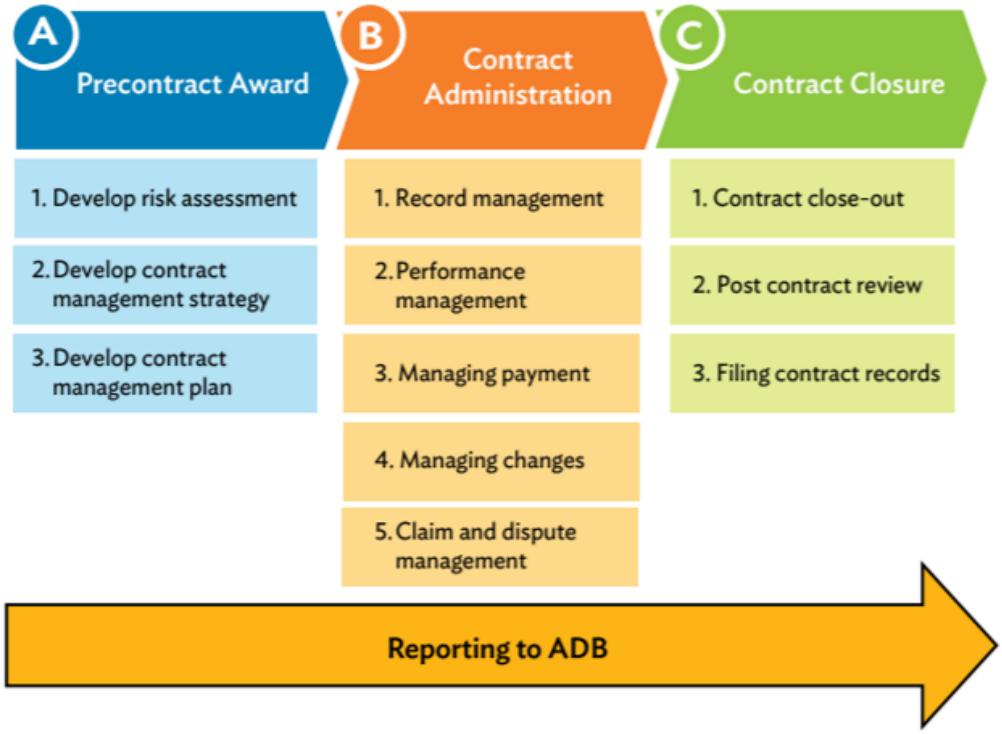


Fig: Contract Management Process

For supplier, these stages follow a logical flow:

During award stage the design phase of contract management is designed

Contact Administration stage- the contact award is publishing, consist of implementing the strategy by acting the number of monitoring & control activities in interaction with the contractor admin and last stage is the closure of the contract.

- Precontract Award

In order to be effective, contract management must be considered early in the procurement procedure. It must be based on a risk assessment that was completed initial in the project's development. A contract strategy will be built on the basis of this risk assessment. Contract Management Plan will be executed, which the supplier will establish at the time of contract scripting all actions and responsivities for monitoring the supplier performance during contract execution will be performed until the contact get publish. As a result, prior to contract signature, the CONTRACT MANAGEMENT PLAN must be performed.

Many of the responsibilities outlined in the CONTRACT MANAGEMENT PLAN necessitate the buyer and supplier performing specific tasks. Some of the task may be financial impression on the contractor and/or supplier , and many of them will need to included in the contract clauses to ensure that they are a contractual responsibility. As a result, CM measures must established at time of contract preparation in order to educate bidders of the contractor's responsibilities and expenses during the deployment phase.

- Develop Risk Assessment

The risk valuation should be undertaken at the initial phase of the procurement cycle to establish the supplier contract and prepare for its implementation.

