Diploma in procurement and supply chain management

Procurement and supply chain management

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1. ***Outline the phases and processes of operation research study. What are its limitation***

OR is a systematic method oriented study of the basic structures, characteristics, functions and relationships of an organization to provide the executive with a sound, scientific and quantitative basis for decision-making.

Or

OR is the scientific knowledge through interdisciplinary team effort for the purpose of determining the best utilization of limited resources.

***Phases of Operations Research***

Formulating the problem

Constructing a mathematical model

Deriving a solution from the model

Testing the model and its solution (updating the model)

Controlling the solution

Implementation

***Limitations of OR***

The inherent limitations concerning mathematical expressions:

OR involves the use of mathematical models, equations and similar other mathematical expressions. Assumptions are always incorporated in the derivation of an equation or model and such an equation or model may be correctly used for the solution of the business problems. This happens when the underlying assumptions and variables in the model are present in the concerning problem. If this caution is not given due care, then there always remains the possibility of wrong application of OR techniques. Quite often the operations researchers have been accused of having many solutions without being able to find problems that fit.

High costs are involved in the use of OR techniques:

OR techniques usually prove very expensive. Services of specialized persons are invariably called for (and along with it the use of computer) while using OR techniques. As such only big concerns can think of using such techniques. Even in big business organizations we can expect that OR techniques will continue to be of limited use simply because they are not in many cases worth their cost. As opposed to this, a typical manager, exercising intuition and judgement, may be able to make a decision very inexpensively. Thus, the use of OR is a costlier affair and this constitutes an important limitation of operations research.

OR does not take into consideration the intangible factors, that is, non-measurable human factors: OR makes no allowance for intangible factors, such as skill, attitude, vigour of the management people in taking decisions, but in many instances success or failure hinges upon the consideration of such non-measurable intangible factors. There cannot be any magic formula for getting an answer to management problems; much depends upon proper managerial attitudes and policies.

OR is only a tool of analysis and not the complete decision-making process: It should always be kept in mind that OR alone cannot make the final decision. It is just a tool and simply suggests best alternatives, but in the final analysis many business decisions will involve human element. Thus, OR is at best a supplement rather than a substitute for management; subjective judgement is likely to remain a principal approach to decision-making.

**Other limitations:**

Bias:

The operational researchers must be unbiased. An attempt to shoehorn results into a confirmation of management’s prior preferences can greatly increase the likelihood of failure.

Inadequate objective functions:

The use of a single objective function is often an insufficient basis for decisions. Laws, regulations, public relations, market strategies, and so on, may all serve to overrule a choice arrived at in this way.

Internal resistance:

The implementation of an optimal decision may also confront internal obstacles, such as trade unions or individual managers with strong preferences for other ways of doing the job.

Competence:

Competent OR analysis calls for the careful specification of alternatives, a full comprehension of the underlying mathematical relationships and a huge mass of data. Formulation of an industrial problem to an OR set programme is quite often a difficult task.

Reliability of the prepared solution:

At times, a non-linear relationship is changed to linear for fitting the problem to linear programming pattern. This may disturb the solution.

1. ***Explain ways in which purchasing and supply performance measurement may enhance productivity of an organization.***

One way to identify the best suppliers is to track performance after awarding a contract.

Supplier measurement and management is a key part of the purchasing cycle. Continuous measurement is necessary to identify improvement opportunities or supplier nonperformance.

A desired outcome from performance measurement is improved supplier performance.

If no formal evaluation takes place, a buyer has little insight into supplier performance over time, and tracking any performance improvement that results from supplier development efforts is not possible. Without a measurement and evaluation system, a buyer lacks the quantitative data necessary to support future purchase decisions.

A major issue when evaluating supplier performance is the frequency of evaluation and feedback. For example, should a buyer receive a supplier quality performance report on a daily, weekly, monthly, or quarterly basis? Although most firms recognize the need to notify suppliers immediately when a problem arises, there is little consensus about the frequency for conducting routine or scheduled supplier evaluations. Regardless of the reporting frequency, supplier performance measurement is an important part of the purchasing process cycle.

