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1. **What are the objectives of Materials** **management? What are its advantages?**

The objectives of material management can be classified into two categories primary objectives and secondary objectives

* **primary objectives**

The following are the important primary objectives of materials management.

* **Low Prices (**Proper, cost effective material procurement.**)**

If materials management succeeds in reducing the price of items it buys, it contributes in not only reducing the operating cost but also in enhancing the profits.

* **Lower Inventories (**Proper storage of materials **)**

By keeping inventories low in relation to sales, it ensures that less capital is tied up in inventories. This increases the efficiency with which the capital of the company is utilized resulting in higher return on investment. Storage and carrying costs are also lower.

* **Regular Supply (** Making available the material TIMELY **)**

Continuity of supply of materials is essential for eliminating the disruption in the production process. In the absence of regular supply of materials, production costs go up.

* **Procurement of Quality Materials (**Providing high quality at the lowest price**)**

Materials department is responsible for ensuring quality of materials from outside suppliers. Therefore, quality becomes the single most objective in procurement of materials.

* **Efficient handling of Materials (**handling the costs of materials by using scientific techniques**)**

The effective material control techniques help the efficient handling of materials resulting in the lowering of production cost.

* **Enhancement of Firm’s goodwill (** Development of better relationships

Good relations with the suppliers of materials enhance the company’s standing in the society as well as in the business community.

* **Secondary Objectives:**

The following are the important secondary objectives of materials management.

* **New Developments (**Identifying new or better sources of supply )

The staff of the materials department deals regularly with the suppliers responsible for new developments in material handling. These developments can be successfully applied in material handling and management.

* **Make or Buy Decisions (**Performing the value analysis of inventory **)**

The material manager with regular reviews of cost and availability of materials can safely conclude that whether the material is to be purchased or developed in the organisation itself.

* **Standardization (**Creating a standardized quality of the products **)**

Standardization of materials is greatly helpful in controlling the material management process. With regular stock-taking, the non-standardised items can be rejected and standard components may be brought into product designs to reduce the cost of production. It is further helpful in promoting the standardisation with suppliers.

* **Assistance to Production department (** Creating a smooth flow of information among the various sections **)**

By supplying the standardized materials or components to the production department, quality products can be assured. It is helpful in imparting the economic knowledge in bringing about the desired improvement in the product.

* **Co-operation with other departments:**

Successful management of materials department contributes to the success of every other department in the organization. At the same time the success of materials department depends on how successful it is in getting the co-operation of the staff of the other departments.

The material management system works under the broad basic objectives of an organization that is “maximum profit with sustained growth and research, satisfied customers and staff of the organization”.

* **The advantages of objectives of Materials management**
* Better accountability on part of materials as well as other departments as no one can shift blame to others .
* As materials management is handled by single authority, it can result in better coordination, as it becomes the central point for any material related problems.
* Materials management department makes sure that better quality material is supplied timely to the requesting departments. This can result in better performance of the organization.
* A materials management system is typically controlled through an information system, thus, can help in taking decisions related to material in the organization.
* One indirect advantage of material management is that good quality material develops the ethical and moral standard in an organization.

From the above it is clear that materials management serves two fold objectives viz., to strive for a reduction in cost of production and distribution and to help the enterprise in attaining its objectives.

These dual objectives of the materials management further aim at maintaining the regular flow of production by purchasing materials of right quality, in a right quantity at a right time from a right source, on right terms and conditions and at lower price.

Reference

\* [www.yourarticlelibrary.com](http://www.yourarticlelibrary.com) / Smriti Chand

\*PROCUREMENT AND SUPPLY CHAIN MANAGEMENT

1. **What are the activities of materials and information flow in an organization?**

* **The activities of information flow**

The capability of business partners to have access to shared information on a timely basis is critical for improving their performance (Lee and Whang, 2001).

***Demand***

Information flow about real demand is vital and make a high degree of chain or network coordination possible demand management is the process of anticipating and fulfilling orders against defined customer service goals. Information is the key to demand engagement information from the marketplace in the form of medium-term forecasts; information from customers , preferably based upon actual usage and consumption; information on production schedules and inventory status; and information on marketing activities such as promotions that may cause demand to fluctuate away from the norm as items are consumed or purchased, this information is transmitted to the supplier and this immediately triggers a response In other words, the processes for capturing information from the marketplace (forecasts, anticipated requirements, customer schedules and orders) will be linked to the processes for meeting that demand.