Contract Risk Allocation

The first stage in risk analysis is to find the optimal risk distribution between the supplier and the contractor, often known as contract risk allocation. It is recommended that this analysis follow a principle of selecting the party in the most advantageous position to manage and control the identified risk, and thus that the liability rests with the selected party. A risk shall be allocated to a party,parties then must take all necessary preventive, mitigating, or corrective measures to manage the risk, and the likelihood of incurring financial liability if a risk materializes must be kept in mind.

Strict technical and market analysis should be based on this allocation of contract risks. Suppliers should resist the temptation to transfer all (or most) of the assigned risks to the contractor: an unfair or unbalanced risk allocation is likely to stifle competition, raise costs, and open the door to claims and disputes during contract execution, all of which are detrimental to achieving scores.

To prevent bidding contractors from inserting risk into their proposed pricing, the risk allocation should be included in the drafted contract.

- Risk Management Plan

The second part of the risk assessment is to deal with the dangers. An action plan for mitigating the identified employer's risks (e.g., delays in providing the contractor access to the site, payment delays, etc.) must be established. These hazards must be recognised as thoroughly as possible, and an action plan for mitigating them must be established. This action plan should identify preventive, mitigating, or corrective steps for each risk identified, as well as responsible personnel from the supplier's executing and/or implementing agency who will implement them and a time frame. Although the supplier is not accountable, he or she should be aware of the contractor's risks and their potential influence on the project. The supplier may remind the contractor of its contractual duties.

The risk management strategy is a compilation of all such identified hazards, as well as the action plan that goes with it. Throughout the contract implementation phase, it should be managed. One part of the contract management strategy is the risk management strategy. As an illustration of a risk management strategy.

- **Development of the Contract strategy**

The contract strategy is the technique - take in order for the supplier to properly control contractor performance throughout contract execution.

- Determining how the supplier and contractor will interact during the contract's execution
- Determining the key performance metrics to be tracked during contract execution
- Detailing how the supplier and the contractor will manage the risk management strategy and carry out contract administration procedures (reporting , using third party analysis reports, performance measure parameter.

A. Standardizing Resources

The purchaser shall form the right size and composition for a contract management team. This feature is often overlooked and relies too heavily on the on-site monitoring team. Naturally, the number and composition of the contract management team of the supplier will depend on the scope and complexity of the project. A simple supply contract will, for example, not require a large-scale cloud computing project with the same number of resources. The team should include people with technical expertise, contract management and document administration for a small and/or basic project (all of the above could be done by one person).

The supplier's contract management team should have access inside the supplier to the appropriate level of decision-makers to make timely decisions. Delays in contract decisions have the potential to significantly increase construction costs and hinder completion of construction projects (e.g., the approval of a small contract variation, if delayed, can lead to the incurrence of substantial additional costs and time delays, as the contractor is not authorised quickly enough to implement the action required).

B. Identifying and Designing Key Performance Indicators

Setting up a contractor performance management system based on relevant key performance pointers is recommended for this reason. A system like this is designed to keep track of a number of variables. These parameters should be freely reviewed with the contractor at regular intervals in order to agree on corrective (or improvement) steps targeted at improving performance. It should be highlighted, however, that these KPIs are just meant to be used as a monitoring tool and should not be mistaken for contract terms.

The contractor's success is determined by the quality, punctuality, and efficiency with which the contractual works, goods, and services are delivered. It also depends on the contractor's reactivity and capacity to change and respond to changing needs, new information, and unforeseen occurrences. This is relatively simple in some circumstances, such as off-the-shelf purchases. Performance can be tough in other situations, for example specialist “consulting” projects and complex activities, and it can be made even more critical in unpleasant working settings (e.g., emergencies, natural disasters).

Supplier performance aimed at critical projects is determined by several factors, including the efficiency of the work programme, the quality of staff, the prompt mobilisation of equipment, assuring. Quality and management of subcontractors, monitoring and improved productivity, settlement of disputes, timely testing and asset transfer, etc. Often the overall performance is determined in the areas under its control by the support provided by the agency and timely delivery of services.