Secure top management support for the initiative and budgeting for the project. Develop a list of key benefits and deliverables that will occur as a result of the improvements. Document the cost of leaving the system “broken” in its current state.

Understand the needs and requirements of the user groups. Many of the people involved maintenance, planning, project management, supplier’s accounts payable, buyers, and so on have specific issues that prevent them from using the existing system. Also, many of the specific sites may have issues that need to be considered in designing the new system.

Team redesign workshops should be used to bring together key subject matter experts (SMEs) from each of the business units. Suppliers should also be invited to attend and participate, as they may have solutions they have adopted with other customers that may prove to be efficient and simple to use.

Explore existing technology solutions with ERP systems, as well as bolt-on applications.

Map out the business requirements and ensure they are aligned with the technology solutions that are available. Begin to estimate cost of deployment, and ensure that adequate planning and due diligence is taken at this step.

Following the workshops, define the new process, and begin to pilot using a planned technology. Ensure that it takes place in a real environment, with actual non trained users involved in the pilot before cutting over to the next process.

Train and deploy other users based on the new processes and systems. Be sure to make the training appropriate to the specific functional unit and user groups.

Monitor, update, and improve the system, ensuring that catalogs are kept up to date. Hold periodic meetings with suppliers and user groups to solicit input and identify problems with the systems.

1. ***Purchasing and supply management differ from each other in their focus and scope. Explain pointing out the difference between the two.***

Purchasing is a functional group as well as a functional activity i.e., buying goods and services. The purchasing group performs many activities to ensure it delivers maximum value to the organization. Examples include supplier identification and selection, buying, negotiation and contracting, supply market research, supplier measurement and improvement, and purchasing systems development. Purchasing has been referred to as doing “the five rights”: getting the right quality, in the right quantity, at the right time, for the right price, from the right source

Supply management is not just a new name for purchasing but a more inclusive concept. Supply management is a strategic approach to planning for and acquiring the organization’s current and future needs through effectively managing the supply base, utilizing a process orientation in conjunction with cross-functional teams (CFTs) to achieve the organizational mission. Similar to our definition, the Institute for Supply Management defines supply management as the identification, acquisition, access, positioning, and management of resources and related capabilities an organization needs or potentially needs in the attainment of its strategic objectives.

**Mean while**

Supply management is a broader concept than purchasing. Supply management is a progressive approach to managing the supply base that differs from a traditional arm’s-length or adversarial approach with sellers. It requires purchasing professionals to work directly with those suppliers that are capable of providing world-class performance and advantages to the buyer. Think of supply management as a progressive and supercharged version of basic purchasing.

Supply management often takes a process approach to obtaining required goods and services. We can describe supply management as the process of identifying, evaluating, selecting, managing, and developing suppliers to realize supply chain performance that is better than that of competitors.

1. ***Discuss the four principles that might guide a supply chain manager.***

*Improve the organization’s competitive position.* As a strategic player, the activities of supply management must be focused on contributing to overall organizational strategy, goals, and objectives. Supply managers must identify and exploit opportunities in the supply chain to contribute to revenue enhancement, asset management, and cost reduction.

Supply can secure the lowest total cost source of supply, provide access to new technologies, and design flexible delivery arrangements, fast response times, access to high-quality products or services, and product design and engineering assistance.

Companies that are successful in the long run must constantly look for opportunities in the supply chain to provide a superior value proposition for their customers, and supply represents a key area for such opportunities. Strategic supply is concerned with the long-term survival and prosperity of the organization. It focuses on bottom-line impact, the income statement, and the balance sheet.

*Provide an uninterrupted flow of materials, supplies, and services required to operate the organization.* Stock outs or late deliveries of materials, components, and servicescan be extremely costly in terms of lost production, lower revenues and profits, and diminishedcustomer goodwill. For example: (a) an automobile producer cannot complete thecar without the purchased tires, (b) an airline cannot keep its planes flying on schedulewithout purchased fuel, (c) a hospital cannot perform surgery without purchased surgicaltools, and (d) an office cannot be used without purchased maintenance services.