***Resilience.***

Identifying, mitigating and managing supply chain risk is now a critical requirement to ensure business continuity. The idea of resilience in the context of supply chain management is that supply chains need to be able to absorb shocks and to continue to function even in the face of unexpected disruption.

***Relationships***

Strategic sourcing is based on the careful selection of suppliers whom the customer wishes to partner. the benefits of such an approach include improved quality, innovation sharing, reduced costs and the integrated scheduling of production and deliveries. Underlying all of this is the idea that buyer–supplier relationships should be based upon partnership.

***Megatrend internationalization***

Companies need to manage the specific point in time when they penetrate a foreign market (particularly important in, for example, the current economic downturn), and on the other, the duration of the entire process of entering the foreign market is of decisive importance. In order to keep costs low, utilize assets as quickly as possible and implement business strategies, the internationalization process faces an enormous pressure on time.

***Assets and infrastructure dependencies***

Companies must dedicate time, training, investment in both people and infrastructure to achieve the change in attitude and mentality. Access to detailed internal information by partnership companies is often a source of disputes.

* **the activities of materials flow**

Product Flow includes movement of goods from supplier to consumer (internal as well as external), as well as dealing with customer service needs such as input materials or consumables or services like housekeeping. Product flow also involves returns / rejections (Reverse Flow). Acquisition is taking place at each stage from the previous stage along the entire flow in the supply chain. In the supply chain the goods and services generally flow downstream (forward) from the source or point of origin to consumer or point of consumption. There is also a backward (or upstream) flow of materials, mainly associated with product returns. The first stages of material flow are :-

***Purchase Requisitions or Purchase Indents***

In this stage the requisitions form should be issued upon the planning of purchase which identify the materials’ need , the availability of the budget , the appropriate vendors , the deadline of purchase materials , the estimated cost . a standard purchase requisition form is used for non-recurring requirements of items

***Travelling Purchase Requisition:***

In this stage the operation department will provide reliable, accurate and real-time data , information and track stock-keeping units to provide accurate inventory status information and facilitate inventory replenishment and the With the purchase requisitions and specifications as inputs from the departments and sections of the organizations, the restraints from the external environment and the factors about the demand pattern, the purchasing department has to make several decisions. Some are purely operational while some relate to policy formulation having far-reaching impact on the long-term success of the organization.

From purchase requisitions, the purchasing department generates purchase orders which are a legal document. Purchase order forms vary in their format and their routing through the organization. A purchasing should contain purchase order number (for identification) , date of issue , name and address of supplier receiving the order , Quantity and description of item(s) , required delivery date , shipping instructions price and payment terms , other conditions governing the order. Also through this stage the receipt and analysis of requisition to assess the need and description of requirement

***Bill of Materials***

Once the good receipt and quality inspection are done due to the received purchase order the purchasing department issue payment to the supplier and send the complete documents to the account to finishing the payment

Reference

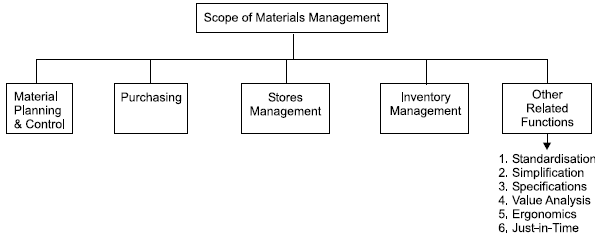
\*PROCUREMENT AND SUPPLY CHAIN MANAGEMENT

\*GLOBAL LOGISTICS

\*Procurement Principles and Management

1. **What is the scope of materials management?**

Materials management is defined as “the function responsible for the coordination of planning, sourcing, purchasing, moving, storing and controlling materials in an optimum manner so as to provide a pre-decided service to the customer at a minimum cost”.From the definition it is clear that the scope of materials management is vast.

**Scope of materials management**

**Materials planning and control**

Estimation of materials requirements, Preparation of materials budget of the organization) based on the sales forecast and production plans, the materials planning and control is done. This involves estimating the individual requirements of parts, preparing materials budget, forecasting the levels of inventories, scheduling the orders and monitoring the performance in relation to production and sales.