A contractor performance management system can help the supplier track the contractor's performance throughout the contract's life cycle.

C. Communication Management

Mutual confidence and understanding are essential elements of successful partnership management, as are the creation of an open and productive environment and the creation of adequate staff with sufficient resources to carry out contracts management operations. The supplier should ensure during the initial phases of the relationship that the following criteria promote efficient and productive relationship management, as follows:

(i) Obtaining senior-level approval from both the supplier and the contractor
(ii) Confirming that executing agency personnel have enough resources to complete their assigned tasks;
(iii) Making sure that roles and responsibilities are defined and understood clearly;
(iv) ensuring that escalation procedures are well-understood and clear;
(v) Ensuring that proper behaviours are demonstrated and implemented in order to foster a pleasant and productive relationship between supplier and contractor representatives.
(vi) Unravelling strategic issues from the daily issues in the delivery of contracts (e.g., strategic steering committee and daily accounts management and/or separate strategic and other agenda meetings);
(vii) Collaboration and information sharing at the appropriate level with maximum transparency

Develop the Contract Management Plan

The contract management plan is the main instrument for tracking the performance of contractors. It is not a contract document, but an internal supplier document. It includes a collection of documents, tables, diagrams or flowcharts which show the essential figures, positions, obligations and objectives of the contract.

The Contract Management Plan should be established during the precontract award phase, making it a valuable instrument for informing the supplier about the contract's characteristics, issues to watch for during the contract execution phase, and the matrix by which contractor performance will be measured.

The scope and content of the contract management planning should be proportional to the contract's complication, risk and costs to ensure that the level of contract performance monitoring and control is in line with that contract.

Regarding lower-value contracts, as well as for “high-value, high-risk, or complex contracts”, the procurement regulations outline the components that should be included in any Contract Management Plan . These elements can be classified as descriptive components or dynamic elements, depending on how they are structured and laid out.

The CONTRACT MANAGEMENT PLAN for simple and low-value contracts may be limited to a few concise clauses that, according to procurement regulations, can only include the following:

(i) important roles and tasks,

(ii) important prescribed dates and delivery indicators;

(iii) record-keeping requirements; budget and payment milestones; and

(iv) budget and payment milestones.

It is suggested that for many projects involving contracts where it is not practical to have a CONTRACT MANAGEMENT PLAN in each contract, a CONTRACT MANAGEMENT PLAN can cover a similar size group of contracts. Only for a few major contracts can CONTRACT MANAGEMENT PLANs be prepared at a time. For multiple contracts discussions, executive agencies should contact the buyer.
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B. Contract Administration

Contract administration begins with the award of the contract and continues through the period of execution. It refers to the day-to-day managing the of the contract's facts and administrative requirements. It accounts for majority of contracts management tasks.

Contract administration is influenced by events of project (completeness of project papers, agreement clauses, selection, project team formation, strong selecting and bidding, and so on); as a result, the supplier's team must consider contract management from the beginning of project plan.

Contract administration is usually the responsibility of a supplier-designated individual, or it may be handled by expert project implementation consultants hired by the supplier and working under their direction and supervision, especially for large, complex projects.

Contract management naturally involves the following:

managing and tracking payments to the contractor against invoices and/or claims and the timeliness thereof;

- managing performance;
- conducting review meetings;
- managing changes, i.e., variations and alterations to the contract;

1. Records Management

Contract management necessitates the keeping of records. Key contract information should always be kept up-to-date in the records to provide a comprehensive source of information.

In, there is a non-exhaustive list of records that should be maintained and controlled. The list should be tailored to the particulars of the contract in question.

Maintaining accurate records (whether in digital or paper format) that are accessible at all times is a requirement of good records management. This function may need to be delegated to a document administrator for projects that generate a large number of documents. For some projects, an electronic document management system may be required, which allows for the reference, storing of document.