*Keep inventory investment and loss at a minimum.* One way to ensure an uninterrupted material flow is to hold large inventories. But inventory assets require use of capital that cannot be invested elsewhere, and the cost of carrying inventory may be 20 to 50 percent of its value per year. For example, if supply can support operations with an inventory investment of $10 million instead of $20 million, at an annual inventory carrying cost of 30 percent, the $10 million reduction in inventory represents a savings of $3 million in addition to freeing $10 million in working capital.

*Maintain and improve quality.* A certain quality level is required for each material or service input; otherwise the end product or service will not meet expectations or will result in higher-than-acceptable costs. The cost to correct a substandard quality input could be huge. For example, a spring assembled into the braking system of a diesel locomotive can cost less than $5.00. However, if the spring turns out to be defective when the locomotive is in service, the replacement cost is in thousands of dollars, caused by the teardown required to replace the spring, the lost revenue to the railroad because the locomotive is not in service, and the possible loss of locomotive reorders. Continuous improvement in supplier quality is directly linked to an organization’s ability to compete effectively on a worldwide basis.

*Find or develop best-in-class suppliers.* The success of supply depends on its ability to link supply base decisions to organization strategy and its skill in locating or developing suppliers, analyzing supplier capabilities, selecting the appropriate supplier, and then working with that supplier to obtain continuous improvements. Only if the final selection results in suppliers who are both responsive and responsible will the firm obtain the items and services it needs.

*Standardize, where possible, the items bought and the processes used to procure them.* Standardization refers to the process of agreeing on a common specification orprocess. Specifications and processes may be standardized across an organization, anindustry, a nation, or the world. Supply should constantly strive to standardize its capitalequipment, materials, maintenance, repair, and operating (MRO) supplies, and servicespurchases wherever and whenever possible. For materials, standardization often leadsto lower risk in the marketplace, lower prices through volume purchase agreements,and lower inventory and tracking costs while maintaining service levels. In the case ofcapital equipment, standardization results in reduction in MRO inventories and reducedcosts for training staff on equipment operation and maintenance. In the case of services,standardization leads to supply base reduction, lower operating costs, more consistentservice levels, and lower prices.

*Purchase required items and services at lowest total cost of ownership.* Purchased goods and services in the typical organization represent the largest share of that organization’s total costs. Consequently, the profit-leverage effect. Price is the most convenient method to compare competing proposals from suppliers. However, supply’s responsibility is to obtain the needed goods and services at the lowest total cost of ownership, which necessitates consideration of other factors such as quality levels, after-sales service, warranty costs, inventory and spare parts requirements, downtime, and so forth that in the long term might have a greater cost impact on the organization than the original purchase price.

1. ***Explain the circumstances under which the supplier bargaining power may be higher than the buyer’s***.

The power of suppliers.

Powerful suppliers capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants. Powerful suppliers, including suppliers of labor, can squeeze profitability out of an industry that is unable to pass on cost increases in its own prices. Microsoft, for instance, has contributed to the erosion of profitability among personal computer makers by raising prices on operating systems. PC makers, competing fiercely for customers who can easily switch among them, have limited freedom to raise their prices accordingly. Companies depend on a wide range of different supplier groups for inputs. A supplier group is powerful if:

It is more concentrated than the industry it sells to. Microsoft’s near monopoly in operating systems, coupled with the fragmentation of PC assemblers, exemplifies this situation.

The supplier group does not depend heavily on the industry for its revenues. Suppliers serving many industries will not hesitate to extract maximum profits from each one. If a particular industry accounts for a large portion of a supplier group’s volume or profit, however, suppliers will want to protect the industry through reasonable pricing and assist in activities such as R&D and lobbying.