**Purchasing:**This includes selection of sources of supply finalization in terms of purchase, placement of purchase orders, follow-up, maintenance of smooth relations with suppliers, approval of payments to suppliers, evaluating and rating suppliers.

**Stores management**   
This involves physical control of materials, preservation of stores, minimization of obsolescence and damage through timely disposal and efficient handling, maintenance of stores records, proper location and stocking. A store is also responsible for the physical verification of stocks and reconciling them with book figures. A store plays a vital role in the operations of a company.

**Inventory control or management:**Inventory generally refers to the materials in stock. It is also called the idle resource of an enterprise. Inventories represent those items, which are either stocked for sale or they are in the process of manufacturing or they are in the form of materials, which are yet to be utilized. The interval between receiving the purchased parts and transforming them into final products varies from industries to industries depending upon the cycle time of manufacture. It is, therefore, necessary to hold inventories of various kinds to act as a buffer between supply and demand for efficient operation of the system. Thus, an effective control on inventory is a must for smooth and efficient running of the production cycle with least interruptions.

**Other related activities**

**Standardization:**

Standardization means producing maximum variety of products from the minimum variety of materials, parts, tools and processes. It is the process of establishing standards or units of measure by which extent, quality, quantity, value, performance etc. may be compared and measured.

**Simplification:**

The concept of simplification is closely related to standardization. Simplification is the process of reducing the variety of products manufactured. Simplification is concerned with the reduction of product range, assemblies, parts, materials and design.

**Specifications**:

It refers to a precise statement that formulizes the requirements of the customer. It may relate to a product, process or a service.

**Value analysis**:

Value analysis is concerned with the costs added due to inefficient or unnecessary specifications and features. It makes its contribution in the last stage of product cycle, namely, the maturity stage. At this stage research and development no longer make positive contributions in terms of improving the efficiency of the functions of the product or adding new functions to it.

**Ergonomics**

(Human Engineering): The human factors or human engineering is concerned with man-machine system. Ergonomics is “the design of human tasks, man-machine system, and effective accomplishment of the job, including displays for presenting information to human sensors, controls for human operations and complex man-machine systems.” Each of the above functions is dealt in detail.

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1. **Define the various roles of materials management in the context of internal and external interfaces to materials management system?**

Effective internal co-ordination of the key people on the part of the buying organisation will mean that everyone involved knows their role in the management of the supplier and subsequently communications are significantly enhanced.

**Internal interfaces and role of Material management**

**Forecasts**

enable to have a more reliable idea about the future than you would otherwise have and, of course, the selection and application of an appropriate forecasting technique can enable you to be less wrong than a competitor or other person taking a less suitable approach. In order to source effectively it is essential that buying organizations develop appropriate specifications, avoid unnecessary (last-minute) changes to Production specification, create regular patterns of demand and ensure that as little buying as possible takes place outside of the organization’s commercial rules.

**production**

MRP procedure calculates gross requirements level by level, adjusting at each level for stock on hand and orders due in to get net requirements. These are offset by lead times to arrive at dates at which orders should be placed if net requirements are to be available in time.

**Inventory Control:**

Stock must be counted and stock records must be right (and the reconciliation of physical stocks with the relevant records cannot be done by computer) before the order generation process (which can be done by computer) will work properly. Stock control is appropriate to a situation in which the demand for each stock item is independent of the demand for any other stock item

**Inspection or quality control:**

This is a very interesting interface as the quality of material for different types of an organization is impacted during materials management cycles, though materials management is not directly responsible for quality, yet it can cause indirect effects on the quality of products. The products, whose quality deteriorates with time, are very likely candidates in this category. For example, if we buy paper 3-4 months in advance then proper storage conditions may need to be kept in store to avoid any deterioration of quality of the paper. This is also the problem of inventory control.

**Finance**

in the long run, stock price is driven by company profits or cash flows. Therefore, we refer to shareholder value in this chapter from the perspective of the internal financial performance of a company. Even from this internal perspective shareholder value goes by many names. Over the years two basic concepts related to either discounted cash flow or economic profit This financial performance enables companies to pay dividends to shareholders and it drives companies’ stock price, in the long term. Thus, supply chain management can create shareholder value.