2. Performance Management

Suppliers must keep track of the performance and progress of contracts awarded under the Contract Management Plan and provide timely performance and progress reports under procurement laws.

For works contracts, an engineer or other borrowing employees (depending on the contract) will normally oversee progress by conducting regular site inspections and testing (including tests on completion and, as the case may apply, tests after completion).

The contractor's commitment to implement all of the safeguards and plans laid out in their safeguard management plans is also being monitored by performance management. The project's environmental and social advantages can be increased by correctly supervising the contractor's performance in this area.

To track the contractor's performance on a set of metrics, use the KPIs that were produced in the CONTRACT MANAGEMENT PLAN. Use reports from the engineer or supervisor, and contractor progress reports. Other sources of information, including environmental management and other precautions, might be required to be provided by the supplier (e.g., reports from the local community

or other stakeholders, or tips from a hotline). One key performance indicator (KPI) should be measured on a regular basis, but the frequency will vary based on the length of the contract.

To check on and manage the performance of the team, the contractor and supplier frequently schedule contract review meetings. To gain a balance of backward-looking (reviewing previous work) and forward-looking (framing future goals) in a review session, go back and review what you have already done (e.g., work planning, continuous improvement initiatives). To follow the optimum practise, 40% of the time should be spent reviewing previous performance, and 60% of the time should be setting new goals.

Managing Payments

Contract provisions must be monitored to make sure payment issues are dealt with properly. Keeping track of actual vs. anticipated payments (retrospective view) and forecasting future payments (prospective view). Enhances loan disbursement planning and overall performance of its loan portfolio by encouraging its suppliers to use proactive and strong financial management of contracts.

Fig:Balance the focus on Performance Review Meetings

1. Managing Changes

Contract variations are managed by the supplier during contract implementation. The efficient and effective management of contract variation processing is one of the most important aspects of contract management. How variations will be handled should be specified in the contract. Such provisions should address who has the authority to approve changes based on their value and significance (in terms of quality, cost, and timeliness), as well as how changes will be initiated and implemented once approved.

Variations in contracts can happen for a variety of reasons, including but not limited to:

(i) Variations in the SOW
(ii) unpredicted events, e.g., climate conditions and real conditions
(iii) Settlement of claim setup in system

If the impact on the deliverables is significant, any significant agreement modification or variation should be reported separately in the periodic report. When contracts are subject to post-review, the supplier must obtain a no-objection letter if any change would increase the original contract price by more than 15% individually or collectively.

2. Claim and Dispute Management

Sometimes the contract clause my go wrong on project, even with constant evaluation, results conflicts. Supplier and the contractor should first try to establish an agreeable arrangement. It is not always feasible to come to a mutually beneficial arrangement. As a result, it's vital to include a dispute resolution process in the contract while it's being written. This conflict resolution process can be employed when issues cannot be settled peacefully. Contracts involving a foreign contractor should be resolved through international commercial arbitration. Disagreements must be handled correctly, and all serious disputes must be reported on their progress and result.

C. Contract Closure

1. Contract Closure

Contract closing is the final stage of contract management. Because the contract's key deliverables have been met and the parties to the contract are focused on other matters, contract closing is frequently overlooked or handled incorrectly. Contract closure, on the other hand, is critical because it signals the end of the contractor's contract and reduces the risk to the supplier.

(i) contractual dues,
(ii) monetary acquaintance, and
(iii) effective impact of a poor change.

A contract closes when both parties have fulfilled all of their responsibilities, excepting cancellation. Contract closure begins when the contract is fulfilled according to its terms and circumstances.

(i) the supplier verifying internally that all contract deliverables have been completed and that there are no lingering difficulties or difficulties; and
(ii) Aside from any agreed-upon, continuing warranties or guarantees, the supplier verifies that the contract is finished with the contractor.