Industry participants face switching costs in changing suppliers. For example, shifting suppliers is difficult if companies have invested heavily in specialized ancillary equipment or in learning how to operate a supplier’s equipment, Firms may have located their production lines adjacent to a supplier’s manufacturing facilities (as in the case of some beverage companies and container manufacturers). When switching costs are high, industry participants find it hard to play suppliers off against one another. Suppliers offer products that are differentiated. Pharmaceutical companies that offer patented drugs with distinctive medical benefits have more power over hospitals, health maintenance organizations, and other drug buyers, for example, than drug companies offering me-too or generic products.

There is no substitute for what the sup- plier group provides. Pilots’ unions, for example, exercise considerable supplier power over airlines partly because there is no good alternative to a well-trained pilot in the cockpit.

The supplier group can credibly threaten to integrate forward into the industry. In that case, if industry participants make too much money relative to suppliers, they will induce suppliers to enter the market.

1. ***Highlight five strategic issues in purchasing and supply that may be put in place to ensure value of money without sacrificing the environment.***

Single sourcing advocates may want to address certain issues regarding long-term impacts of single sourcing. In the long run, if everyone undertakes a reduction in supplier base, there will be fewer suppliers to deal with and overall competition will decrease.

**Cross-Sourcing**

The single-sourcing/multiple-sourcing issue does not have to be viewed as a “yes or no” type of a decision. A hybrid approach can be used that is known as cross-sourcing. With this method, the supplier base is expanded without increasing the actual number of suppliers. For example, if supplier A can supply materials on projects 5, 6, 7, 8, and 9 and so can supplier D, the advantages of both single and multiple sourcing can be achieved if supplier A supplies materials for projects 5, 7, and 8 and supplier D supplies for projects 9 and 8. If anything happens to supplier C, supplier D can pick up the slack because D has the capability to supply projects 8, 7, and 9 as well. Neither supplier suffers because overall volume remains the same. The reverse also can be done if supplier D fails to perform.

**Supplier Reduction**

Regardless of one’s final analysis of the single/multiple debate, reduction of the supply base is recommended. If the perceived benefits outweigh the risks, and after careful analysis of both short-term and long-term needs, a single source may be appropriate. However, for operations that would be financially damaged if a supply stoppage occurred, then the use or development of a second source is wise. Assuming that it is desirable to reduce the number of suppliers, the question becomes “which ones?” The grade and hurdle methods are used to guide the supplier reduction analysis.

**Grade**

Grade methods are those that are based on a score or grade given to the supplier by the buyer for some attribute. The most common attributes are quality, price, and delivery. The supplier’s performances in the past are kept on record and the suppliers receive a “report card” for performance compared to other suppliers. Many additional attributes can be added such as frequency of delivery, but the method remains the same—for each attribute and purchase transaction, the supplier is given a grade. These attributes can be weighted equally or used to emphasize what is more important to the buying firm.

When implementing a policy of supplier reduction, it is often recommended to use the report card, which is usually computerized, to rank the suppliers and then go with the best ones. One of the drawbacks of this method is that, many times, qualitative information cannot accurately be incorporated into the system for example, if a design change or traffic congestion caused a shipment to be delayed. Another drawback of grade methods is that supplier performance is the only element used to resolve the cause of the problems. One major flaw in grade methods is that they assume that the best performance in the past will be the best performance in the future. In a way, it forecasts which suppliers will be able to best meet supply needs even though a construction organization’s needs may be different in the future. Computerized supplier performance reports or grade methods may be of better use if futuristic criteria were used and the criteria were very comprehensive and exhaustive.

**Hurdle**

The second group of methods used to reduce the number of suppliers a firm uses is what is known as “hurdle” methods. In this situation, suppliers are required to “jump” over higher and higher hurdles to win the buying organization’s business. Usually this is done through some sort of supplier certification program.

**Certification**

Supplier certification programs are very useful tools for evaluating the quality capabilities of a supplier. Because quality is one of the biggest concerns to many construction organizations, this is a good way to control supplied material quality. Basically, certification involves the setting of criteria regarding quality levels as demonstrated through the use of statistical process control and such elements as process capability studies of a supplier’s equipment, record-keeping abilities, and so forth. If a supplier meets some but not all of the criteria, it may reach a “preferred” status and will remain on the construction organization’s bidders list. If a supplier meets all the criteria and has demonstrated that it can sustain these levels, then it may be granted “strategic” status and be placed on the construction organization’s bidders list. By using these methods, buyers can reduce their supply base by only awarding business to those suppliers who can become certified or by rewarding the suppliers who become certified first. Some of the suppliers will not be able to become certified due to their inabilities; thus, the supply base will be reduced.