**External interfaces and role of Material management**

The guiding principle in vendor relations is the spirit of what is best for the partnership. The supplier must be made to realize that it is not enough to accept the returns willingly or to negotiate the disposition of materials not delivered to the specifications. The supplier should view such instances objectively and work constructively with the buyer to correct the conditions that brought about the. Delivery of unsatisfactory material or service.

**VENDOR EVALUATION AND RATING**

In making the decision whether to outsource or not, it might be helpful to undertake a market testing exercise whereby one’s own commercial and technical capabilities are benchmarked against providers in the external market. This process requires some analysis and evaluation of current and projected needs and capabilities, the reduction of the product of this analysis to a clear specification and the invitation of external providers to bid against this specification. Analysis of provider bids might result in a decision not to proceed, but if it is determined at this stage that outsourcing might be appropriate then a thorough but conventional contractor selection and evaluation exercise will follow, and a contract will be drawn up. The contract will most likely be based on agreed, measurable service levels

Reliability , *Technical Capabilities ,* Convenience , *Availability , After-sales Service*

**Vendor Relations**

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Every professionally managed and proactive manufacturing and marketing firms which respond to market needs resort to product planning exercise in relation to its customers, relevant markets, competition and other market forces prevalent. Product planning does include basic corporate plan and marketing plan from which the 'product plan emerges. Generally in product plan we consider product strategies like product line its length and breadth, line stretching, bet upwards and downwards.

Reference

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\*Procurement Principles and Management

1. **Describe the role of material management in performing various functions in an organization?**

Materials management is the integrated functioning of purchasing and allied activities to achieve the maximum co-ordination and optimum expenditure in the area. From these definitions we can define materials management as the planning, organization, sourcing, and purchasing, moving storing and controlling of materials, form their initial purchase through internal operation to distribution of finished goods or services in optimum manner and take the following performance in consideration

**Batter accountability**

In order to accomplish this accountability, senior management owns the outcomes of the effort at the dashboard level the supply chain team is positioned as aiding the business rather than being the bad guys. Furthermore, it removes discussion about the effort from the execution level. According to the senior supply chain executive, this is important because otherwise, ‘you end up with emotion involved at this level resulting in endless discussion instead of focused action’.

**Better coordination**

a coordination mechanism that uses information optimally to support the material flow. supervise the movement of goods between a company's departments. They may also supervise the flow of materials between distributors, suppliers, and other business partners. Coordinators are expected to make business decisions based on a complete assessment of costs, inventory levels, work progress reports, and other efficiency indicators.

**Better quality material**

Quality and cost of manufacture should be most affordable for the organization. Although quality and cost of production are the responsibilities of the Production Manager, however, material management can support this process by the timely delivery of quality material

**Information system**

The system makes use of data base technology and a telecommunications protocol permitting terminals situated in diverse areas, for example; engineering design, purchasing, expediting and construction, access to common and up-to-date information. It is even possible to provide an inspector with a portable terminal for data input and inquiry into MMS from a vendor's plant site.

The data within the system is logically tied to a project number, thereby allowing the material control process to reflect the methodology used by Lummus, project oriented design, procurement and utilization. The system has been designed so that the user may tailor it to suit the particular requirements of a given project/client. The implementation of MMS resulted in reduced material lost at jobsite, reduce subcontractor charges for idle manpower while they wait for material delivery. It also allows material control personnel on jobsite to identify potential material shortfalls.

**ethical and moral standard**

Allegations of corruption have long been a factor in business dealings, and these have focused attention on business ethics. Without a rigid self-imposed and universally accepted ethical tradition, purchasing could not be regarded as a true profession. It is only to be expected, then, that CIPS should publish a

Code of Conduct and Guide to Good Practice containing many references to basic ethical considerations

Reference

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\*Evaluation of performance measures for materials management process in industrial construction projects prepared by: Ali \*Al-quriesha, Mukhtar Bello, and Yaser Fallatah

\*[www.iiste.org](http://www.iiste.org) , Industrial Engineering Letters , ISSN 2224-6096 (Paper) ISSN 2225-0581 (online)

1. **Discuss the scope of a product. Elucidate the term taking two products of your choice and comment on the satisfaction you derived by adoption.**

The Product Scope can be defined as the features and functions that characterize a product. In other words, it defines and details the features, characteristics of a product, service, or result. Therefore, it involves technical specifications, features, functions required to represent a product itself. Simply put, the product scope focuses on how the product will look like and how will it work. The product can be described as the output or the end result of a project. For example, your company will produce a computer. The product is the computer and its scope will include its dimensions, battery size, processor speed, screen resolution, memory capacity, etc.