Upon concluding the contract, the closing procedure (especially for more complicated activities) often involves the parties to the contract

- Complete all administrative documents; (ii) test, instal, inspect, commission, and hand over the works, goods, and, where suitable, services; (iii) test, instal, inspect, commission, and hand over the works, goods, and, where suitable, services;
- Create a final faults list;
- Determine the amount of liquidated damages to be subtracted from the contract price; and create the completion certificate.
- Complete payments;

- Follow up on corrective work on the faults list within the liability period;
- Keeping track of warranties, indemnities, and insurance;
- Recording final contract payments and reconciling all payments; and
- Keeping track of any asset transfers, asset verification, and disposals, Describe any claims made against or received from the contractor by the executing agency.
- Keep track of the final inspection date, time, and information, as well as the issue of the performance certificate.
- Verify that all items, services, and technical inputs have been received, including as-built drawings for works, operating instructions, user training, and guarantees or warranties.

2. Post contract Review

A post-closing contract review and reporting of the review findings are included in best practise contract closure and comprise the below items:

• The contract's financial outcome, including details of any significant occurrences;
• The contract's safety and environmental performance, including details of any significant occurrences; and
• The influence of quantity variations on the initial contract amount (for unit price contracts); • Price adjustments;
• Exchange rate variations (for contracts payable in one or more foreign currencies); and
• The effect of revisions, claims, and disputes on the contract cost
• The baseline programme is compared to the actual or final timetable.
• An overall performance evaluation based on key performance indicators, as well as any lessons learned and suggestions for similar initiatives in the future.

3. Filing of Contract Records

The keeping and safe storage of contract documents and documents is the last task to be completed. As-built documentation, for example, may be required to permit future work on or in conjunction with the project.

Another reason to preserve adequate filing and protecting of data for projects undergoing post-review (sampling) is the ability to perform audits beyond the project's completion date.

4. Typical Contract Management Issues

Based on their own experiences, those with contract management experience will be aware of challenges that develop throughout the contract implementation phase. Here is a non-exhaustive list of frequent topics that contract managers should think about while assessing agreement risk. Any risk moderation activities arising from any of the concerns recognized in the risk valuation should be involved in the CMS.

B. For Cloud Procurement

- Specific competence is lacking in practise in the key employees.
- The practical knowledge and experience of the consultants in their fields of specialisation is shown to be incompatible.
- The team leader has no good working connection with the contracting provider team, other officials or members of the team.
- Mobilization delays for the consulting team.

- Costs associated with claims for variation.
- Deliverables that are of poor quality.
- Deviations from the agreed-upon scope of work.
- The supplier's late processing of intermediate and final payments.
- Delays in putting dispute resolution systems into place.
- Inadequate knowledge of Cloud integration gateway and integration.
- Few learning and improper knowledge transfer.

Conclusion

Technology Strategic Sourcing is a novel method that promises to boost a company's competitiveness significantly mostly used in Information Technology Sourcing. The strategic source technique enables the organisation to find the best sourcing technique, rather than a unique transaction-based technique of supplying products and services according to the significance of an item for its general business goals. The greatest time and effort is focused on the most strategic and economically valuable elements or contracts. Strategic sourcing is evolving, but early-stage enterprises are able to satisfy or surpass customer service needs and provide more cost competitive goods and services. Strategic procurement will reduce overall procurement costs and enhance product quality and service – eventually improving the competitive edge of a firm.

With the help of E-Procurement tool/software like SAP, Ariba, Coupa, Jagger and other, surely helps in decision making and maintain proper Compliance. In Ariba Supplier Request, Supplier Qualifications and Supplier Performance, automatic approval flow, Contract Workspace, can be done. Now a days, many companies use E- Strategic Sourcing Suite to increase the Technology Sourcing Capabilities and decrease in fraud, and loss in business.

Outsourcing procurement operations—

- shifting all or part of an organization's actions to a third party
- will become more common, with the goals of
- leveraging original technology – centralising operations for size and breadth of saving.

Access to a bigger pool of suppliers in the technology.

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