The certification criteria can be changed and updated as recertification is required. Thus, the “hurdle” can be raised higher and higher until there are only one or a few suppliers left. The price and productivity hurdles can also be used in combination with certification. Construction organizations can add criteria to make it more difficult to be a preferred or strategic supplier.

Good certification should include issues regarding equipment capability, quality assurance, financial health of the supplier, production scheduling methods, value analysis abilities, and cost-accounting methods.

1. ***What is the difference between a purchase order and purchase requisition. Prepare a standard purchase requisition form with all the entries filled.***

A purchase requisition is the document used to communicate needs internally between users/ specifiers and supply management according to established internal controls. The flow of the requisition is determined by who needs access to the information to perform their duties, the need for an audit trail, and evidence of proper authorization.

A requisition is a gatekeeping tool to manage the flow of information through three gates: authority, internal clarity, and internal clearance.

There are several types of purchase requisitions, including standard requisitions, traveling requisitions, a bill of materials, and stores/inventory requisition.

Purchase Order

A qualified supplier is on file, the buyer issues a purchase order (PO) in duplicates to the selected supplier. Generally, the original purchase order and at least a duplicate are sent to the supplier. An important feature of the purchase order is the terms and conditions of the purchase, which is typically preprinted on the back. The purchase order is the buyer’s offer and becomes a legally binding contract when accepted by the supplier. Therefore, firms should require the supplier to acknowledge and return a copy of the purchase order to indicate acceptance of the order. Then a supplier’s sales order will be used. The sales order is the supplier’s offer and becomes a legally binding contract when accepted by the buyer.

Once an order is accepted, purchasing personnel need to ensure on-time delivery of the purchased material by using a follow-up or by expediting the order. A follow-up is considered a proactive approach to prevent late delivery, whereas expediting is considered a reactive approach that is used to speed up an overdue shipment

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| **Purchase Requisition form** |
| Babi Hutan Inc. **Purchase Requisition** RX #: 6334554  523 Las Vegas Blvd  Las Vegas, NV89154  Tel: 702-123-4567 |
| Requestor: Department:  Phone #: Account #: Date:  Suggested Vendor:  Address: Phone:   |  |  |  |  | | --- | --- | --- | --- | | No. | Description | Price | Quantity | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  |   Special instructions:  Approval Authority: Date:  Distribution: White-Purchasing/Yellow-Purchasing (return to requestor)/Pink-Department |

Wisner Tan Leong (3rd*) Principle of supply chain management. Chapter 2 purchasing management figure 2.2*

1. ***Identify and briefly explain some important documents that Purchasing departments should have a record of.***

Purchase Requisitions

The most common method of informing purchasing of material needs is through a purchase requisition. Users may also transmit their needs by phone, by word of mouth, or through a computer-generated method.

Although there are a variety of purchase requisition formats, every requisition should contain the following:

*Description of required material or service*

*Quantity and date required*

*Estimated unit cost*

*Operating account to be charged*

*Date of requisition (this starts the tracking cycle)*

*Date required*

*Authorized signature.*

Traveling Purchase Requisitions/Bar Codes

Material needs are also communicated through a traveling purchase requisition—a form consisting of a printed card or a bar code with information about whom the item is purchased from. This method is used primarily for very small companies that have not automated their purchasing or inventory management processes. Information on the card or the database entry associated with the bar code can include the following:

Description of item

List of approved suppliers

Prices paid to suppliers

Reorder point

Record of usage.

Bidding or Negotiating?