For example when we make comparison between HP and Dell , we prefer Dell because of **Efficiency** , when using hard in video editing, playing high-graphics games, or using software like(After Effects) .I confidently tell you that Dell is the best . **Design and Style**, the exterior shape of Dell Batter then HP. **The Weight**, the Dell laptop is much lighter than Hp laptop. **The capacity of Battery**, the average of Dell battery capacity is up to two hours and sometimes 2.5 hours while the Hp battery capacity is up to 1.5 hours. **The quality of materials**, Dell is very careful in using the materials in manufactured and the device can withstand the flaws and paint doesn’t peel off easily. For the previous reasons I preferred the Dell product than Hp.

Reference

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\*Marketing-insider.eu

\*Projectcubicle.com

1. **Product mix and line decisions are viewed as strategic tools to increase market share and keep competition at bay. Discuss**.

a particular combination of products to meet the needs of one or more target markets. This is not a once-and-for-all process. The right mix for today might not be the right mix next year. New products appear on the market, old products sometimes lose their appeal, consumers’ preferences alter. The target market is itself subject to change. The product mix includes ranges of merchandise. A product line or range of merchandise is a group of related products. Products can be related in several ways to form a range of merchandise; for instance, various kinds of canned soup, or children’s clothing, or wallpaper. In developing a range of merchandise, merchandise criteria include the suitability of the merchandise for the store’s requirements, how well it fits the store’s image and the needs of its target customers; its availability whether it can be delivered in the quantities, to the locations, at the times required; and perhaps adaptability, whether the supplier is willing to meet any special needs, such as supplying exclusive brands or own brands. Standard criteria for supplier selection are quality, price, terms, delivery and service, together with actual performance on previous orders. since they apply to most buying decisions taken by an organization. Four important dimensions of a product mix can be identified. These are: width, length, depth, and consistency. The first of the product mix decisions refers to the product mix width. The width is all about the number of different product lines the company carries. For example, Colgate has 3 product lines. Thus, it has a rather limited width. The product mix length refers to the total number of items a company carries within the product lines. For instance, Colgate carries several different brands within each line. In Colgate’s oral care product line, several different categories of toothpastes can be identified. A car manufacturer may have several series in its car product line, such as 3-series, 5-series, and 7-series.  
The next one of the product mix decisions is the product mix depth. It refers to the number of versions offered for each product in the product line. For instance, Colgate toothpastes come in several tastes and variations. The vehicle manufacturer’s 3-series in the car product line may be offered in several versions: convertible, coupé, sedan, and so further. Finally, the consistency of a product mix completes our four product mix decisions. Consistency refers to how closely related the product lines are in terms of end use, production requirements, distribution channels or any other way. In Colgate’s case, we can observe a rather strong consistency, which is based on the fact that all product lines constitute consumer products and go through the same distribution channels. The vehicle manufacturer also has a relatively consistent product mix, since both product lines contain consumer-vehicles, can be sold in the same way etc. Certainly, these four product mix decisions are interrelated. 4 Ways to increase business with Product Mix Decisions We can identify four ways in which a company can increase its business on basis of the four product mix decisions determined above. Add new product lines à widen the product mix. New lines benefit from and build on the company’s reputation in its other lines. Lengthen the existing product lines. More items in the product lines may result in a more full-line company. Add more versions of each product a Deepen the product mix. Make product lines more consistent (or less). This depends on whether the company wants to have a strong reputation in a single field or in several fields of business. the four product mix decisions are more than a strategic issue that has some impact on the company’s success. To be precise, the product mix is one of the most critical instruments the company has. It is the centre of its offerings. Therefore, the right product mix decisions should be taken, in line with customer needs. Since customer needs may change rapidly, product mix decisions need to be taken more than once at the beginning – product mix decisions are part of an ongoing process. Only if product mix decisions are taken on an ongoing basis, maximum value for customers can be created.

Reference

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\*Marketing-insider.eu