Identifying potential suppliers is different from reaching a contract or agreement with suppliers. Competitive bidding and negotiation are two methods commonly used when selecting a supplier. Competitive bidding in private industry involves a request for bids from suppliers with whom the buyer is willing to do business. This process is typically initiated when the purchasing manager sends a request for quotation

(RFQ) form to the supplier. The objective is to award business to the most qualified bidder.

Purchasers often evaluate the bids based on price. If the lowest bidder does not receive the purchase contract, the buyer has an obligation to inform that supplier why it did not receive the contract. Competitive bidding is effective under certain conditions:

Volume is high enough to justify this method of business.

The specifications or requirements are clear to the seller. The seller must know or have the ability to estimate accurately the cost of producing the item.

The marketplace is competitive, which means it has an adequate number of qualified sellers that want the business.

Buyers ask for bids only from technically qualified suppliers that want the contract, which in turn means they will price competitively.

Adequate time is available for suppliers to evaluate the requests for quotation.

The buyer does not have a preferred supplier for that item. If a preferred supplier exists, the buyer may simply choose to negotiate the final details of the purchase contract with that supplier.

Request for Quotation

If the requisition requests an item for a higher dollar amount with no existing supplier, then purchasing may obtain quotes or bids from potential suppliers. Purchasing forwards a request for quotation to suppliers inviting them to submit a bid for a purchase contract. Exhibit 2.4 presents an example of a request for quotation form.

The form provides space for the information that suppliers require to develop an accurate quotation, including the description of the item, quantity required, date needed, delivery location, and whether the buyer will consider substitute offers. Purchasing can also indicate the date by which it must receive the supplier’s quotation. The supplier completes the form by providing name, contact person, unit cost, net amount, and any appropriate payment terms. The supplier then forwards the request for quotation to the buyer for comparison against other quotations. The normal practice is for a buyer to request at least three quotations. Purchasing evaluates the quotations and selects the supplier most qualified to provide the item.

Purchase Order

The drafting of a purchase order, sometimes called a purchase agreement, takes place after supplier selection is complete. Purchasing must take great care when wording a purchase agreement because it is a legally binding document. Almost all purchase orders include on the reverse side of the agreement the standard legal conditions that the order (i.e., the contract) is subject to. The purchase order details critical information about the purchase: quantity, material specification, quality requirements, price, delivery date, method of delivery, ship-to address, purchase order number, and order due date. This information, plus the name and address of the purchasing company, appears on the front side of the order.

Blanket Purchase Order

For an item or group of items ordered repetitively from a supplier, purchasing may issue a blanket purchase order—an open order, usually effective for one year, covering repeated purchases of an item or family of items. Blanket orders eliminate the need to issue a purchase order whenever there is a need for material. After a buyer establishes a blanket order with a supplier, the ordering of an item simply requires a routine order release. The buyer and seller have already negotiated or agreed upon the terms of the purchase contract. With a blanket purchase order, the release of material becomes a routine matter between the buyer and seller.

Material Purchase Release

Buyers use material purchase releases to order items covered by blanket purchase orders. Purchasing specifies the required part number(s), quantity, unit price, required receipt date, using department, ship-to address, and method of shipment and forwards this to the supplier. Purchasing forwards copies of this form to the supplier, accounting, receiving, and traffic. Purchasing retains several copies for its records.

The copy to the supplier serves as a notification of a required item or items. Accounting receives a copy so it can match the quantity received against the quantity ordered for payment purposes. Receiving must have visibility of incoming orders so it can compare ordered quantities with received quantities. As with other forms, this part of the process is increasingly becoming electronic.

Different types of material releases exist. Organizations often use the material release as a means to provide visibility to the supplier about forecasted material requirements as well as actual material requirements. One U.S. automobile producer provides suppliers with an 18-month forecast for replacement parts. The first three months of the release are actual orders. The remaining nine months represent forecasted requirements that help the supplier plan.

Fixed-Price Contracts

Firm Fixed Price

The most basic contractual pricing mechanism is called a firm fixed price. In this type of purchase contract, the price stated in the agreement does not change, regardless of fluctuations in general overall economic conditions, industry competition, levels of supply, market prices, or other environmental changes. This contract price can be obtained through a number of pricing mechanisms: price quotations, supplier responses to the buying organization’s requests for proposal, negotiations, and other methods. Fixed-price contracts are the simplest and easiest for purchasing to manage because there is no need for extensive auditing or additional input from the purchasing side.

If market prices for a purchased good or service rise above the stated contract price, the seller bears the brunt of the financial loss.

Cost-Based Contracts

Cost-based contracts are appropriate for situations in which there is a risk that a large contingency fee might be included using a fixed-price contract. Cost-based contracts typically represent a lower level of risk of economic loss for suppliers, but they can also result in lower overall costs to the purchaser through careful contract management.

It is important for the purchaser to include contractual terms and conditions that require the supplier to carefully monitor and control costs. The two parties to the agreement must agree on what costs are to be included in the calculation of the price of the goods or services procured.

Material Packing Slip

The material packing slip, which the supplier provides, details the contents of a shipment.

It contains the description and quantity of the items in a shipment. It also references a specific purchase order and material release number for tracking and auditing purposes. A packing slip is a critical document when receiving material at a buyer’s facility. The receiving clerk uses the packing slip to compare the supplier packing slip quantity against the actual physical receipt quantity. Furthermore, the packing slip quantity should match the material release quantity. The comparison between material release quantity and packing slip quantity is critical. It determines if suppliers have over- or under shipped.

Bill of Lading

Transportation carriers use a bill of lading to record the quantity of goods delivered to a facility. For example, the bill of lading may state that XYZ carrier delivered three boxes to a buyer on a certain date. This prevents the purchaser from stating a week later that it received only two boxes. The bill of lading details only the number of boxes or containers delivered. Detailing the actual contents of each container is the supplier’s responsibility; that information appears on the packing slip.

Receiving Discrepancy Report

A receiving discrepancy report details any shipping or receiving discrepancies noted by the receiving department. It is often the job of purchasing or material control to investigate and resolve material discrepancies. Material discrepancies usually result from incorrect quantity shipments. They can also result from receiving an incorrect part number or a part number incorrectly labeled.

1. ***Identify and explain some of the attributes to look for when choosing a supplier.***

Material quality, delivery dependability, and price are the most critical criteria for supplier selection in the construction industry. However, the degree of importance that individual firms place on the three criteria varies. The supplier selection process begins with choosing potential suppliers for each material type needed for a specific project. The selection process is usually based solely on past performance.

Once a pool of potential sources is formed, requests for quotations (RFQs) are sent out, negotiations are conducted, and specific suppliers are selected.

High-quality materials are expected from every potential supplier.

If a supplier has shown the ability to supply a quality product in the past, it is assumed that it will continue to do so. In most cases, there are no formal measures taken to ensure that high-quality materials have been delivered. Visual material inspection is undertaken and any piece of material that is not visibly damaged is accepted and used. However, materials such as steel beams or concrete require a more formal inspection to ensure that they conform to specifications. In the case of steel materials, plant visits may be made by a representative of the buying firm during testing procedures to ensure that the architect’s specifications are being met. Quality is rarely a problem in the construction industry, simply because the buying firm provides the supplier with specifications and the supplier must comply. If a supplier cannot provide adequate quality, it will not receive consideration for future business from the contractor. Therefore, after the potential suppliers have been selected, considerations of delivery dependability and price play a more important role in actually selecting one supplier over another.

Delivery dependability is obviously vital in today’s fast-track construction industry, where construction is often begun before the architects’ final designs are completed. If delivery deadlines are missed, the result can be costly for both the owner and the contractor. *In the construction industry, time really is money*. If a project is not completed by its deadline, the loss of potential profits increases with each day past the due date. In the construction industry, suppliers must be able to deliver materials to the contractor when promised. If one company can supply a contractor considerably faster than another supplier, the faster company will have an advantage. Delivery considerations are the most important criteria used in selecting suppliers for the construction industry.

Price also has a significant effect on the process selection. Price, however, cannot always overshadow all other criteria. The trick is to strike a balance between price and the other factors considered in the process. Premiums often may be required for rush deliveries. The company must weigh the desire for expected deliveries with the resulting higher prices. Through negotiation, the buyer and supplier must reach a price agreement that is satisfactory to both parties. While quality, delivery dependability, and price play the most vital roles in selecting a supplier, they are not the only considerations. Depending on the project and the specific types of materials required, other factors may play an even more important role. For example, a supplier must be financially stable in order to ensure the buyer that it will be around to fulfill the negotiated agreement. Finally, advantages in the areas of customer service or supplier location also may sway a buyer in the direction of a particular supplier.

1. ***What is inventory management? What is the importance of keeping an inventory in an organization? Identify the different types of inventory.***

Inventories are stockpiles of raw materials, suppliers, components, work in process, and finished goods that appear at numerous points throughout a firm’s production and logistics channel

**Importance of inventory**

Inventory plays an important role in the growth and survival of an organization in the sense that failure to an effective and efficient management of inventory, will mean that the organization will lose customers and sales will decline. Emphasizing on the importance of inventory on the balance sheet of companies, inventory as an asset on the balance sheet of companies has taken an increased significance because of the strategy of many firms to reduce their investment in fixed assets, that is, plants, warehouses, office buildings, equipment and machinery, and so on.

Inventory management is an important concern for managers in all types of businesses. For companies such as J C Penny Limited, which operate on relatively low profit margins, poor inventory management can seriously undermine the business.

The challenge isn’t to pare inventories to the bone to reduce costs or to have plenty around to satisfy all demands, but to have the right amount to achieve the competitive priorities for business most efficiently.

Inventories are found in such places as warehouses, yards, shop floors, transportation equipment and on retail store shelves. Having these inventories on hand can cost between 20 and 40 percent of their value per year. Therefore, carefully managing inventory levels makes good economic sense. Even though many strides have been taken to reduce inventories through just-in-time, time compression, quick response and collaborative practices applied throughout the supply channel, the annual investment in inventories by manufacturers, retailers, and merchant wholesalers, whose sales represent about 99 percent of GNP, is about 12 percent of the U.S gross domestic product.

**Types of inventory**

*Cycle stock*. Cycle stock is inventory that results from the replenishment process and is required in order to meet demand under conditions of certainty, that is, when the firm can predict demand and replenishment times, lead times almost perfectly. For example, if the rate of sales for a constant 20 units per day and the lead time is always 10 days, no inventory beyond the cycle stock would be required. While assumptions of constant demand and lead time remove the complexities involved in inventory management, let’s look at such an example to clarify the basic inventory principles.

*In-transit inventories.* In-transit inventories are items that are route from one location to another. They may be considered part of cycle stock even though they are not available for sale and /or shipment until after they arrive at the destination. For the calculation of inventory carrying costs, in-transit inventories should be considered as inventory at the place of shipment origin since the items are not available for the buyer, sale, or subsequent reshipment.

*Safety or buffer stock.* Safety or buffer stock is held in excess of cycle stock because of uncertainty in demand or lead time. The notion is that a portion of average inventory should be devoted to cover short-range variations in demand and lead time. Average inventory at a stock-keeping location that experiences demand or lead time variability is equal to half the order quantity plus the safety stock.

*Speculation stock.* Speculation stock is inventory held for reasons other than satisfying current demand. For example, materials may be purchased in volumes larger than necessary in order to receive quantity discounts, because of a forecasted price increase or materials shortage, or to protect against the possibility of a strike.

*Seasonal stock*. Seasonal stock is a form of speculative stock that involves the accumulation of inventory before a season begins in order to maintain a stable labour force and stable production runs or, in the case of agricultural products, inventory accumulated as the result of a growing season that limits availability throughout the year.

*Dead stock* is inventory that no one wants, at least immediately. The question is why any organization would incur the costs associated with holding these items rather than simply disposing of them. One reason might be that management expects demand to resume at some point in the future. Alternatively, it may cost more to get rid of an item that it does to keep it. But the most compelling reason for maintaining these goods is customer service.

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